REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF TRANSPORTATION

MARITIME INDUSTRY AUTHORITY
STCW OFFICE

GUIDE QUESTIONNAIRES

for seafarers

The Annual Publication of Database of Questionnaires is mandated in Republic Act 10635 or the Act Establishing the Maritime Industry Authority (MARINA) as the Single Maritime Administration Responsible for the Implementation and Enforcement of the 1978 International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended and International Agreements or Covenants related thereto and its Implementing Rules and Regulations.

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A Publication of the MARINA STCW Office

OIC ENGINE WATCH

Nr	Questions	Choice1	Choice2	Choice3	Choice4
1	If you do not wear goggles and helmet, your chances of being _____ will be greater?	damaged	stricken	beaten	hurt
2	The ship can leave the port _____ the joint inspection?	at	after	before	from
3	How can the error be corrected when writing in the official log book?	Cross out the error with a single line and rewrite the entry correctly	Blot out the error completely and rewrite the entry correctly	Remove this page of the log book and rewrite all entries on a clean page	Carefully and neatly erase the entry and rewrite it correctly
4	An accidental grounding is called _____.	breaching	grounding	stranding	squatting
5	When a vessel is entering or leaving a port, record of engine speed is kept in the _____.	engine rough log	bell book	deck rough log	Official Logbook
6	Has any person _____ on board during the voyage otherwise than as a result of accident?	dying	die	died	dyed
7	When oil is discharged overboard?an entry is required in the _____.	Oil Record Book	engine rough log	Official Logbook	deck rough log
8	What language shall the issuing country use in medical certificates ?	French	Spanish	Official language of the issuing country	English
9	Please charge the expenses _____ the ship's account?	for	into	at	by
10	The Mariner's Handbook _____ general information affecting navigation and is complementary to the Sailing Directions?	given	giving	gives	give
11	The accident _____ caused damage to ship's hull?	has	have	is	will
12	The most critical time during bunkering is when _____.	hoses are being blown down	final topping off is occurring	you first start to receive fuel	hoses are being disconnected
13	Let _____ the real fact of the accident?	me to tell you	I tell you	I to tell you	me tell you

NOT FOR SALE

OIC ENGINE WATCH

14	A pumproom is suspected of accumulating gases after a ventilation machinery breakdown. Where should the combustible gas indicator case be placed when testing the pumproom atmosphere for combustible gases?	In the upper level of the pumproom	In the lower level of the pumproom	On the deck outside the pumproom	In the middle level of the pumproom
15	Dunnage may be used to protect a cargo from loss or damage by _____.	ship's sweat	inherent vice	tainting	hygroscopic absorption
16	Which is not a required entry in the ship's Official Logbook?	Inspections of cargo gear	Medical treatment of an injury	Sale of effects of a deceased crew member	Drydocking of the vessel
17	The damage to winches is due to _____.	insufficiency of packaging	insufficiency of packaging	rough handling	inherent vice of the cargo
18	In case of accident _____ the risk of sinking, all effective measures shall be taken to steer clear of the fairway to avoid _____ the traffic?	involving/impeding	involved/to impede	involving/to impede	involved?impeding
19	According _____ the report, ship hit the wharf during berthing?	for	on	of	to
20	Please get everything ready prior _____ shifting?	on	to	at	for
21	As soon as the ship is berthed? you should lower the gangway and stretch a net _____.	near	over	underneath	besides
22	Any person maintaining a listening watch on a bridge-to-bridge radiotelephone must be able to _____.	speak English	repair the unit	send Morse Code	speak a language the vessel's crew will understand
23	He must have had an accident?or he _____ then?	would be here	would have been here	should be here	had to be here
24	The _____ showed that said ship complied with the requirements of the Convention.	looking	seeing	inspection	sightseeing
25	The patches where rust have been removed should be wiped clean before paint is _____.	supplied	complied	applied	replied

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26	Never make comment? estimate or guess in your Official Logbook? but _____ only?	the details	the facts	the descriptions	the specifications
27	Steam smoke will occur when _____.	warm dry air from shore passes over cooler water	cool rain passes through a warm air mass	cold ocean water evaporates into warm air	extremely cold air from shore passes over warmer water
28	An accident came _____ my mind when I saw the broken case?	to	with	in	on
29	Which is a roof like canopy of canvas suspended above a vessel's decks, bridges, etc., for protection against sun and weather?	Canvas roof	Back stay	Awning	Sun roof
30	What is the term applied where one flange of a bar is bent to form an acute angle with the other flange?	Bar Angle	Bevel open	Bight	Bevel closed
31	After being rescued from the vessel accident, the people agreed that they had much to _____.	be thankful for		be thankful	be thanked
32	Which is a black tarlike' composition largely asphalt containing such other ingredients as rosin, portland cement, slaked lime, petroleum that is used as a protective coating in ballast and trimming tanks, chain lockers, shaft alleys, etc.?	Base primer	Bitumastic	Base asphalt primer	Base petroleum primer
33	What is the term applied where one flange of a bar is bent to form an obtuse angle with the other flange?	Bevel Open	Bevel Closed	Bight	Angle bar
34	Which of the following is a block having two sheaves of different diameters, placed in the same plane one above the other?	Bobstay	Block Fiddle	Block Snatch	Block cheek

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35	Which is a single sheave block having one side of the frame hinged so that it can be opened to allow the bight of a rope to be placed on the sheave, thus avoiding the necessity of threading the end of the rope through the swallow of the block?	Bobstay	Block Fiddle	Block cheek	Block Snatch
36	Which is a half shell block with a single sheave bolted to a mast or other object which serves as the other half shell?	Block Snatch	Bobstay	Block cheek	Block Fiddle
37	Which of the following is an outside area on a vessel's hull from bow to stern between certain waterlines to which special air, water, and grease-resisting paint is applied?	Boot topping	Boom table	Boom topping	Bosom plate
38	Which of the following is a structure built up around a mast from the deck to support the heel bearings of booms and to provide proper working clearances when a number of booms are installed on or around one mast?	Bolster plate	Boom topping	Boot topping	Boom table
39	Which is a piece of plate adjoining the hawse hole, to prevent the chafing of the hawser against the cheek of a ship's bow?	Bolting plate	Bobstay plate	Bosom plate	Bolster plate
40	Which is a triangular-shaped plate fitted parallel to and between decks or side stringers in the bow for the purpose of rigidly fastening together the peak frames, stem, and outside plating?	Bow lines	Brace	Breast hook	Bracket
41	What is the curve representing vertical sections parallel to the central longitudinal vertical plane of the bow end of a ship?	Bow lines	Breast hook	Brace	Bow sprit

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42	Which is a spar projecting forward over the bow for the purpose of holding the lower ends of the head sails?	Breast hook	Bow sprit	Bow lines	Brace
43	What is generally, but not exclusively, applied to various devices used to prevent water from entering hawse and chain pipes, etc.?	Buckle	Buckling	Brow	Buckler
44	Which of the following is a gangplank usually fitted with rollers at the end resting on the wharf to allow for the movement of the vessel with the tide?	Buckling	Brow	Buckle	Buckler
45	Which of the following is a distortion, such as a bulge; to become distorted; to bend out of its own plane?	Buckle	Buckler	Brow	Buckling
46	Which is a departure of a plate, shape, or stanchion from its designed plane or axis when subjected to load?	Buckler	Buckle	Buckling	Brow
47	Which of the following is a four- to six-inch angle bar welded temporarily to floors, plates, webs, etc. It is used as a hold-fast which, with the aid of a bolt, pulls objects up close in fitting?	Club foot	Cup	Close butt	Collar
48	Which of the following is a hatchway or opening in a deck provided with a set of steps or ladders leading from one deck level to another for the use of personnel?	Counter	Companionway	Cordage	Cradle
49	Which of the following is a support of wood or metal shaped to fit the object which is stowed upon it?	Cradle	Counter	Cordage	Companionway
50	What is the comprehensive term used for all ropes of whatever size or kind on board a ship?	Cradle	Counter	Companionway	Cordage

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51	What are foundations of heavy blocks and timbers for supporting a vessel during the period of construction?	Crown	Cross trees	Cribbing	Crutch
52	Which of the following is a riveted joint in which the ends of the connected members are brought into metal-to-metal contact by grinding and pulling tight by clips or other means before the rivets are driven?	Collar	Cup	Close butt	Club foot
53	Which of the following is a fore foot in which displacement or volume is placed near the keel and close to the forward perpendicular, resulting in full water lines below water and fine lines at and near the designed waterline, the transverse sections being bulbshaped? OR Which is also called a bulb or bulbous bow?	Club foot	Cup	Close butt	Collar
54	The lower end of a vessel's stem which is stepped on the keel and the point in the forward end of the keel about which the boat pivots in an endwise launching is called _____.	Futtocks	Farefoot	Flukes	Foul
55	What are pieces of timber of which a frame in a wood ship is composed called?	Farefoot	Foul	Flukes	Futtocks
56	Which of the following are strips of timber, metal, or boards fastened to frames, joists, etc., in order to bring their faces to the required shape or level, for attachment of sheathing, ceiling, flooring, etc.?	Farefoot	Furrings	Flukes	Foul

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57	Which of the following is a frame that is bent to fit around the boss in the way of a stern tube or shaft?	Frame, Boss	Frame, Line	Frame, Spacing	Frame, Stiffener
58	What is the term applied to boards or a movable platform used in transferring passengers or cargo from a vessel to or from a dock?	Gangway	Girtline	Gantline	Gangplank
59	Which is an inclined platform, fitted at the intersection of the forward weather deck and the shell, for stowing an anchor?	Forecastle	Billboard	Orlop deck	Poop deck
60	Marine Operators when calling a ship on VHF-FM radiotelephone normally call on channel_____.	23	19	16	13
61	An intermediate spring is_____.	generally located between the fishplate and the main towing hawser	fitted in each leg of the towing bridle	usually made of manila hawser	secured at the H bitts
62	After being rescued from the vessel accident the people agreed that they had much to _____.	be thankful	be thanked	be thankful for	thank
63	If you do not wear goggles and helmet your chances of being _____ will be greater?	damaged	stricken	hurt	beaten
64	The ship can leave the port _____ the joint inspection?	before	at	after	from
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NOT FOR SALE

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79	All members of the engineering watch should have adequate knowledge of the _____.I - use of appropriate internal communication II - escape routes from machinery spaces III - location of fire fighting equipments	I only	I II and III	III only	II only
80	Prior to taking over the engineering watch while the ship is underway relieving officers of the engineering watch should satisfy themselves regarding _____. I - availability of fire fighting appliances II - state of completion of engine room log III - standing orders of the chief engineer officer	II & III	I only	I II III	II only
81	The relieving engineering watch officers when underway should be familiar with the _____. I - level of fuel in the service tank II - potential adverse condition resulting from bad weather III - nature of work being performed on the machinery	II & III	I II III	II only	I only
82	When do you pump diesel oil into the burners of an auxiliary boiler?	Starting a dead ship	Overload capacity is required	Heavy fuel must be blended	Heavy smoking persists

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83	What should you do FIRST to correct a condition wherein a diesel engine is operating with excessively high exhaust temperature on all cylinders?	Adjust the fuel rack	Increase the cooling water flow	Increase the lube oil pressure	Reduce the engine load
84	What is the easiest way to locate defective exhaust valves in a propulsion diesel engine?	Inspecting the valves visually	Listening to the engine	Exhaust pyrometer reading	Taking compression readings
85	Some diesel engines are fitted with a thermometer in the cooling water outlet from each cylinder. If the cooling temperature from an individual cylinder begins to rise what should you suspect?	That there is an overloading of cylinder	That there is an incomplete combustion in that cylinder	That there is an overloading of the adjacent cylinder	That there is an increase blow-by of the cylinders
86	What is the function of an expansion tank in a diesel engine cooling system?	Lower lubricating oil pressure when operating long period	Increase raw water content	Cooling exhaust gases without using coolant	Allow changes of the cooling water volume due to heating or cooling
87	Why is the temperature of the scavenge air after the scavenge air cooler should not be lowered below recommended value?	To avoid misfiring and starting problems	To maintain the thermal efficiency of the diesel	To avoid excessive formation of condensate water	To avoid cracking of the cylinder liner
88	Prior to departure what preparations are required regarding pistons and cylinder liners of a diesel engine ?	Open starting air start booster pump start stern tube pump	Preheat cylinders and pistons turn engine turn cylinder lubricators	Close safety valve put out turning gear open air bottles	Open indicator cocks close safety valve turn lubricators
89	In an engine operation what is the effect called that describes the unstable operation of the governor that will not maintain a steady state condition ?	Hunting	Stability	Sensitivity	Deadbeat
90	The fundamental difference between a 2-stroke and a 4-stroke engine is in the number of _____.	strokes in each combustion cycle	combustion events occurring in each stroke	piston strokes each one needs to complete a combustion cycle	piston strokes each one needs to complete a revolution
91	Diesel engine crankcase oil mist detectors are designed to analyze _____.	the temperature of the bearings in the crankcase	fire risk in the crankcase	the temperature of the oil in the crankcase	the concentration of oil vapours in the crankcase

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92	If the main engine jacket cooling water expansion tank level drops rapidly what could this reaction indicate?	There is an internal leak in the engine	Any of these choices	There is a leak in the jacket cooling water cooler	There is a leakage in external piping
93	Why is it important to slow down the main engine RPM while water washing the turbocharger ?	To protect rotor blades from damage	To protect the blower side	To protect the bearings	To protect the exhaust gas economizer
94	Your vessel is entering a tropical area and high humidity is expected what should you do to avoid condensation in the main engine s air cooler ?	Increase scavenging air temperature to above dew point	Operate the engine with slightly open scavenging drain cocks to get rid of water	Decrease the air temperature so proper draining can be achieved from the air cooler	Reduce speed
95	When all preparations have been made to ensure that the main engine is operational prior to departure what will be the final test to be carried out ?	Close safety valves blow indicator cocks fill air bottles	Put out the turning gear and turn the lubricators	Blow indicator cocks test reversing of engine short firing kick	Open air to engine drain air bottles blow indicator cocks
96	To avoid the possibility of a scavenge fire what important check is to be carried out every watch and more frequently if a damaged piston ring is suspected?	The scavenge drain line is not clogged	The cylinder lubrication	The exhaust gas temperature	Overhear the cylinder for noise
97	With full load on the main engine the RPM of the turbocharger is too low what may be the cause ?	Dirty nozzle ring	Exhaust temperatures on the main engine are too high	The lubricating oil pump is malfunctioning	The diffuser ring is damaged
98	In an automated engine the center from which the ship s engine room is controlled is called the _____.	main engine nerve and control station (MENS)	control plant station (CPS)	engineering control room (ECR)	power plant station control station (PPCS)
99	Which of the following most important measurement to check when overhauling centrifugal pumps?	Shaft axial clearance	Neck bush/shaft clearance	Impeller diameter	Impeller/wear ring clearance
100	Which of the items listed below is the correct method for removing intact engineers studs?	Stud box	Self grip wrench	Drill and use stud remover	Pipe wrench

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101	If a leak is suspected in a tube heat exchanger what should be checked FIRST?	Tube plates for cracking	Tubes for damage	Fixed tube end for security in tube plate	Tightness of flared tube end
102	Which of the followingfirst check to carry put when suction gauge reading is high but no liquid is passing through the bilge pump?	inspect pump internals for wear	clean the oil /water seperator	check the suction stainers and valves	open the sea suction valve to prime pump
103	Which would you do FIRST on starting a gear pump if pumping cold oil?	start/stop the pump frequently	ease off the spring loaded pressure relief valve	start the pump with valves closed and gradually open	throttle the suction valve
104	When on passage what should be the condition of the fire main?	sea suction and fire main discharge valves always open	pressurized at all times	all pump and isolating valves closed	drained and empty to prevent leakage at hydrants
105	Before loosening pump covers how should the pressure be checked?	remove drain plug	checking the pressure gauge	air vent valve open and clear	remove cover slowly
106	How does a quick closing valve operate?	an independent mechanism closes the valve	the valve bridge is collapse remotely allowing the valve to close	a retaining collar is released allowing the valve to close	the valve can only be opened and closed hydraulically
107	When the opening pressure of a diesel fuel injector is LOWER THAN that specified by the engine manufacturer the effect would be a/an _____.	decrease in the quantity of fuel injected	delay in the start of injection	increase in quantity of fuel injected	reduction in the duration of injection
108	Which of the following type of electric light is used in pil tanker pump room?	flame proof	shock proof	water proof	acid proof
109	The process of killing the harmful bacteria from the water so as to make it safe for use is called_____.	filtration	carbonization	evaporation	disinfection
110	Scavenging trunks are more prone to fire because they are_____	always over pressure	located below the cylinder	accumulating oily substance	recipient of fresh air
111	An incinerator is a waste disposal unit that will burn_____.	gases	solid material and all types of liquid waste	liquid material	solid material
112	Which of the following minimum standard rest of a rating forming part of an engineering watch within a 24-hour period.	10 hours	12 hours	6 hours	8 hours

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113	When an engineer on duty is inspecting an UMS-mode operated engine room at night what precaution should be taken?	leave the UMS selector switch to UMS mode	do not silence the alarm so the other engineer can hear	switch on the dead man alarm upon entering the control room	switch the engineer call alarm to notify other engineers
114	Where is the safest place to do hot work in the engine room	purifier room	electrical shop	boiler room	work shop
115	Engine room bilge water can be pumped out overboard safely by the use of which equipment listed below?	oil seperator	foam type filter	oil purifier	fine mesh filter
116	Which of the following kind of tank is being used onboard that collects the dirty water from basins and sinks when the vessel is in port so that water pollution can be prevented?	bilge	sludge	sewage	drain
117	When there is excessive formation of frost in the evaporator coils it will _____ .	system in normal condition	lessen load on compressor	reduce efficiency of refrigerating plant	keep compartment cooler
118	Excessive vibrations created by the main propulsion machinery are detrimental to which equipment listed below?	electronic	navigation	galley	cabin
119	An engineer on duty inspecting an unmanned engine room at night should be aware of which of the following precautions?	Switch on the dead man alarm upon entering the control room	Call the oiler on duty	Switch the engineers call alarm to notify other engineers	Silence the alarm so the other engineer cannot hear
120	What should the outgoing duty engineer do before he hand over the watch to his reliever?	Soda drink is ready	Hand over the log book	Information the first engineer before leaving engine room	Check that reliever is capable to carry out watch keeping duties
121	A report when an incident takes place involving the discharge or probable discharge of oil (Annex I of MARPOL 73/78)_____.	effective report	final report	harmful substances report	dangerous goods report
122	It is necessary to transfer fuel oil to the settling tanks in order to _____.	purge any air in the fuel	allow the sediments and water to settle	heat the fuel to proper temperature for atomization	filter and purify it before being pumped to the boiler burners

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123	When you are securing a steam-reciprocating pump which valves should you leave open?	Steam cylinder drain valve	Steam supply valve	Steam exhaust valve	Water cylinder drain valve
124	Latent heat can be defined as the heart which must be added to a substance in order to change it from a _____.	Liquid to vapor	Solid to vapor	Solid to liquid	All of the above
125	Which of the following design features is most common to two-stroke/cycle low-speed main propulsion diesel engines?	Single reduction gearing	Trunk type pistons	Crosshead construction	Cross-scavenging air flow
126	The one method of constructing large marine diesel engines and reducing the total engine frame weight is through _____.	forging integral components	welding plates to form sections for assembly	case hardening integral component	casting interlocking components
127	A hand held digital tachometer give a bad reading if _____.	partially aimed at a 60 Hz fluorescent light	aimed directly at the shaft	positioned 5-10 inches from the shaft	the tae is too shinny
128	What speed is known when the rotating shaft frequency and the natural vibrating frequency become synchronized at a particular speed?	Breakaway speed	Synchronous speed	Sympathetic speed	Critical speed
129	At what temperature in degree Celsius will safety devices called fusible plug installed in air compressor or compressed air system melts in order to prevent explosion?	150	100	50	200
130	The standards of marine engines of over 23 HP for starting purposes in most cases should_____.	Hand starting	Electric starting	Compressed air	Battery starting
131	The action should take when water is found in the fuel oil setting tank is to _____.	shift pump suction to an alternate settling tank	All of the options	shift to alternate or standby fuel oil service pump	sound the settling tank with water indicating paste
132	Diesel engine jacket water is used in distilling units in the_____.	brine cooler	distillate cooler	final heating of the distillate	final heating of the feedwater
133	The following refers to the first law work transfer?	Higher than heat transfer	Equal to heat transfer	Greater than heat transfer	Lower than heat transfer

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134	What unit of measure expresses the chloride content of boiler water?	GPC	Micro ohms	PPM	pH
135	A marine diesel engine consumes 32 MT of fuel per day when developing 4960 KW indicated power. Calculate specific fuel oil consumption in kilogram per kilowatt hour (kg/KWH). Specific gravity of fuel oil at 15C = 0.9526	0.268	0.226	0.0226	0.0238
136	A revolution counter reads 69, 985 at 8:00 am at 11:00 am the clock was advanced 20 minutes and at noon the counter reads 87, 400 What was the average speed on the 8 to 12 0clock watch?	123.58 RPM	79.15 RPM	78.13 RPM	102.65 RPM
137	A seven cylinder, 2-stroke/cycle, single acting diesel engine has a 750 mm bore and a 2000 mm stroke. What indicated power will be developed if the average mean effective pressure is 14.8 kg/cm2 at a speed of 96 RPM?	3,906 kW	28,726 kW	1,959 kW	14,363 kW
138	A seven cylinder, two-stroke/cycle, single acting diesel engine with a cylinder indicated horsepower calculated as 1350 kW and brake horsepower measured at 7466 kW. What is the mechanical efficiency.	79%	55%	18%	83%
139	A ship leaves port with 7200 barrel of fuel oil on board. At 15 knots, the fuel consumption is 360 barrels/day. After the vessel has travelled 1612 miles, what is the remaining steaming radius?	5558 barrels	5358 barrels	5588 barrels	5258 barrels
140	A ship travels is 5472 miles in 26 days 2 hours and 24 minutes. Find the average speed for the engine voyage.	8.68 knots	8.60 knots	8.63 knots	8.74 knots

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141	A single-acting pump makes 100 single strokes per minute. The diameter of the water cylinder 6 inches and the stroke is 10 inches. If the efficiency of the pump is 90%, what is the capacity of the pump in gallons per minute?	18	55	61	92
142	A six cylinder 2-stroke/cycle, single acting diesel engine has a 580 mm bore and a 1700 mm stroke. What indicated power per cylinder will be developed if the average mean effective pressure is 15.3 kg/cm2 at a speed of 120 RPM?	1,348 kW	8,088 kW	2,696 kW	4,044 kW
143	A six cylinder, four stroke engine has a stroke of 200 mm and a bore of 120 mm. If the mean effective pressure speed is 15 rev/s. Calculate the brake power.	152.2 kw	122.5 kw	12.25 kw	1.522 kw
144	An 8000 horsepower diesel engine has a specific fuel consumption of 0.4 lbs. of fuel per horsepower hour. If each pound of fuel contains 18,500 BTUs and 25% of the available heat leaves the engine with the exhaust, how many BTUs per hour are theoretic	22.2 million BTUs per hour	7.4 million BTUs per hour	14.8 million BTUs per hour	29.6 million BTUs per hour
145	An 8-inch (203 mm), globe-type, stop-check valve has been installed in the lube-oil cooler water outlet, with the flow coming in from the top of the disk. This means that _____.	the valve will prevent back flow	the valve will remain completely open	the valve will allow the lube oil temperature to be 10F (5.5C) cooler than if the valve were properly installed	the valve will never permit water flow from the lube oil cooler
146	An air conditioning system, required to remove from 33,000 to 35,000 BTU per hour. Must have a minimum capacity of howmany tons.	3.0 tons	1.5 tons	2.0 tons	2.5 tons

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147	An indicator card or pressure-volume diagram, shows graphically what relationship.	relationships between pressure and temperature during one stroke of the engine	relationships between pressure and volume during one cycle of the engine	volume of the engine	compression ratio of the engine
148	What can be the reason for this. An indicator diagram from an engine shows that the compression, combustion and the expansion lines are all too low. The exhaust temperature is too high and engine output is too low.	the fuel pump plunger has been set too high	the fuel pump has sunk due to wear	blockages in the exhaust system	leaking fuel pump
149	During the watch ships clock was advance 20 minutes. At 0400H the reading of the engine counter was 785140 and at 0800H the reading was 810140. what was the mean speed of the engine in revolutions per minute.	90.7 r.p.m.	114.5 r.p.m.	113.6 r.p.m.	117.2 r.p.m.
150	Calculate the horsepower needed to drive a centrifugal pump to deliver 250gal./min. of water against a 70 ft. head if the pump efficiency is 65 percent?	9.7 Hp	8.2 Hp	5.9 Hp	6.8 Hp
151	Calculate the Kilowatt needed by the electric motor driving a centrifugal pump used for pumping 250 gal./min. of water against a 100 ft. ahead, efficiency of pump is only 50 percent, efficiency of motor is 80 percent. Data: 5308 constant, SG= 1 H2O.	11.775 Kw	9.1456 Kw	10.01 Kw	13.145 Kw
152	Calculate the piston dispalcement of a two cylinder compressor rotating at 1, 500 RPM. If the diameter of the cylinder is 15 cm. and the length of the stroke is 15 cm.	12.44 cu. in.	6.25 cu. in.	8.64 cu. in.	10.44 cu. in.

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153	Find the cylinder oil in grm-bhp/hr. whose consumption 189.36 litres/day, maximum BHP 8200; specific gravity=.95; ave. rpm= 141.30 and shop trial rpm=150	1.502 grms-bhp/hr.	1.975 grms-bhp/hr.	0.970 grms-bhp/hr.	0.501 grms-bhp/hr.
154	Find the fuel consumption in GRMS-BHP/HR whose cons. Per day is 27.10 MT (metric ton) and actual BHP is 7109.52.	150.14 gms-bhp/hr	160.90 gms-bhp/hr	155.12 gms-ghp/hr	158.82 gms-bhp/hr
155	Should one boiler on a two boiler vessel suffer serious tube damage, the Officer-in-Charge, Marine Inspection may issue a permit (Form CG-948) to proceed to another port for repair _____.	only upon written application of the master, owner, or agent of the vessel	only if the vessels Certificate of Inspection is valid and has not expired	as long as no cargo or passengers are being carried	all of the above
156	Technicians servicing small refrigeration appliances can employ what type of recovery equipment?	either active or passive	passive only	active only	do not need to recover the refrigerant
157	The counter reading at 1200H was 444630. if the speed of the engine of 121.8 r.p.m. is in increased by 10% at noon and the new speed maintained during the whole of the following watch, what is the counter reading at 1600H?	465347	476766	475860	465340
158	The duties of a chief engineer upon taking charge of the department include.	taking a complete personal inventory of all engine room spare parts	obtaining a valid Certification of Inspection from the Coast Guard	determining if any vital engine room equipment is inoperative	preparing a list of engine department personnel for the Masters signature
159	The specific fuel consumption of the main diesel engine rated at 12, 000 metric brake horsepower is 155g/Bhp-hr. What is daily consumption in metric tons? What is the equivalent consumption in gram per kw-hr?	42.64 MT ; 213.77 gms/Kw-hr	44.64 MT ; 207.77 gms/Kw-hr	46.64 MT ; 107.77 gms/Kw-hr	34.14 MT ; 217.78 gms/Kw-hr

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160	The specific fuel consumption of the main engine rated at 12000 metric brake horsepower is 155g/Bhp-hr. What is the fuel consumption in metric tons to make a voyage of 6,280 nautical miles at the speed of 14 knots? Allow 10% fot the unpumpable in the fue	978.10 MT	953.14 MT	960.53 MT	917.98 MT
161	The speed of the ships propeller through the water is 12.5 knots, however due to slip, the ship covers a discharge of only 287 nautical miles in 24 hours. Calculate what percentage of the propeller of the propeller speed does the slip represent?	4.80%	10%	7.00%	6.80%
162	To service a 60 ton air conditioning package, the easiest way how to determine the type of refrigerant used is to _____.	ask the Chief Engineer	look on the top of the TXV	look at the unit name plate	use your service gage set and refrigeration card
163	Which of the listed parts on a fire-tube auxiliary boiler requires a written report to the Officer-in-Charge of Marine Inspection when renewed?	Gage glasses	Cleanout plug gaskets	Water columns	Fusible plugs
164	Which of the listed pre-start procedures should be carried out prior to starting a crosshead type diesel engine after an overhaul?	Open all indicator valves.	Open all air space drain cocks.	Pre-lube cylinders with hand cranks.	All of the above.
165	While riding at anchor, the anchor chain should be secured by the _____	riding spindle	anchor shackle	chain stopper or riding pawl	windlass brake only
166	With reference to bunkering operating the first step in safe bunkering is to_____	identify the vessels person in-charge	identify and be familiar with the vessels oil transfer procedures	prepare the deck and receiving areas	calculate the oil level currently in each tank

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167	A message giving warning of a hurricane should have which prefix when sent by radiotelephone?	TTT TTT TTT	No special prefix	Securite Securite Securite	Pan-Pan (3 times)
168	According _____ the report, ship hit the wharf during berthing?	on	for	of	to
169	After being rescued from the vessel accident, the people agreed that they had much to _____.	be thankful	be thankful for	thank	be thanked
170	An accident came _____ my mind when I saw the broken case?	to	with	in	on
171	An accidental grounding is called _____.	grounding	squatting	stranding	breaching
172	Any person maintaining a listening watch on a bridge-to-bridge radiotelephone must be able to _____.	repair the unit	speak English	speak a language the vessels crew will understand	send Morse Code
173	As soon as the ship is berthed, you should lower the gangway and stretch a net _____.	besides	over	near	underneath
174	Has any person _____ on board during the voyage otherwise than as a result of accident?	died	die	dyed	dying
175	He must have had an accident, or he _____ then?	should be here	would be here	would have been here	had to be here
176	How can the error be corrected when writing in the official log book?	Blot out the error completely and rewrite the entry correctly	Carefully and neatly erase the entry and rewrite it correctly	Remove this page of the log book and rewrite all entries on a clean page	Cross out the error with a single line and rewrite the entry correctly
177	How should the letter D be pronounced when spoken on the radiotelephone?	DA VID	DELL TAH	DUKE	DOG
178	If you do not wear goggles and helmet, your chances of being _____ will be greater?	hurt	stricken	beaten	damaged

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179	In case of accident _____ the risk of sinking, all effective measures shall be taken to steer clear of the fairway to avoid _____ the traffic?	involved/to impede	involving/to impede	involving/impeding	involving/impeding
180	In the IMO SMCP, the prefix MAYDAY is used _____.	to announce safety	to announce emergency	to announce urgency	to announce distress
181	In the IMO SMCP, the prefix PAN PAN is used _____ .	to announce emergency	to announce urgency	to announce distress	to announce safety
182	In the IMO SMCP, the prefix SECURITY is used _____.	to announce safety	to announce distress	to announce urgency	to announce emergency
183	Let _____ the real fact of the accident?	I to tell you	me to tell you	me tell you	I tell you
184	Never make comment?estimate or guess in your Official Logbook?but _____ only?	the descriptions	the facts	the specifications	the details
185	Please charge the expenses _____ the ships account?	for	into	by	at
186	Please get everything ready prior _____ shifting?	for	at	to	on
187	The _____ showed that said ship complied with the requirements of the Convention.	inspection	sightseeing	seeing	looking
188	The accident _____ caused damage to ships hull?	have	has	is	will
189	The Mariners Handbook _____ general information affecting navigation and is complementary to the Sailing Directions?	give	gives	giving	gives
190	The patches where rust have been removed should be wiped clean before paint is _____.	supplied	complied	replied	applied
191	The ship can leave the port _____ the joint inspection?	after	at	before	at

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192	The word CHANNEL is spelled conform the international phonetic alphabet _____:	Cornelis, Hotel, Alfa, November, November, Edison, Lodewijk	Charlie, Hotel, Able, November, November, Echo, Liverpool	Charlie, Hotel, Alfa, November, November, Echo, Lima	Dont know
193	The word EIGHT is spelled conform the international phonetic alphabet _____:	Dont know	Echo, Istria, Gulf, Hotel, Tango	Echo, India, Golf, Hotel, Tango	Echo, Israel, Golf, Hotel, Tango
194	The word LOBITH is spelled conform the international phonetic alphabet _____:	Dont know	Liverpool, Oslo, Bernhard, India, Taro, Hotel	Lima, Oscar, Bernhard, Italia, Tripoli, Havana	Lima, Oscar, Bravo, India, Tango, Hotel
195	The word NAVTEX is spelled conform the international phonetic alphabet _____:	November, Alfa, Victor, Tango, Echo, X-ray	Dont know	November, Able, Valencia, Tripoli, Echo, Xantippe	November, Anna, Victor, Tango, Eduard, X-ray
196	The word SATCOM is spelled conform the international phonetic alphabet _____:	Sierra, Able, Tripoli, Charlie, Oscar, Mike	Sierra, Anna, Tango, Cornelis, Oslo, Mike	Dont know	Sierra, Alfa, Tango, Charlie, Oscar, Mike
197	The word SHIP is spelled conform the international phonetic alphabet _____:	Sugar, Hotel, Italia, Peter	Sierra, Hotel, India, Papa	Sierra, Hotel, Item, Paris	Dont know
198	The word VOLUME is spelled conform the international phonetic alphabet _____:	Victor, Oscar, Lima, Uniform, Mike, Echo	Dont know	Victor, Oslo, Lima, Uncle, Mike, Echo	Valencia, Oslo, Love, Uncle, Mike, Eduard
199	The year 1945 is spelled to conform with the international phonetic alphabet _____:	One-Nine-Four-Five	Won-None-Flower-Fiver	Wun-Niner-Fower-Fife	Wan-Nayn-Poor-Payb
200	What language shall the issuing country use in medical certificates?	English	Official language of the issuing country	French	Spanish
201	When oil is discharged overboard, an entry is required in the _____.	deck rough log	Official Logbook	Oil Record Book	engine rough log
202	The word QUICK is spelled conform the international phonetic alphabet:	Quebec, Uniform, India, Charlie, Kilo	Queen, Upsala, India, Charlie, Kilo	Any of the above	Quebec, Uniform, Italia, Casablanca, Kilo
203	The word RADIO is spelled conform the international phonetic alphabet:	Romeo, Alfa, Delta, India, October	Any of the above	Romeo, Alpha, Delta, India, Oscar	Radio, Alfa, Delta, India, Oscar
204	The word EIGHT is spelled conform the international phonetic alphabet:	Echo, Israel, Golf, Hotel, Tango	Echo, Istria, Gulf, Hotel, Tango	Any of the above	Echo, India, Golf, Hotel, Tango

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205	Using IMO SMCP in shore-to-ship and ship-to-shore communication, how do you response when the information requested is not immediately available.	Say: Stand by - followed by a two tone signal until the information will be available	Say: Stand by - followed by a long pause and one long tone until the information will be available	Say: Stand by - followed by the time interval within which the information will be available	Say: Stand by - followed by a waiting signal until the information will be available
206	Using IMO SMCP in shore-to-ship and ship-to-shore communication, how do you response in the affirmative when an INSTRUCTION (e.g. by a VTS-Station, Naval vessel or other fully authorized personnel) or an ADVICE is given.	Roger on that, affirmative, followed by the instruction or advice in full	Copy, over, instructions are loud and clear, revert at the soonest when complied with	Affirmative, instructions are loud and clear, revert to you as soon as possible if complied with	I will/can ... - followed by the instruction or advice in full
207	Using IMO SMCP in shore-to-ship and ship-to-shore communication, how do you response in the affirmative if the VTIS gives the following message: ADVICE. Do not overtake the vessel North of you.	Respond: Affirmative, message understood, proceeding as instructed, out.	Respond: I will not overtake the vessel North of me.	Respond: I will not overtake my vessel North of you.	Respond: I do not overtake the vessel North of me.
208	Using IMO SMCP in shore-to-ship and ship-to-shore communication, how do you correct a wrong message .	Example: My present speed is 14 knots - mistake. Correction, my present speed is 12, one-two, knots.	Example: My present speed is 14 knots - mistake. Correction, my present speed is one-two, knots.	Example: My present speed is 14 knots - mistake. my present speed is one-two knots, knots.	Example: My present speed is 14 knots - Correction, my present speed is 12 knots, knots.
209	A message giving warning of a hurricane should have which prefix when sent by radiotelephone?	Pan-Pan (3 times)	No special prefix	TTT TTT TTT	Securite Securite Securite
210	According _____ the report, ship hit the wharf during berthing?	on	of	to	for
211	After being rescued from the vessel accident, the people agreed that they had much to _____.	be thanked	thank	be thankful for	be thankful
212	An accident came _____ my mind when I saw the broken case?	with	in	to	on
213	An accidental grounding is called _____.	stranding	breaching	grounding	squatting

214	Any person maintaining a listening watch on a bridge-to-bridge radiotelephone must be able to _____.	repair the unit	speak a language the vessels crew will understand	send Morse Code	speak English
215	As soon as the ship is berthed, you should lower the gangway and stretch a net _____.	besides	over	underneath	near
216	Has any person _____ on board during the voyage otherwise than as a result of accident?	dyed	died	die	dying
217	He must have had an accident, or he _____ then?	would have been here	would be here	should be here	had to be here
218	How can the error be corrected when writing in the official log book?	Blot out the error completely and rewrite the entry correctly	Cross out the error with a single line and rewrite the entry correctly	Remove this page of the log book and rewrite all entries on a clean page	Carefully and neatly erase the entry and rewrite it correctly
219	How should the letter D be pronounced when spoken on the radiotelephone?	DA VID	DOG	DELL TAH	DUKE
220	If you do not wear goggles and helmet, your chances of being _____ will be greater?	beaten	damaged	hurt	stricken
221	In case of accident _____ the risk of sinking, all effective measures shall be taken to steer clear of the fairway to avoid _____ the traffic?	involved/impeding	involving/impeding	involved/to impede	involving/to impede
222	In the IMO SMCP, the prefix MAYDAY is used _____.	to announce distress	to announce urgency	to announce safety	to announce emergency
223	In the IMO SMCP, the prefix PAN PAN is used _____ .	to announce emergency	to announce safety	to announce urgency	to announce distress
224	In the IMO SMCP, the prefix SECURITY is used _____.	to announce distress	to announce urgency	to announce emergency	to announce safety
225	Let _____ the real fact of the accident?	me to tell you	me tell you	I to tell you	I tell you
226	Never make comment?estimate or guess in your Official Logbook?but _____ only?	the facts	the descriptions	the specifications	the details

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227	Please charge the expenses _____ the ships account?	for	at	into	by
228	Please get everything ready prior _____ shifting?	at	on	for	to
229	Which of the following statement is/are not safety precaution of gas welding in acetylene tank?	Away from combustible materials or sources of heat	Keep the valve cap off when not in use	Store cylinders in well ventilated, protected and dry location	Store valve end up
230	Safety is dependent on orderliness and cleanliness that may be kept by _____.	tagging all items according to their age and then storing them together	storing all items in a common storage area	storing all items in their proper place	disposing of worn out items
231	What is the limit that each Administration shall establish for the purpose of preventing alcohol abuse for masters, officers and other seafarers while performing designated safety, security and marine environmental duties?	0.07% blood alcohol level (BAC)	0.01% blood alcohol level (BAC)	0.05% blood alcohol level (BAC)	0.03% blood alcohol level (BAC)
232	How many weeks shall an expection of 70 hours in a week be granted by the administration?	3 weeks	4 week	2 weeks	1 week
233	What is the minimum number of hours of rest in a 24 hour period?	14 hours	16 hours	10 hours	12 hours
234	The hours of rest may be divided into no more than two periods, one of which shall be at least how many hours?	6 hours	2 hours	4 hours	3 hours
235	Cylinder oil is used for _____.	4-stroke engine	2-stroke engine	gasoline engine	4-stroke and 2 stroke engine

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236	All persons who are assigned duty as officer in charge of a watch or as a rating forming part of a watch and those whose duties involve designated safety, prevention of pollution, and security duties shall be provided with a rest period of not less than _____.	70 hours in a 7 day period	55 hours in a 7 day period	50 hours in a 7 day period	77 hours in a 7 day period
237	When the engine is running, a leaking air starting valve is indicated by_____.	a hissing sound from the indicator cock	low power develop	hot pipe connected to the starting valve	. knocking sound
238	While inspecting the steering gear at sea, you should check for _____.	any leaks in the system	movement of the trick wheel	accuracy of the rudder angle indicator	air bubbles in the sight glass
239	The expansion tank for the jacket cooling water which is a closed cooling type is used to _____.	reduce air contamination	maintain constant head in a system	prevent water leakage	allow easy release of air
240	A good housekeeping on a vessel prevents fires by _____.	eliminating trip hazards	improving personnel qualifications	eliminating potential fuel sources	allowing better access in an emergency
241	Which of the conditions listed would cause the stern tube lube oil header tank level to decrease?	The entry of sea water into the system.	An increase in sea water temperature.	A worn or damaged stern tube seal.	An increase in the stern bearing operating temperature.
242	As a duty engineer you should know that some auxiliaries are not designed to handle steam at boiler pressure. Which of the following devices is usually fitted in the branch line to deliver steam at the correct pressure?	A steam pressure reducing valve	A nozzle valve	A constant quantity regulating valve	An orifice

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243	Which of the following is the most critical information that the officer in an engineering watch be relayed during taking over a watch?	Any special requirements relating to sanitary system disposals	The next engineer on watch	The condition and state of readiness of portable fire-extinguishing equipment and fixed fire-extinguishing installations and fire-detection systems	The procedures for notifying the appropriate authority of environmental pollution resulting from engineering activities
244	When the machinery spaces are in the periodic unmanned condition, the designated duty officer of the engineering watch shall be _____.	None of the stated options	at the poop deck and wait for the call of the able seaman	in a ship compartment that has an alarm	all of these
245	To ensure that a bearing is receiving the proper oil supply, you should check the _____.	bull's eye in the gravity tank overflow	sight flow glass in the bearing oil supply line	lube oil temperature at the cooler outlet	lube oil return flow valve
246	All portable electric tools should have a ground connection to prevent _____.	electric shock if the tool is shorted	burning out the motor from an overload	grounding the plastic case through a short	overloading the motor from a short
247	Under what condition may the master suspend the schedule of hours of rest and require a seafarer to perform any hours of work necessary?	Emergency Cases	Machinery Maintenance	Drills	Cargo loading
248	Not properly vented main engine jacket cooling water can _____.	lower main engine power	cause overheating	easily cool the engine	cause scaling
249	When maneuvering, you discover heavy smoke coming from the turbocharger casing. What action should you take first?.	Check the cooling water temperature	Check for an exhaust leak	Check the air filter for dirt	Notify the bridge and ask to shut the engine down
250	As an engineer which action should you normally take during each watch when the auxiliary boiler is operating?	Inspect and clean burner oil solenoid valve	. Lift the safety valve by hand	Observe general performance of the boiler	Clean all duplex oil strainers
251	If one fuel oil strainer of a duplex unit becomes clogged while the vessel is steaming at sea, the first action is to _____.	clean the dirty strainer as quickly as possible	open the strainer bypass valve	stop the fuel oil service pump	change the oil flow over to the clean side

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252	Under what condition shall the officer in charge of the engineering watch shall ensure that permanent air or steam pressure is available for sound signals?	Normal Sea Operations	Restricted visibility	Coastal and congested waters	Ship at anchor
253	What is the most important parameter to check right after any diesel engine is started?	salt water pressure	crankcase pressure	lube oil pressure	exhaust temperature
254	If two compressors must be operated in parallel in order to maintain the box temperatures, a careful watch should be kept on the _____.	suction pressure gauges of both compressors	expansion valves of both evaporator coils	oil levels in both compressor crankcases	discharge pressure gauges of both compressors
255	An auxiliary diesel generator continues to run after you try to shut down. Your next course of action should be to _____.	engage the jacking gear	block the flow of air supply to the engine	decrease control air pressure	secure the lube oil pump
256	Dark exhaust gas from the engine is caused by _____.	engine overload	engine running too cold	water in a cylinder	too much lubricating oil in one or more cylinder
257	Below are some of the causes of high exhaust gas temperature except _____.	injection of fuel is too late	excessive carbon deposit on the exhaust valve	poor quality of fuel oil	leaky fuel oil nozzle for injector
258	Cracked cylinder liner of a 2-stroke engine is indicated by_____.	black smoke	excessive loss of lubricating oil	hunting of jacket cooling water pressure	low compression pressure
259	The flash point of a residual fuel oil should be used to determine the highest temperature to which the oil may be heated _____.	for centrifuging	in a storage tank	for atomizing	in the recirculating line
260	An engine fails to start even if all temperatures and pressures are normal because_____.	fuel oil injector in one cylinder is leaking	turbocharger is dirty	lube oil pressure is low	fuel is contaminated with water
261	The effect of too much heating in the fuel oil of main engine is _____.	sublimation	stuck plunger and barrel	high exhaust gas temperature	high corrosion attack
262	Which steam plant watch operating condition will require priority attention over the other conditions listed?	High level main condenser	Low water level main boiler	High level lube oil storage tank	Deareating tank pressure 2 psig above normal

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263	Which of the following is an example of head hazard? I. Impact from falling, II. Flying Object, III. Hair entanglement	I, II, and III	I and III	II and III	I and II
264	Which condition could cause the feed pump of an auxiliary boiler to lose suction?	Excessive feed water temperature	Decreased feed water temperature	Increased suction head pressure	Pump recirculating line being open to much
265	An engine with high exhaust temperature but low compression is due to_____ .	too much fuel oil	leaking valve	insufficient air	broken piston
266	An indication of excessive soot accumulation on boiler water tubes and economizer surfaces is due to____.	lower feed water flow	high stack temperature	low stack temperature	high feed water temperature
267	Before using the steam soot blowers of boiler at sea, you should _____.	lower the water level	decrease the firing rate	increase the firing rate	raise the water level
268	You would not see a flow through the sight glass of the lube oil gravity tank overflow line when the _____.	main engines are secured and the turning gear is engaged	main engines are turning at normal sea speed	the lube oil service pumps are secured	main engines are stationary at a stop bell
269	Before the seas get rough, it is a good safety practice to _____.	move quickly about the ship	Increase lighting	secure loose gears	Shutdown auxiliary equipment
270	Prior to taking over the engineering watch, which of following responsibilities shall an officer of an engineering watch rely to the incoming watch?	Type and quantity of cargo	Next port of call	Master's standing order	C/E standing orders of the day
271	Fuel oil enters the main engine cylinder through _____.	oil spill valve	fuel oil injector	plunger and barrel	starting valve
272	When securing a fuel oil heater, you should _____.	open the fuel oil temperature regulator bypass, widely	remove all fuel oil pressure from the system by securing the service pump	stop the oil flow and then cut out the steam	cut out the steam before securing the oil flow
273	Too high exhaust gas temperature in all cylinders is cause by the following except_____.	stuck-up fuel injection pump	charged air pressure is too low	overload engine	charged air temperature is too high

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274	The watch engineer finds the refrigeration compressor has blown the shaft seal. In this situation, he should _____.	secure the compressor at once and close the suction and discharge valves	tighten the shaft seal packing to reduce leakage, slow the compressor, and operate the expansion valves by hand until repairs can be made	pump the system down and isolate the leak	close the suction valve, secure the compressor, and then replace the shaft seal
275	Before using a boiler compressed air soot blower system, you should _____.	lower the water level	decrease the forced draft fan speed	reduce the boiler pressure	drain the soot blower pneumatic operating lines
276	If the fire ignites in the engine room as a result of a high pressure fuel oil leak, you should first _____.	secure the generator	find a soda acid extinguisher	secure the ventilation	shut off the fuel supply
277	What condition shall the chief engineer officer consult with the master whether or not to maintain the same engineering watch as when under way?	Cold lay up	sheltered anchorage	Unsheltered anchorage	Hot lay up
278	If the engineer on watch is doubtful of the accuracy of water level in the boiler gauge glass, he should ____.	blow down the gauge glass	speed up the main feed pump	start the stand by feed pump	open the auxiliary feed line
279	Which of the following conditions should be immediately reported to the engineering officer on watch?	Steam leaving the vent of the gland exhaust condenser.	Oil in the drain inspection tank.	Water trickling in through the stern gland.	Lube oil passing through the bull's eye of the gravity tank overflow line.
280	In relieving watch, the outgoing duty engineer should _____.	drain-out water from the fuel oil tanks	leave the engine room immediately	stop the main engine before relieving time	check that the reliever is capable to carry out watch keeping duties
281	When there is sufficient reason that the relieving officer is not capable of watch keeping duties, the outgoing in charge of the engineering watch should _____.	notify the chief engineer officer	all of these	stop the main engine immediately	None of the stated options

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282	In testing the boiler water for chloride content will indicate the amount of ____.	phosphates present in the water	dissolved salts from sea contamination	methyl orange that should be added	total alkalinity in the water
283	Prior to engaging the turning gear, precautions should be taken to_____.	close the inlet and outlet valves of cooling water	transfer M/E control to emergency control console of the engine	shut off the starting air supply and open the indicator cocks	stop the fuel oil service pump
284	Before the turning gear is engaged, precaution should be taken to_____.	close the inlet and outlet valves of cooling water	transfer M/E control to emergency control console of the engine	stop the fuel oil service pump	shut off the starting air supply and open the indicator cocks
285	What is the proper way of storing an oxygen and acetylene cylinders?	Upright with the cylinder caps screwed on	Upright with the cylinder caps off	Horizontal with the cylinder caps off	Horizontal with the cylinder caps screwed on
286	The watch engineer has been unable to transfer the fuel oil to the settling tank while underway. As the tank level is becoming dangerously low, the engineer should now _____.	temporary stop the main enginepropulsio n boiler	utilize a portable rubber impeller transfer pump	call out other engineers for assistance	repeat all the steps he has taken
287	When there is a fire in an electric motor, normally the first step is to _____.	start the fire pump and lead out hoses	ventilate area to remove the smoke	apply foam extinguisher	secure the electrical supply
288	What is the main reason that live auxiliary steam is normally attemporated before entering the feed heater of a flash evaporator?	To increase the brine overboard density	To reduce the rate of scale formation on heating surfaces	To increase the pressure in the heat exchanger	To increase the pressure in the first stage flash chamber
289	If the temperature in a hot air manifold were found to be 122oF, what will be the equivalent reading on the centigrade scale?	35oC	40oC	45oC	50oC
290	Which of the listed fuel oil ignition methods are commonly found on automatically fired auxiliary boilers aboard merchant vessels?	A manually-operated friction igniter	An incandescent glow plug	A high energy electric spark	A gas pilot light
291	What maybe the cause of injection lag in a diesel engine?	The diesel fuel used having a high viscosity	A decrease in the fuel pump delivery pressure	A higher cetane number of fuel oil	Mechanical rigidity in the lube pump mechanism

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292	A lube oil filter can be used to remove most contaminants from lube oil. What contaminant will remain in the lube oil after filtering?	Water	Sediment	Fuel/Diesel oil	Acid
293	Diesel engines driving alternators operating in parallel must maintain a set frequency regardless of load changes. What is the governor characteristic used to accomplish this?	Compensation	Actuation	Promptness	Sensitivity
294	What might be the cause of excessive vibration of an automatically fired auxiliary boiler?	Fuel oil pump failure	flame failure	Combustion pulses	Air or water in the furnace
295	A pneumercator is an instrument used to indicate _____.	micro ohms in condensate	air pressure in the diesel engine starting circuit	tank fluid level	phosphates in boiler water
296	What reading will be obtained if we use a dry uncoated sounding rod or tape to measure the depth of water in a reserve feed water tank?	Always be 100% accurate	Very inaccurate	Be satisfactory if a small amount of oil is floating on the surface	Thoroughly contaminate the feed water
297	What is the main reason that live auxiliary steam is normally attemporated before entering the feed heater of a flash evaporator?	To increase the pressure in the first stage flash chamber	To reduce the rate of scale formation on heating surfaces	To increase the pressure in the heat exchanger	To increase the brine overboard density
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300	What maybe the cause of injection lag in a diesel engine?	Mechanical rigidity in the lube pump mechanism	A decrease in the fuel pump delivery pressure	The diesel fuel used having a high viscosity	A higher cetane number of fuel oil

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305	What reading will be obtained if we use a dry uncoated sounding rod or tape to measure the depth of water in a reserve feed water tank?	Be satisfactory if a small amount of oil is floating on the surface	Very inaccurate	Thoroughly contaminate the feed water	Always be 100% accurate
306	Where is the contaminated oil enters the centrifuge in a disk type centrifugal purifier?	Through the funnel body	At the top through the regulating tube	Through the neck of the top disk	At the bottom through the oil inlet
307	Why is condensate being pumped from the condenser to the DC heater instead of directly to the boiler?	Condensate should be deaerated before entering the boiler	Boiler feed pumps must operate with a negative suction head	Suspended solids in the condensate must be eliminated	Condensate at condensing temperature is too hot and will cause thermal stress in the boiler
308	The device most commonly used to measure the exhaust gas temperature of a diesel engine cylinder is called a _____.	calorimeter	dynamometer	tachometer	pyrometer

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309	Exhaust valve grooving and corrosion is caused by certain components of residual fuel oil. These components are sodium, sulfur, and _____.	copper	vanadium	carbon	ash
310	A dirty atomizer sprayer plate in the burner of an auxiliary boiler, would be indicated by _____.	fluctuating pressure in the windbox	carbon on the register doors	a dazzling white atomizer flame	an unevenly shaped burner flame
311	Which of the following statements is true concerning the centrifuging of lubricating oil?	Centrifuging will purge the oil of various contaminants, including acids and alkalis	Centrifuging is more effective with inhibited oils than straight mineral oils	Centrifuging is more efficient when the oil is preheated prior to centrifuging	Silicones are water soluble and easily removed by centrifuging
312	Why do most temperature control valves in diesel engine closed freshwater cooling systems bypass the flow of jacket water around the cooler instead of around the engine?	changing the rate of flow in the jackets could cause localized hot spots	excessive cooling would take place in the heat exchangers at high loads	emergency hand control would not be possible if water flow through the jackets were controlled	excessive cavitation erosion would take place in the coolers
313	Which system should be tested and used when required to raise the water level in an idle boiler?	Chemical feed system	Superheated steam system	Desuperheated steam system	Auxiliary feed system
314	A pyrometer is capable of producing a voltage by _____.	light striking a photo sensitive substance	heating a junction of two dissimilar metals	squeezing crystals of certain substances	chemical reaction
315	The DC heater functions to _____.	Store, heat, and deaeratefeedwater	Chemically treat feedwater to remove carbonic gas	Ensure recirculation in the feedwater system	Remove the major amount of noncondensable gases from the main condenser
316	Excessive lubricating oil consumption in a running diesel engine can be caused by _____.	low lube oil temperature	clogged lube oil piping	excessive valve-guide clearance	high lube oil viscosity
317	Increasing the valve clearance between a valve stem and rocker arm, will in the valve _____.	closing later	staying open for a shorter period of time	staying open for a longer period of time	opening sooner
318	Oil accumulating in the exhaust piping or manifold of a diesel engine can be caused by _____.	worn valve guides	collapsed hydraulic valve lifters	excessive lube oil pressure	excessive crankcase vacuum

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319	Valve lash, or clearance refers to the _____.	clearance between the valve seat inserts and the valve head	compression force of the valve springs	clearance between the top of the valve stem and the rocker arm	fuel injection cam profile
320	Crank web deflection readings will give a positive indication of _____.	crankpin misalignment	worn main bearing journals	slack thrust bearings	bearing shells shim dimension
321	Cooling water pumps driven by direct-reversing diesel engines are usually _____.	straight impeller vane with concentric housing	curved impeller vane with concentric outlet	curved impeller vane with tangential outlet	
322	Rapidly discharging condensate into the DC heater during normal steaming conditions could cause _____.	Decrease in dissolved oxygen in the feedwater	Decrease in auxiliary exhaust pressure	Increase in auxiliary exhaust pressure	Water hammer in the economizer
323	Most large main propulsion diesel engines use a duplex lube oil strainer to _____.	ensure a positive flow of oil at all times	remove all large and small foreign objects	ensure that all lube oil has been treated twice	decrease the time required between cleanings
324	Throttling a burner air register on an auxiliary boiler could result in _____.	fewer soot deposits	improved fuel combustion	smoky boiler operation	decreased fuel consumption
325	Significant retardation of diesel engine fuel injection timing will result in _____.	increased fuel economy	advanced fuel ignition	decreased ignition lag	reduced engine power
326	Which of the following problems can cause fluctuating pressure in the closed cooling system of a main propulsion diesel engine?	cavitation in the cooling water pump	defective temperature controls in the system	opened vent in the cooling system	restricted water passages in the engine
327	The effective stroke of a constant-stroke, individual, fuel injection pump is varied by the _____.	plunger crossbar	delivery valve	control rack	governor speed
328	The minimum design height of the DC heater is determined by the _____.	Maximum condensate pump discharge pressure	Dew point temperature of the stack gases	Minimum net positive suction head required by the main feedpump	Desuperheter outlet temperature

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329	You are operating a main propulsion diesel engine at a constant load when the jacket temperature begins to rise. This could be caused by _____.	fuel oil being too heavy (viscous)	high water level in the expansion tank	dirty fuel oil filter	a piston about to seize
330	The bulk of the solid material entering a centrifugal purifier with lube oil is _____.	trapped in the bowl	discharged with the water	trapped in the filter	forced out the overflow
331	The DC heater automatic level dump valve is used to _____.	Recirculate condensate to the atmospheric drain tank	Drain excess feedwater to the distilled water tank	Divert the flow of condensate from the first stage heater to the vent condenser	Maintain a proper condensate level in the condenser hotwell
332	While at sea, the flash type evaporator is discharging the output to the distill tanks. If it becomes necessary to reduce the feed water temperature below 165oF, you should _____.	Raise the tripping point at the salinity indicating panel for the three-way valve	Secure the evaporator until the feedwater temperature can be raised to 165oF or more	Continue the current evaporator operation	Dump the evaporator to the bilge
333	Exhaust pyrometer readings provide an indication of the _____.	effectiveness of water-cooled exhaust elbows	amount of fuel penetration into the engine cylinders	indicated horsepower of the engine cylinders	distribution of the load between engine cylinders
334	A salinity indicating system functions on the basic principle of measuring the _____.	Electrical inductance of water	Specific gravity of water	Hydrogen ion concentration of water	Electrical conductivity of water
335	Fuel combustion in a diesel engine cylinder should begin just before the piston reaches top dead center and should _____.	end when fuel injection has been completed	continue through the after-burning period	end at bottom dead center	be completed exactly at top dead center
336	The main propulsion diesel engine jacket water temperature rises above normal, with the raw water sea suction and the expansion tank water level being normal. Which of the following problem is most likely the cause?	steam formation in the expansion tank	excessive leakage from jacket water pump seals	eroded zinc pencils in the heat exchanger	Faulty thermostatic bypass valve
337	The purpose of an oil mist detector in a main propulsion diesel engine is to warn of _____.	a possible overheated bearing	low cylinder oil pressure	excessively high crankcase vacuum	excessive carbon buildup in the lube oil

338	The direct cause of a crankcase explosion can be attributed to _____.	jacket water contamination of the oil in the crankcase	extremely hot scavenge air	excessive cooling water temperature	an overheated bearing
339	A burned exhaust valve may be detected by a higher than normal _____.	compression pressure	cooking water temperature	exhaust temperature from a particular cylinder	firing pressure
340	Mist detectors used on large low-speed and medium speed main propulsion diesel engines monitor and check for the presence of _____.	lube oil vapors in the crank case	lube oil vapors in the engine room	fuel oil vapor at the sludge tank vent	unburned fuel vapors in the scavenge air receiver
341	Improper maintenance of an automatic auxiliary boiler oil burner could result in _____.	fuel pump failure	decreased boiler efficiency	increased feedwatercomsumption	fan motor failure
342	A change in engine speed is required before a governor is able to make a corrective movement of fuel rack. This aspect of governing is commonly expressed as a percent and is known as _____.	governor promptness	isochronous governing	speed droop	governor sensitivity
343	Reducing the clearance between a valve stem and rocker arm will result in the valve _____.	having a longer duration of opening	opening later	having a shorter duration of opening	closing sooner
344	Diesel engine injection lag is caused by _____.	excessive air turbulence	high fuel oil supply flow	compressibility of the fuel	low cetane value of the fuel
345	Which of the following procedures decreases the total dissolved solids concentration in the water of an auxiliary boiler?	Hydrazine treatment of condensate	Bottom blowing	Frequent compounding	Chemical cleaning
346	Air trapped in the hydraulic fluid of a steering system would be indicated by _____. I. An improper rudder response II. Hammering noises in the equipment or transmission lines III. Popping or sputtering noises	I only	II & III	I & III	I, II & III

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347	Which of the DC heater operations listed will result in excessive dissolved oxygen in boiler water? I. Excessively high water level in the heater II. Adding excessive make up feed III. Operating the heater with a closed air vent	I, II & III	I only	I & III	II & III
348	In a flash-type evaporator, an electrical salinity cell would be installed in the _____. I. Distillate outlet from the distillate cooler II. Distilate inlet to the distillate cooler III. Condensate drains from the distiller feedwater heater	II & III	I only	I, II & III	I & III
349	Salinity cells are strategically installed in flash type distilling units to indicate the _____. I. presence of leaks in the flash chambers II. quantity of the distillate produced	II only	I only	Both I and II	Neither I nor II
350	Engine protection by means of an alarm or shutdown control can be obtained with devices that are sensitive to _____. I. temperature II. pressure III. engine speed	I & III	II & III	I, II & III	I only
351	What would be the result of adding phosphate compounds into the cooling system of a diesel engine? I. Protect the coolant from freezing II. Protect metallic surfaces from the corrosion	Neither I or II	I only	Both I and II	II only
352	With regards to a diesel engine crankcase explosion, the most violent is the _____. I. primary explosion II. secondary explosion	II only	I only	both I and II	neither I or II
353	A large low speed main propulsion diesel engine may become overloaded	I only	neither I nor II	II only	both I and II

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	by _____. I. A heavily fouled hull II. Strong head winds and heavy seas				
354	The exhaust system for a turbocharged two-stroke /cycle diesel engine functions to _____. I. discharge exhaust gases and smoke II. furnish energy to the turbocharger III. reduce engine room noise	I only	I, II & III	II & III	I & II
355	If oil is dripping from the burner of a coil-type auxiliary steam generator, the cause may be _____. I. the oil valve not seating properly II. a loose boiler burner nozzle III. carbon on the burner nozzle causing deflection of oil spray	I, II & III	I only	I & II	II & III
356	If the fuel/air ratio in an automatically fired auxiliary boiler is insufficient, the result could lead to _____. I. inefficient combustion II. dark smoke III. automatic shutdown	I only	I & II	II & III	I, II & III
357	The control system for a controllable pitch propeller can be programmed _____. I. to produce a maximum combined propeller and engine efficiency between pitch and a give engine speed II. For continuous operation of the engine at preset conditions	I only is correct	neither I or II are correct	II only is correct	both I and II are correct
358	If a crankcase explosion occurs in a diesel engine, you should stop the engine and _____.	increase crankcase exhauster speed to draw cool air into the engine	increase crankcase scavenge air to remove unburned gases	allow the engine to cool down naturally before opening the inspection covers	immediately open all crankcase relief ports

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359	Prolonged operation of a diesel engine with a closed cooling water system, at lower than normal designed operating temperatures can _____.	eliminate fuel knock	decrease lube oil viscosity	cause sulfuric acid formation	increase power output
360	When an auxiliary boiler is panting and emitting black smoke, you should _____.	increase the fuel oil temperature	increase othe air supply	decrease the fuel oil temperature	decrease the fuel oil supply pressure
361	In diesel engines, hydraulic valve lifters are used to _____.	obtain greater valve lift	increase valve operating lash	reduce valve gear pounding	create longer valve duration
362	In a diesel engine exhaust system, the cooling of the exhaust gases below their dew point, will result in _____.	sulfuric acid corrosion	moisture impringement on the turbocharger compressor blade	surface pitting of the turbocharger compressor blades	increased engine back pressure
363	Which of the following will have the greatest effect on the mean effective pressure in a cylinder of a diesel engine operating at normal load?	Increasing the TBN of the lubricating oil	Increasing the quality of the fuel-air mixture	Increasing the inlet temperature of the lubricating oil	Decreasing the temperature of the jacket water
364	Which of the following conditions could cause black smoke to be discharged from the stack of an auxiliary boiler equipped with turbine-driven rotary cup atomizers?	low fuel oil viscosity being maintained	insufficient steam supply to the fuel oil heater	improper turbine shaft speed in the atomizer assembly	excessive opening of the dampers in the combustion air inlet
365	What is the purpose of a hydraulic valve lash adjuster?	Compensates for the expansion and contraction of the valve stem due to changes in operating temperature	Insures proper pressure in a hydraulic system	Eliminates need to remove valve springs	Provides easier removal of the valve cage
366	The highest pressure in any closed diesel engine freshwater cooling system is at the ____.	heat exchanger inlet	jacket water outlet	expansion tank inlet	cooling water pump inlet
367	The longer ignition delay period resulting from the use of low cetane fuel, will result in _____.	lower cylinder combustion temperature	more complete fuel combustion	higher cylinder firing pressure	less fuel entering the cylinder

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368	The bearing used to support the crankshaft of a diesel engine are generally called _____.	line shaft bearings	connecting rod bearings	support bearings	main bearings
369	The overspeeding of the diesel engine driving an electric generator could cause _____.	reverse power trip to trip	low voltage trip to trip	excessive exhaust temperature	damage to the field windings
370	Reduction gear lube oil temperatures for keel cooler installations are generally _____.	lower than raw water cooled installations, but the pressure will be higher	lower than raw water cooled installations	higher than raw water cooled installations	identical to raw water cooled installations
371	Which of the substances listed is satisfactorily removed from the fuel b a centrifugal oil purifier?	Carbon particles	Lube oil	Gasoline	Diesel fuel
372	Diesel engine automated control systems may utilize sensing devices of dual function, with sensing ranges providing both alarm and engine shut down capability. Which of the key points listed would only require an alarm sensor?	Jacket water pressure and temperature	Lube oil sump level	Lube oil pressure and temperature	Engine overspeed
373	The primary objective of the auxiliary exhaust system is to supply steam to the _____.	soot blower	main condenser	deaerating feed tank	main feed pumps
374	You are standing watch in the engine room, with an auxiliary boiler. You should blow down a gage glass periodically to _____.	test the feedwater stop-check valve	remove any sediment from the glass	provide water samples for the second assistant	maintain the proper water level in the steam drum
375	In a diesel engine, the spring force required for proper valve operation is determined by _____.	length of the spring	maximum firing pressure	minimum firing pressure	cam contour
376	The pressure differential across a diesel engine lube oil system duplex, filter should be checked to _____.	determine the need for filter cleaning	measure any change in oil viscosity	prevent excess pressure downstream	determine the need for batch filtration
377	Why are hydraulic cranes being properly warmed up before they are used?	Warm-up allows the relief valve to a properly tested	Warm-up allows the hydraulic system to become charged with oil	Hydraulic strainers operate only during the warm-up period	Hydraulic fluid must be at the opening room temperature before use.

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378	On tank vessels using an automatic tape wells, free movement of the tape is normally checked by _____.	using litmus paste	removing the side plate	operating the hand clutch	comparing with a hand tape
379	Steam drum water level indicators must be calibrated to compensate for density differences between the indicated drum water level, and the actual drum water level. If no compensation is made, the indicator will show a _____.	lower level than exists in the drum with the error becoming greater as the drum pressure decreases	higher level than exists in the drum with the error becoming greater as the drum pressure decreases	lower level than exists in the drum with the error becoming greater as the drum pressure increases	higher level than exists in the drum with the error becoming greater as the drum pressure increases
380	While standing watch in the engine room, you notice a high reading at a salinity cell located in the loop seal between two stages of a flash type evaporator. This would indicate _____.	Chill shocking is necessary to remove scale	Faulty operation of the brine overboard pump	Leakage at the second stage condenser	Carryover in the first stage
381	A solenoid operated distillate three-way valve is installed in the discharge line between the distilling plant and the potable water tank. This valve will trip and dump the distillate discharge if the _____.	Potable water tank has become contaminated	Potable water tank has been filled with raw water	Distillate salinity is excessive	Distillate temperature is excessive
382	In an operating diesel engine, which of the following is true concerning a tube and shell type jacket water heat exchanger?	zinc anodes installed in the heads should always be painted	jacket fresh water pressure should always be greater than the sea water pressure	fresh water circulates through the tubes and sea water around the outside of the tubes	only seawater is allowed to circulate to cool the lube oil
383	In a diesel engine closed freshwater cooling system, the cooling water pressure drop through the engine is 10 psig, and the pressure drop through the heat exchanger is 4 psig at maximum flow rates. The cooling water pump must produce a discharge head of atleast _____.	4 psig	15 psig	6 psig	28.7 psig

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384	Operating a diesel engine for prolonged period at temperature lower than the normal design temperature may cause _____.	the formation of sulfuric acid in exhaust passages	a decrease in lube oil viscosity	a increase in cooling water pH	a thermostat failure
385	Immediately after the a diesel engine, normal raw water and jacket water pressures are indicated. However, the jacket water temperature continues to rise. If there is no change in the sea temperature, you should suspect _____.	chromate pH too low	a high level in the surge tank	overloading in all cylinder	a jammed three-way thermostatic valve
386	The main propulsion diesel engine jacket water temperature rises above normal, with the raw water sea suction and the expansion tank water level being normal. Which of the following problem is most likely the cause?	steam formation in the expansion tank	Faulty thermostatic bypass valve	eroded zinc pencils in the heat exchanger	excessive leakage from jacket water pump seals
387	Some diesel engine are fitted with a thermometer in the cooling water outlet from each cylinder. If the cooling water temperature from cylinders begins to rise above normal, you should suspect _____.	incomplete combustion in all cylinders	increased blow-by in all cylinders	insufficient fuel delivery to all cylinder	overloading in all cylinders
388	If the jacket water temperature rises rapidly above normal in a diesel engine, you should FIRST _____.	clean sea water strainer	place standby cooler in operation	reduce engine load	check thermostatic valve
389	In a diesel engine cooling system, the high temperature alarm contact maker will be activated on excessively high water discharge temperature from the _____.	engine jacket water outlet	cooling water heat exchanger outlet	expansion tank outlet	raw water pump discharge
390	In a closed cooling system for a turbocharged, four-stroke/cycle diesel engine, fluctuate water pressure can be caused by _____.	an correctly set cooling system temperature control	a totally clogged impeller in the cooling water pump	carrying the expansion tank water level too high	improper venting of the cooling system

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391	Which of the following conditions can cause oil to accumulate in the cooling system of a diesel engine?	Excessive valve train lubricant	Defective oil cooler core	Overfilled lube oil system	Excessive lube oil pressure
392	One result of operating a diesel engine at light load with excessively low cooling water temperatures is a/an _____.	increase in fuel economy	decreases in ignition lag	increase in cylinder misfiring	reduction in lube oil viscosity
393	The purpose of an oil mist detector in a main propulsion diesel engine is to warn of _____.	low cylinder oil pressure	excessively high crankcase vacuum	a possibility of an overheated bearing	excessive carbon buildup around the cylinder liner ports
394	If a diesel engine has been stopped because of piston seizure due to severe overheating, the crankcase _____.	explosion covers should be opened slightly to provide extra ventilation	ventilation system should be continued in operation for one hour for cooling	scavenge pump should be immediately secured to prevent loss of lube oil	inspection covers should not be opened until the engine has cooled
395	During diesel engine warm-up, which type of valve lash adjuster compensates for the change in the length of the exhaust valve stem?	Mechanical	Hydraulic	Electrical	Pneumatic
396	The rate of pressure rise during the period following fuel ignition in a diesel engine is influenced by the length of the ignition delay period and the _____.	fuel efficiency	volumetric efficiency	valve overlap	turbulence of the air charge
397	For equal amounts of fuel injected, what change in condition will have the greatest effect on the mean effective pressure in the cylinder of a diesel engine?	TBN of the lubricating oil	Completeness in the mixing of the fuel	Temperature of the lube oil	Temperature of the cooling (sea) water
398	The pressure in an operating diesel engine cylinder continues to rise for a short period after the piston passes top dead center as a result of the _____.	expansion during the combustion process	exhaust and intake valves just closing	maximum compression pressure is just being attained	fuel injection cutoff

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399	Which of the following statements concerning the factors affecting ignition delay is correct?	An increase in combustion chamber turbulence will increase ignition delay	An increase in intake air temperature will increase ignition delay	An increase in coolant temperature will decrease ignition delay	An increase in compression ratio will increase ignition delay
400	If fuel injection occurs too early, a diesel engine will lose power because the _____.	fuel will not be properly atomized in the cylinder	ignition will be delayed due to low compression pressure	fuel will ignite after top dead center	maximum fuel expansion will occur on the compression stroke
401	In a jerk pump, the amount of fuel that will be forced through the spray nozzle on each upward stroke of the plunger depends on _____.	the position of the helix groove relative to the spill port	the pump supply pressure	the slope of the fuel cam	the number of sleeve segments engaged with the rack
402	Injection lag in a diesel engine may be caused by _____.	a change in the cetane number of the fuel	a decrease in compression pressure	the flexibility of high pressure fuel lines	a decrease in the air temperature
403	If fuel injection in a diesel engine begins earlier than the design earlier than the design start of injection, ignition may be delayed because the _____.	fuel oil injection pressure may not be high enough	cylinder compression temperature may be too high	scavenge and purge process is incomplete	cylinder compression pressure may not be high enough
404	During the fuel injection period, fuel pressure must exceed cylinder gas pressure to _____.	prevent reflected pressure waves when the needle valve closes	ensure penetration and distribution of the fuel in the combustion chamber	ensure the needle valve is flushed clean during each injection	allow combustion gas blowback into the open needle valve
405	Increasing the load on an engine using a double-helix type injection pump varies the effective stroke of the pump to start _____.	and end earlier	and end later	later and end earlier	earlier and end later
406	The amount of fuel injected into a cylinder by a unit injector is controlled by _____.	a metering helix	the firing pressure in the cylinder	varying the clearance between the injector cam and the injector rocker arm	varying the length of the plunger stroke
407	On a diesel engine equipped with individual jerk type fuel pumps, adjustments should be bade to the tappets (push rods) of the pumps to _____.	change from light to heavy fuel	equalize effective delivery strokes	regulate combustion pressures	regulate exhaust temperatures

408	The amount of fuel delivered for each cycle must be in accordance with the engine load, and the same quantity of fuel must be delivered to each cylinder for each power stroke at that load. Which of the following statements describes this requirement?	Suitable injection rate	Proper timing	Accurate metering	Suitable atomization rate
409	An individual fuel injection pump is designed for variable beginning and constant ending of injection. For diesel engines operating a generator at constant speeds, the start of injection will _____.	always occur at top dead center	retard as the load increases	advance as the load increases	remain unchanged regardless of load
410	Which of the following problems may occur if the opening pressure of a fuel injection nozzle is greater than specified by the engine manufacturer?	The amount of fuel injected will be increased	The start of injection will be retarded	The nozzle will permit fuel to dribble	The spray pattern will be distorted
411	Which of the following conditions will tend to increase the ignition delay period of combustion in a compression ignition engine?	Decreasing the air charge temperature	Using a fuel oil with a higher cetane number	Increasing the compression ratio	Reducing the injected fuel oil droplet size
412	If the diesel engine fuel injection timing is changed to delay the start of injection until the pistons are at top dead center, the engine will _____.	lift its cylinder relief valves	have high firing pressures	develop less power under load	backfire through the air intake
413	One remedy for a high firing pressure, in addition to a high exhaust temperature in one cylinder of a diesel engine, is to _____.	retard fuel injector timing	adjust the fuel rack	increase scavenge air pressure	reduce fuel booster pump pressure
414	During engine warm-up, the expansion of cylinder head valve stems due to the buildup of engine heat, is compensated for by the _____.	hydraulic governor	valve lash clearance	jacket water cooling system	valve spring tension

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415	When the cold tappet clearance is less than that specified by the engine manufacturer, the diesel engine valves will _____.	fail to open when the valves are warm	close earlier than normal	open earlier than normal	remain open for a shorter duration
416	If the valve tappets in a diesel engine are set at greater clearances than those specified by the engine manufacturer, those valves will _____.	open late and close early	open late and close late	open late and close late	fail to open at normal operating temperature
417	If the intake, or exhaust valve stem clearance is found to be excessive, in addition to too little movement of the rocker arms, you should check for _____.	worn valve seats	collapsed hydraulic valve lifters	loose valve spring locks	broken valve spring
418	If the valve lash on a diesel engine is set improperly, which of the following statements represents the most serious problem that can develop?	Too little lash will cause noisy operation and excessive wear	Too much lash may prevent combustion through loss of compression	Too little lash may prevent the valves from seating properly	Too much lash will cause the valve to open early and close late
419	A large, low-speed, main propulsion diesel engine is operating at 80% load and normal speed while the vessel is in calm seas. As the intensity of the seas increase, the engine speed governor maintains the same RPM, although the load indicator indicates an increase in load beyond its allowable limits. Which of the following actions should be taken?	Ignore this situation as the engine can handle the load increase	Increase the load limit setting	Increase engine RPM	Decrease the load limit setting
420	If a two-stroke/cycle diesel engine is overspeeding due to leakage of lube oil into the cylinders, what should you do to stop the engine?	Shut off the fuel supply and block the flow of intake air	Move the fuel control mechanism to the no fuel position	Block the fuel supply by closing the master fuel valve	Relieve all pressure in the fuel system
421	A diesel generator has just been paralleled with an AC turbogenerator, but the load can not be properly divided. This could be caused by _____.	a faulty reverse power relay within the main circuit breaker assembly	a different speed setting on each unit	unsynchronized isochronous load distribution adjustments	an incorrect diesel generator governor speed droop adjustment

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422	If the load on a diesel engine equipped with an isochronous hydraulic governor is increased, after compensation is performed by the governor, the engine speed will _____.	decrease	increase	fluctuate	remain the same
423	An AC diesel generator incapable of being paralleled with the main bus normally employs an isochronous governor in order to _____.	increase speed droop in proportion to load	increase or decrease engine speed upon load demand	prevent attempts to parallel	maintain a frequency of 60 cycles per second
424	When the diesel engine hydraulic governor is operating at controlled speed, which of the relationships listed will occur between the edges of the pilot valve and the ports of the pilot valve bushings?	The edges are above the ports and oil under pressure supplies the power piston	The edges are above the ports and oil bleeds to the sump	The edges are in constant motion going both above and below the ports and governor stability is maintained	The edges register with and just close off the ports without allowing oil flow
425	When the prime movers of two paralleled generators are equipped with mechanical-hydraulic governors, and are operating within their designed range, the unit with the least amount of speed droop will _____.	pick up more of any increase in load	drop an equal amount of any decrease in load	pick up less of any increase in load	share an equal amount of any increase in load
426	Adjustments to the compensating needle valve in a hydraulic governor should be made with the engine at _____.	half speed and normal temperature	maximum power at a normal load	maximum power and load under normal conditions	normal operating temperature without a load
427	Compensating needle valve adjustments to a hydraulic governor should be made with the engine _____.	running at maximum power and load under normal conditions	running at half speed and at normal temperature	running at normal operating temperature without load	developing maximum power at normal load
428	A large change in ambient temperature, or using an oil of a viscosity different than the one recommended by the manufacturer in a mechanical hydraulic governor, will result in the need to adjust the _____.	compensating needle valve	pilot valve opening	accumulator spring tension	compensating spring tension

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429	The major cause of trouble in a mechanical-hydraulic governor is contamination of the hydraulic fluid by _____.	fuel oil tars	dirt	fuel oil	governor cooling water
430	A diesel generator governor is hunting. After changing the oil the governor is flushed and the compensation needle valve is adjusted; but the hunting persists. You should NOW _____.	calibrate the fuel pump rack settings	carefully check for binding in the governor lin	check air intake manifold pressure	set the speed droop adjustment to zero
431	If the main propulsion diesel engine governor works irregularly with a jerking motion, a possible cause can be _____.	a sticking fuel control linkage	a malfunctioning overload cam	floating valves	an unlocked overspeed trip
432	If the operating speed of a diesel engine increases without an apparent change in the engine control settings, you may suspect a _____.	leaking air starting valve	malfunctioning governor	control air leak	clogged intake air intercooler
433	During a routine round of a diesel engine generator, you observe a low oil level in the governor sump. If there is no visible sign of external leakage, you should suspect the cause to be a/an _____.	Uncovered sight glass ventilation orifice	Leakage through the power piston oil seal	Defect in the sight glass gasket	Leakage through the governor drive shaft oil seal
434	Immediately report any abnormal condition or emergency occurring in the fire room to the_____.	first assistant engineer	fireman on watch	oiler on watch	engineer on watch
435	Which of these will have the greatest lasting effect on the crew with respect to safety?	Publishing comprehensive safety rules	Videotapes of actual accidents	Incorporating safety practices in the ship's daily routine	Posters illustrating safety practices

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436	Personnel who are moving or handling materials aboard ship should not follow which practice?	Throwing materials from high places to the deck	Examining materials for sharp edges or protruding points before handling.	Signaling that all personnel are clear before fitting or lowering materials	Closing, tagging, or securing valves that permit the entrance of steam, water, or air into a fitting or other equipment
437	Before you do any work on electrical or electronic equipment, which of the following precautions should you carry out?	Bypass the interlocks	Station a man at the circuit supply switch	Secure and tag the supply circuit breaker in the open position.	De-energize the applicable switchboard bus
438	Which of the following precautions should be observed to safeguard the operator and other personnel working on or near a hoisting operation?	Keep a load on the hoist until all personnel have finished working	Make sure that the fitting gear capacity is not exceeded.	Have one man keep a hand on the load to steady it	Set the load on a movable dolly when transportation is needed
439	Diesel engine control can be obtained by the bridge_____.	only after the engine room control station is switched to bridge control	at any time	whenever the secondary station is switched to ‘bridge control’	approval of the chief engineer only
440	Constant capacity, pressure atomizing, fuel burners designed to meet a wide variation in steaming loads on an auxiliary boiler, are _____.	automatically supplied with more fuel on demand	automatically supplied with warmer air on demand	cycled on and off in response to steam demand	equipped with standard variable capacity atomizers
441	The highest loads applied to the diesel engine crankshaft main bearings are _____.	centripetal loads	inertia loads	axial loads	firing loads
442	Underway on watch in the fireroom, the bridge reports black smoke coming from the stack. This would indicate_____.	all of the above	excessive steam atomization pressure	fuel oil temperature too low	excessive air-fuel turbulence
443	Automatically fired auxiliary boilers use fuel oil strainer arrangements of either the simplex type or _____.	absorbent type	duplex type	metal disc type	filter bag type

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444	While standing watch at sea, a main engine bearing high temperature alarm has just been indicated on the control panel. Your next action should be to_____.	increase the speed of the lube oil supply pump	immediately notify the bridge	decrease the main engine speed to idle	verify the main engine lube oil coolers are functioning properly
445	When standing watch at sea, steaming full ahead, adding make-up feedwater from reserve feed double bottom tanks would also have a tendency to change which of the following parameters?	Decrease air ejector condenser main condensate outlet temperature	Increase DC heater temperature	Decrease DC heater level	Increase main condensate discharge temperature
446	When standing watch at sea, steaming full ahead, reducing the boiler forced draft pressure would also have a tendency to correct which discrepancy?	High atomizing steam pressure	High DC heater level	Low superheat temperature	High stack temperature
447	Diesel engine automated control systems may utilize sensing devices of dual function, with sensing ranges providing both alarm and engine shut down capability. Which of the ke points listed would only require an alarm sensor?	Jacket water pressure and temperature	Lube oil pressure and temperature	Lube oil sump level	Engine overspeed
448	Prior to relieving the watch you should first check the fireroom status by verifying the boiler steam drum level and_____.	lube oil temperature	steam atomization temperature to the mechanical atomizers	fuel pressure to the burners	water drum level

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449	Prior to relieving the watch you should first check the fireroom status by verifying the fuel oil pressure to the boilers and_____.	boiler steam pressure	port and starboard settling tanks	make up feed tank level	prepare to blow tubes
450	You have just been notified by the watchstander in the engine room, a main engine bearing high temperature alarm is indicated and remotely displayed as 145 degrees Fahrenheit, you should_____.	increase the speed of the operating main lube oil supply pump	change over to the standby main lube oil supply pump	assume, but verify that the circuit has malfunctioned	notify the bridge that you will be slowing down the main engine
451	When relieving the watch in the fireroom, you should first check the fuel pressure to the boiler and_____.	economizer outlet temperature	boiler water level	empty all oil drip pans	port and starboard settling tank levels
452	When relieving the watch in the fireroom, you should first check the boiler water level and_____.	steam atomization to the mechanical atomizers	port and starboard settling tank temperatures	condition of furnace fires	feed pump lube oil level
453	When relieving the watch in the fireroom, you should first check the boiler steam pressure and_____.	boiler water level	prepare to blow tubes	stack temperature	port and starboard settling tanks
454	Prior to relieving the watch you should first check the fireroom status by verifying the boiler steam drum level and_____.	preparing to blow tubes	inspecting the fires and burners	port and starboard settling tank levels	stack temperature
455	A bronze bearing liner with a lead-tin flashing has a milky-white color over most of its surface and some areas of exposed bronze. The white coloring indicates_____.	improper break-in wear	relocation of the overlay flashing	water contamination of the lube oil system	proper break-in wear
456	Which of the listed governor characteristics will determine the final load sharing relationship between paralleled diesel generators?	Sensitivity	Power	Compensation	Speed droop

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457	While on watch in the engine room and steaming at a steady rate, the water level begins to decrease and suddenly drops out of sight in the boiler gage glass. Your FIRST corrective action should be to_____.	secure the fires	open the feedwater regulator bypass	blowdown the boiler gage glass	slow down the engines
458	While inspecting the main bearing on a diesel engine you find impregnated dirt and scratches in the bearing surface. You would, therefore, suspect that_____.	the maximum allowable bearing pressure had been exceeded	water was present I the oil	the bearing had been overheated	the lube oil was not being properly filtered
459	Control of the main propulsion diesel engines can be shifted from the engine room to the wheelhouse from the_____.	wheelhouse control station	engine room control station	captain's office	chief engineer's office
460	What is the minimum standard rest of a rating forming part of an engineering watch within a 24-hour period?	8 hours	12 hours	6 hours	10 hours
461	A perfect vacuum is represented by_____.	30 in. Hg	25 in. Hg	15 in. Hg	10 in. Hg
462	One horsepower is equal to _____.	955 ft-lb	270 ft-lb/min	746 watts	778 ft-lb
463	All members of the engineering watch should have adequate knowledge of the _____.I - use of appropriate internal communication II - escape routes from machinery spaces III - location of fire fighting equipments	III only	I II and III	I only	II only

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464	Prior to taking over the engineering watch while the ship is underway relieving officers of the engineering watch should satisfy themselves regarding _____. I - availability of fire fighting appliances II - state of completion of engine room log III - standing orders of the chief engineer officer	II only	I only	I II III	II & III
465	The relieving engineering watch officers when underway should be familiar with the _____. I - level of fuel in the service tank II - potential adverse condition resulting from bad weather III - nature of work being performed on the machinery	I only	I II III	II & III	II only
466	When do you pump diesel oil into the burners of an auxiliary boiler?	Heavy fuel must be blended	Overload capacity is required	Heavy smoking persists	Starting a dead ship
467	What should you do FIRST to correct a condition wherein a diesel engine is operating with excessively high exhaust temperature on all cylinders?	Adjust the fuel rack	Increase the lube oil pressure	Reduce the engine load	Increase the cooling water flow
468	What is the easiest way to locate defective exhaust valves in a propulsion diesel engine?	Taking compression readings	Exhaust pyrometer reading	Listening to the engine	Inspecting the valves visually
469	Some diesel engines are fitted with a thermometer in the cooling water outlet from each cylinder. If the cooling temperature from an individual cylinder begins to rise what should you suspect?	That there is an increase blow-by of the cylinders	That there is an incomplete combustion in that cylinder	That there is an overloading of cylinder	That there is an overloading of the adjacent cylinder
470	What is the function of an expansion tank in a diesel engine cooling system?	Increase raw water content	Allow changes of the cooling water volume due to heating or cooling	Cooling exhaust gases without using coolant	Lower lubricating oil pressure when operating long period

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471	Why is the temperature of the scavenge air after the scavenge air cooler should not be lowered below recommended value?	To maintain the thermal efficiency of the diesel	To avoid excessive formation of condensate water	To avoid misfiring and starting problems	To avoid cracking of the cylinder liner
472	Prior to departure what preparations are required regarding pistons and cylinder liners of a diesel engine ?	Open indicator cocks close safety valve turn lubricators	Open starting air start booster pump start stern tube pump	Preheat cylinders and pistons turn engine turn cylinder lubricators	Close safety valve put out turning gear open air bottles
473	In an engine operation what is the effect called that describes the unstable operation of the governor that will not maintain a steady state condition ?	Hunting	Stability	Sensitivity	Deadbeat
474	The fundamental difference between a 2-stroke and a 4-stroke engine is in the number of _____.	piston strokes each one needs to complete a revolution	piston strokes each one needs to complete a combustion cycle	combustion events occurring in each stroke	strokes in each combustion cycle
475	Diesel engine crankcase oil mist detectors are designed to analyze _____.	fire risk in the crankcase	the temperature of the oil in the crankcase	the concentration of oil vapours in the crankcase	the temperature of the bearings in the crankcase
476	If the main engine jacket cooling water expansion tank level drops rapidly what could this reaction indicate?	There is a leakage in external piping	Any of these choices	There is an internal leak in the engine	There is a leak in the jacket cooling water cooler
477	Why is it important to slow down the main engine RPM while water washing the turbocharger ?	To protect the bearings	To protect the blower side	To protect rotor blades from damage	To protect the exhaust gas economizer
478	Your vessel is entering a tropical area and high humidity is expected what should you do to avoid condensation in the main engine s air cooler ?	Operate the engine with slightly open scavenging drain cocks to get rid of water	Reduce speed	Decrease the air temperature so proper draining can be achieved from the air cooler	Increase scavenging air temperature to above dew point
479	When all preparations have been made to ensure that the main engine is operational prior to departure what will be the final test to be carried out ?	Open air to engine drain air bottles blow indicator cocks	Close safety valves blow indicator cocks fill air bottles	Put out the turning gear and turn the lubricators	Blow indicator cocks test reversing of engine short firing kick

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480	To avoid the possibility of a scavenge fire what important check is to be carried out every watch and more frequently if a damaged piston ring is suspected?	Overhear the cylinder for noise	The cylinder lubrication	The scavenge drain line is not clogged	The exhaust gas temperature
481	With full load on the main engine the RPM of the turbocharger is too low what may be the cause ?	The diffuser ring is damaged	Dirty nozzle ring	The lubricating oil pump is malfunctioning	Exhaust temperatures on the main engine are too high
482	In an automated engine the center from which the ship s engine room is controlled is called the _____.	main engine nerve and control station (MENS)	engineering control room (ECR)	power plant station control station (PPCS)	control plant station (CPS)
483	Which of the following most important measurement to check when overhauling centrifugal pumps?	Impeller diameter	Shaft axial clearance	Neck bush/shaft clearance	Impeller/wear ring clearance
484	Which of the items listed below is the correct method for removing intact engineers studs?	Drill and use stud remover	Pipe wrench	Stud box	Self grip wrench
485	If a leak is suspected in a tube heat exchanger what should be checked FIRST?	Tightness of flared tube end	Tube plates for cracking	Fixed tube end for security in tube plate	Tubes for damage
486	Which of the followingfirst check to carry put when suction gauge reading is high but no liquid is passing through the bilge pump?	inspect pump internals for wear	check the suction stainers and valves	open the sea suction valve to prime pump	clean the oil /water seperator
487	Which would you do FIRST on starting a gear pump if pumping cold oil?	start/stop the pump frequently	start the pump with valves closed and gradually open	throttle the suction valve	ease off the spring loaded pressure relief valve
488	When on passage what should be the condition of the fire main?	sea suction and fire main discharge valves always open	pressurized at all times	all pump and isolating valves closed	drained and empty to prevent leakage at hydrants
489	Before loosening pump covers how should the pressure be checked?	checking the pressure gauge	remove cover slowly	remove drain plug	air vent valve open and clear
490	How does a quick closing valve operate?	an independent mechanism closes the valve	the valve bridge is collapse remotely allowing the valve to close	the valve can only be opened and closed hydraulically	a retaining collar is released allowing the valve to close

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491	When the opening pressure of a diesel fuel injector is LOWER THAN that specified by the engine manufacturer the effect would be a/an _____.	increase in quantity of fuel injected	delay in the start of injection	reduction in the duration of injection	decrease in the quantity of fuel injected
492	Which of the following type of electric light is used in pil tanker pump room?	water proof	shock proof	flame proof	acid proof
493	The process of killing the harmful bacteria from the water so as to make it safe for use is called_____.	carbonization	disinfection	evaporation	filtration
494	Scavenging trunks are more prone to fire because they are_____	accumulating oily substance	located below the cylinder	always over pressure	recipient of fresh air
495	An incinerator is a waste disposal unit that will burn_____.	gases	solid material and all types of liquid waste	solid material	liquid material
496	Which of the following minimum standard rest of a rating forming part of an engineering watch within a 24-hour period	8 hours	12 hours	6 hours	10 hours
497	When an engineer on duty is inspecting an UMS-mode operated engine room at night what precaution should be taken?	leave the UMS selector switch to UMS mode	switch the engineer call alarm to notify other engineers	switch on the dead man alarm upon entering the control room	do not silence the alarm so the other engineer can hear
498	Where is the safest place to do hot work in the engine room	work shop	purifier room	electrical shop	boiler room
499	Engine room bilge water can be pumped out overboard safely by the use of which equipment listed below?	fine mesh filter	oil purifier	oil seperator	foam type filter
500	Which of the following kind of tank is being used onboard that collects the dirty water from basins and sinks when the vessel is in port so that water pollution can be prevented?	drain	bilge	sewage	sludge
501	When there is excessive formation of frost in the evaporator coils it will _____ .	reduce efficiency of refrigerating plant	keep compartment cooler	lessen load on compressor	system in normal condition

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502	Excessive vibrations created by the main propulsion machinery are detrimental to which equipment listed below?	cabin	galley	navigation	electronic
503	An engineer on duty inspecting an unmanned engine room at night should be aware of which of the following precautions?	Switch the engineers call alarm to notify other engineers	Switch on the dead man alarm upon entering the control room	Call the oiler on duty	Silence the alarm so the other engineer cannot hear
504	What should the outgoing duty engineer do before he hand over the watch to his reliever?	Check that reliever is capable to carry out watch keeping duties	Soda drink is ready	Hand over the log book	Information the first engineer before leaving engine room
505	A report when an incident takes place involving the discharge or probable discharge of oil (Annex I of MARPOL 73/78)_____.	final report	harmful substances report	dangerous goods report	effective report
506	It is necessary to transfer fuel oil to the settling tanks in order to _____.	purge any air in the fuel	filter and purify it before being pumped to the boiler burners	allow the sediments and water to settle	heat the fuel to proper temperature for atomization
507	When you are securing a steam-reciprocating pump which valves should you leave open?	Steam cylinder drain valve	Steam supply valve	Steam exhaust valve	Water cylinder drain valve
508	Latent heat can be defined as the heart which must be added to a substance in order to change it from a _____.	Solid to vapor	All of the above	Liquid to vapor	Solid to liquid
509	Which of the following design features is most common to two-stroke/cycle low-speed main propulsion diesel engines?	Cross-scavenging air flow	Trunk type pistons	Single reduction gearing	Crosshead construction
510	The one method of constructing large marine diesel engines and reducing the total engine frame weight is through _____.	case hardening integral component	casting interlocking components	forging integral components	welding plates to form sections for assembly
511	A hand held digital tachometer give a bad reading if _____.	partially aimed at a 60 Hz fluorescent light	aimed directly at the shaft	positioned 5-10 inches from the shaft	the tae is too shinny

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512	What speed is known when the rotating shaft frequency and the natural vibrating frequency become synchronized at a particular speed?	Synchronous speed	Critical speed	Sympathetic speed	Breakaway speed
513	At what temperature in degree Celsius will safety devices called fusible plug installed in air compressor or compressed air system melts in order to prevent explosion?	150	200	50	100
514	The standards of marine engines of over 23 HP for starting purposes in most cases should _____.	Battery starting	Hand starting	Compressed air	Electric starting
515	The action should take when water is found in the fuel oil setting tank is to _____.	shift pump suction to an alternate settling tank	All of the options	shift to alternate or standby fuel oil service pump	sound the settling tank with water indicating paste
516	Diesel engine jacket water is used in distilling units in the_____.	brine cooler	final heating of the distillate	distillate cooler	final heating of the feedwater
517	The following refers to the first law work transfer?	Lower than heat transfer	Higher than heat transfer	Greater than heat transfer	Equal to heat transfer
518	What unit of measure expresses the chloride content of boiler water?	Micro ohms	PPM	GPC	pH
519	Using a fuel oil with an above normal sulfur content in a main propulsion diesel engine, you should _____.	change the lube oil more frequently	maintain a higher jacket water temperature	maintain a higher air-box pressure	maintain a higher air-box temperature
520	When using the universal color contrast-type dye penetrant to examine a boiler weldment, any surface defect will appear _____.	black against a white background	bright red against a white background	white against a dull red background	white against a black background
521	When vapor is in contact with and remains at the same temperature as the boiling liquid from which it was generated, the vapor and liquid are said to be in a/an _____.	critical state	sensible contact	latent contact	saturated condition
522	What is the proper sequence for washing an economizer generating tubes and sections.	screen tubes, generating tubes, and then superheater	superheater, economizer, and then generating tubes	generating tubes, superheater, and then economizer	economizer, superheater, generating, and then screen tubes

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523	When water washing the firesides of a boiler, which of the listed procedures should be followed?	Begin the washing above the economizer and work down.	Begin water washing while the brickwork is still warm.	Dry the boiler by firing all burners at high rates to evaporate moisture rapidly.	Assure that the water stream impinges directly on the refractory to avoid tube damage.
524	When would the available energy of the exhaust gases of a two-stroke/cycle diesel engine be insufficient to drive an exhaust gas turbocharger, resulting in the incorrect amount of air for combustion?	During operation at rated speed, but low power output	During operation at low load and speed	During acceleration	All of the above
525	The exhaust gas of a two-stroke/cycle diesel engine is insufficient to drive an exhaust gas turbocharger, resulting in the incorrect amount of air for combustion?	All of the above	During operation at low load and speed	During operation at rated speed, but low power output	During acceleration
526	During adjustment of a thermostatic expansion valve always remember that _____.	all refrigerant must be pumped into the receiver before adjustments are made	time must be allowed for conditions to stabilize in the evaporator before further adjustments are made	refrigerant must be bled off the sensing line before adjustments are made	all refrigerant must be routed through the dehydrator while changing the superheat setting
527	In checking the oil in an R-12 compressor, the most accurate reading is obtained when ?	immediately after purging	immediately after charging	immediately after shutdown after a prolonged period of operation	after being secured for 3 hours with the sump heater secured
528	When you are installing a new furnace floor in an oil fired boiler, enough clearance should be left between firebrick to allow for _____.	expansion when the boiler is fired	ramming with plastic chrome ore	flame penetration of the joint	proper filling of the joint with slag
529	In transferring fuel oil from one double bottom tank to another, precautions to be observed and should include.	maintaining a supply of chemical dispersant to cleanup minor oil spills adjacent to the ship	sounding the tanks frequently and reducing the transfer rate while topping off	plugging gooseneck tank vents to prevent accidental overflow	maintaining a high transfer rate until a slight trickle of oil is observed flowing from the overflow line

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530	Detected small refrigerant leak in the system with the use of halide torch, what is the color of the torch flame.	blue	orange	green	white
531	You have completed bunkering operations, the hoses should be _____	drained into drip pans or tanks	blow down inert gases	steamed cleaned and flushed with hot water	slowed with their ends open for venting
532	When you use the compressed air reservoir connected to an air compressor as an aftercooler, the reservoir must be_____.	fitted with a manhole	fitted with a moisture trap at the inlet	frequently drained of condensed water	fitted with a sight glass
533	Whenever abnormality is encountered in air compressor, which of the following measures should be done?	Refer to fault finding chart to ascertain in the cause of abnormality	Stopped immediately and check the faults	Observe compressor before stopping	Unload compressor to minimum load
534	Whenever operating a boiler, whose economizer is bypassed, always keep in mind that _____.	less heat is actually being transferred to the steam because of the decrease in the ratio of gas to steam weight	there is always the danger of metal oxidation in the economizer	it is necessary to fire more fuel to maintain the required evaporative rating	all of the above
535	Where a two-stage air ejector set is used in a two-stage flash evaporator, the first-stage air ejector takes suction from the second stage of the evaporator, and the second stage air ejector _____.	takes suction from the first stage ejector discharge	takes suction from the first stage of the evaporator	takes suction from the second stage of the evaporator as well	is normally idle and used mainly as a standby unit
536	Where are moisture shields located in a main propulsion steam turbine?	At the steam strainer inlet	At the inner stage diaphragms	Around throttle valve stems	After the last stage of the ahead rotor blading
537	Where auxiliary steam supply is not used in the process of maintaining vacuum in a distilling unit, the vacuum is usually attained by _____.	a separate suction connection to the brine overboard pump	eductor pumps	increasing the rate of condensation in the distiller condensers	air operated air ejectors
538	Where can the ship speed be controlled without the increasing or decreasing the main engine revolution?	ship rudder	bow truster	propeller pitch	reduction gear

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539	Where diesel engine speed and clutch controls are combined into one operation by a single control lever, movement of the lever from the stop position to the ahead position will FIRST _____.	disengage the astern clutch	increase the engine speed	decrease the engine speed	engage the ahead clutch
540	Where engine bores exceed 230 mm, a bursting disc or flame arrester is to be fitted _____.	on all devices subject to the by-products of combustion or lubrication system vapors	in way of the starting valve of each cylinder for direct reversing engines having a main starting manifold	at the supply inlet to the control air manifold for non- reversing engines	on the exhaust manifold prior to the inlet of the turbochargers
541	Where reaction turbine blading is fitted with shrouding of end tightened design, which of the following conditions will be the most critical to efficient turbine operation?	Rotor axial position	Rotor casing sliding foot position	Diaphragm clearance position	Rotor radial position
542	Where the size and design of an engine is such that lubrication before starting is not necessary and an attached pump is normally used, _____.	an independently driven pump capable of supplying each engine with sufficient quantities of oil during ahead operations is required	no additional pumps are required if the vessel is equipped with two propulsion engines clutched to reduction gears through a suitable arrangement	an additional pump is not required provided the engine driven pump is capable of producing sufficient pressure regardless of the direction of rotation	an independently driven stand-by pump is not required if a complete duplicate of the attached pump is carried as a spare
543	Where three gear trains, i.e. high pressure first reduction, low pressure first reduction, and second reduction are each contained in a separate and sequential portion of the gear housing, the reduction gear unit is known as _____.	nested	articulated	locked train	none of the above

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544	Which can be considered as a drop-in replacement refrigerant?	R-123	R-134a	none of the above since all require a lube oil change out and replacement with a different type of lube oil	R-500
545	Which can of lubricant is used reciprocating pump rods?	Graphite and oil	engine oil	Oil mixed with kerosene	Vegetable oil
546	Which characteristic of fuel oil is the most significant when determining the temperature to which the fuel oil must be heated for proper atomization?	Specific gravity	Viscosity	Flash point	Pour point
547	Which characteristic of the theoretical Otto cycle does not occur in the theoretical Diesel cycle.	No pressure increase during combustion.	Rapid pressure decrease during compression.	Rapid volume increase during combustion.	The entire fuel charge is present for ignition.
548	Which constituent of fuel oil determines the specific heat?	Nitrogen	Oxygen	Hydrocarbons	Sulphur
549	Which cylinder liner surface condition indicates proper lubrication?	A dull black appearance	A bright appearance	A thick oily film	A thin layer of lacquer
550	Which device will normally shut down a diesel engine after it exceeds its maximum speed setting?	Over speed trip	Speed limiting governor	Over speed governor	Speed droop relay
551	Which diesel engine component has oil grooves?	Cylinder walls	Pistons	Bearing journals	Bearings
552	Which diesel engine cylinder has internal cooling water passages?	Externally linned liner	Wet liner	Internally linned liner	Integral liner
553	Which features of a centrifugal pump reduce the need for renewing worn impellers and pump casings?	Close radial clearance between impeller hub and casing	Low rotational speed of impeller	Replaceable impeller and casing wearing rings	Removable end plate
554	Which following condition could occur if the distilled water tank level indicator has been giving an erroneously high reading?	Past logbook entries must all be changed to indicate actual amounts.	All of the above are correct.	The tank may overflow in the engine space causing unnecessary damage to electrical equipment.	It is possible to lose vacuum if the level drops below the make-up feed piping connection.

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555	Which group of numbers would indicate the largest fuel capacity for a sprayer plate in a mechanical fuel oil atomizer?	2909	3 PCRS 4309	3509	43709
556	Which instrument is used to take crankshaft deflection readings?	Trammel gage	Dial type inside micrometer	Dial type outside micrometer	Gage block
557	Which internal combustion engine starting system uses a vane type fluid motor?	Jet flow	Centrifugal	Electric	Compressed air
558	Which is a true statement concerning scotch type boiler	combustion occurs in the tubes	water flows	combustion gasses flows on the tubes	flames impinge on the tube
559	Which is an example of a secondary refrigerant?	carbon dioxide	methyl alcohol	brine	cuprous chloride
560	Which is the first bearing designed to absorb the load created on the piston by combustion in the engine cylinder.	Crankshaft journal bearing	Wrist pin bearing	Crankpin bearing	Thrust bearing
561	Which kind of pump converts energy (external driving source) into kinetic energy in the fluid by giving impulses to the fluid by giving impulses to the fluid by impellers?	axial flow pumps	reciprocating pumps	centrifugal pumps	rotary gear pumps
562	Which lubricating oil additive is used in diesel engines to reduce the tendency for sludge and varnish to form on the engine parts?	Inhibitors	Flash point improvers	Pour point improvers	Foam suppressors
563	Which materials should be used for ammonia refrigeration system evaporator cooling coil construction?	Copper tubing with copper fins	All of the above may be used.	Aluminum tubing with copper fins	Copper tubing with aluminum fins
564	Which of the actions listed should be carried out immediately after securing the fires in one boiler of a two boiler ship?	Drain and refill the boiler with cold water.	Open the air registers wide to cool the furnace.	Secure the main feed pump.	Relieve all fuel oil service pressure to that boiler.
565	Which of the air intake systems listed will require the least amount of brake horsepower to operate?	Natural aspiration	Turbocharged	Underside piston compression	Roots blower
566	Which of the air intake systems listed will result in the lowest specific fuel consumption?	Turbocharged	Natural aspiration	Piston blower	Roots blower

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567	Zinc anodes are installed in a marine sea water heat exchanger cooling system to:	prevent scaling	eliminate corrosion	control electrolysis	inhibit oxidation
568	Your ship has steamed 1651 miles at 20 knots using 580 tons of fuel oil. The distance remaining to your next port is 1790 miles. If you increase speed to 25 knots, how much fuel will be used to reach that port?	1060 tons	640 tons	722 tons	983 tons
569	With an increase in temperature, the volume of hydraulic fluid:	increases	remains the same	remains constant if pressure decreases	contracts
570	With an increase in temperature the volume of flammable and combustible liquids:	remains constant if pressure remains constant	expands	contracts	remains constant
571	Which of the listed problems would be indicated by an accumulation of water in one cylinder, in addition to the crankcase of an idle diesel engine?	Water in the fuel system.	Leaking lube oil cooler.	Cracked cylinder liner.	Excessive condensation in that cylinder.
572	Which of the listed devices is often used in combination with the flywheel of small and medium size diesel engines for the purpose of starting?	Magneto	Bendix drive air motor	Electronic SCR	Electric generator
573	Which of the items listed causes a direct acting mechanical governor to operate the engine fuel control linkage?	Flyweight centrifugal force	Servomotor action	Hydraulic oil pressure	Relay motion
574	Which of the following represents the proper color of the flame end farthest from the boiler burner during normal operations?	Dazzling white	Light brown haze	Bright yellow or orange	Dark brown
575	Which of the following operating conditions will occur when shims are removed from the joint between the foot of a	Increased compression ratio	Decreased connecting rod bearing clearance	Increased connecting rod bearing clearance	Decreased compression ratio

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	marine type diesel engine connecting rod and the bearing box?				
576	Which of the following is only found in an opposed piston engine?	Scavenging port	Double crankshaft	Combustion chamber	Exhaust values
577	Which of the following is necessary for all waste heat boiler installations, regardless of design or manufacturer?	A means to control of evaporation	An independent means to prevent feed water contamination	Installation of a powered circulating booster pump	Installation of a superheater
578	Which of the following fuel oil characteristics establishes the danger point when transferring, pumping, and firing procedures are concerned?	Fire point	Viscosity	Specific gravity	Flash point
579	Which of the additives listed will maintain the suspension of fine residue particles in lube oil?	All of the above.	Dispersant	Suppressant	Viscosity
580	Which of the additives listed is used to lower the pour point of a lubricating oil?	Emulsifiers	Suppressants	Depressants	Extreme pressure
581	Which component of a Kingsbury thrust bearing assembly transmits the thrust from the line shaft to the oil film and shoes?	Lower leveling plate	Base ring	Collar	Upper leveling plate
582	When an air started, four-stroke/cycle diesel engine is being cranked over, the starting air is admitted to each cylinder during the beginning of its:	power stroke	compression stroke	intake stroke	exhaust stroke
583	When a waste heat boiler is installed in the exhaust of a main propulsion diesel engine, the exhaust gas bypass would be used:	at high loads to prevent overheating	at low loads to prevent corrosion in the boiler	during periods of high steam demand	when the turbocharger is in operation
584	When a diesel engine is attached to a reduction gear, diesel engine speed is reduced and the torque available for work:	is reduced	remains the same	is increased	is eliminated
585	What type of energy is associated with the water of an operating boiler?	Specific	Chemical	Mechanical	Thermal
586	What is the unit of pressure in SI unit?	pounds	density	kg	specific weight

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587	What is the unit of power in SI?	Watt	Horsepower	Joule per second	Ps or mHp
588	What is the unit of power in metric system?	Joule per second	Horsepower	Watt	Ps or mHp
589	What is the most common liquefied gas cargo?	ammonia	chemical gases	butane	hydrocarbons
590	What is the main constituent in fuel oil which determines its heat value?	Sulphur	Nitrogen	Hydrocarbons	Oxygen
591	What is the diameter of a cylinder whose cross-sectional area is 706.86 square inches?	15 inches	30 inches	36 inches	24 inches
592	What is the average piston speed of a 7- cylinder 2 stroke engine with a 580 m bone and a 1700 mm stroke operating at 100rpm?	4.5 m/sec	2.8 m/sec	5.7 m/sec	9.0 m/sec
593	What is swept volume per cylinder per revolution of a 6 cylinder, 2 stroke diesel engine with a 580 m bone and a 1700 mm stroke operating at 100 rpm?	900 L	450 L	2700 L	5400 L
594	What equipment is required when processing bilge slops for overboard discharge?	A lube oil purifier operating as a separator.	A 30 PPM oily water separator and discharge monitor.	A 100 PPM oily water separator.	A 15 PPM oily water separator and discharge monitor.
595	What do you call a stress that tender to electro?	bonding	shear	tensile	Compressive
596	Water regulating valves are installed to vary the water flow through the water cooled refrigeration condensers in response to changes in what parameter?	compressor discharge pressure	compressor discharge temperature	compressor speed	condenser discharge temperature
597	Valve rotators are commonly used on which of the listed diesel engine cylinder head valves?	Blow down	Exhaust	Cylinder relief	Air starting
598	Turbine lube oil suction strainer baskets have:	fine perforations	frame lined with wire cloth	self-cleaning design	coarse perforations
599	The unit of pressure in English system.	bar	psi	kPa	kgs
600	The unit of power in English system is:	metric HP	Joule per sec	Hp	Kg.m.

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601	The transfer of heat within a solid, caused by the application of thermal energy, is called:	conduction	radiation	convection	condo-radiation
602	The temperature at which a vapor mixture, at a given pressure, begins to condense is the:	critical point	dew point	bubble point	boiling point
603	The standard unit of liquid volume used in the petroleum industry, as well as the tanker industry, is a:	liter	gallon	barrel	drum
604	The spray holes in diesel engine fuel valves should be cleaned using carbon solvent and:	a copper wire brush	a special cleaning wire	diesel fuel	a shaved wooden
605	The side pressure per unit of area, resulting from the angularity of the motion of the connecting rod, depends primarily on the:	length of the piston	weight of the piston	length of the cylinder liner	speed of the engine
606	The ratio of the brake horsepower to the indicated horsepower of a diesel engine is its:	brake thermal efficiency	thermal efficiency	mechanical efficiency	volumetric efficiency
607	The process of scavenging a two- stroke/cycle diesel engine serves to:	reduce the intake air charge density	improve fuel flow volume	increase the temperature of exhaust gases	cool the exhaust valves
608	The process of grinding or shredding sewage into smaller particles is known as:	communition	detention	skimming	bulking
609	The process of boiling seawater in order to separate it into freshwater vapor and brine is usually defined as:	dehydration	evaporation	dissolution	condensation
610	The power of a 4 stroke cycle diesel engine is:	same that of 2 stroke	depends that of rpm	Double that of 2 stroke	Half that of 2 stroke
611	The percentage by weight of steam in a mixture of steam and water is called the:	moisture quality	heat effectiveness	quality of steam	moisture percentage

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612	The movement of steam piping, as a result of changes in temperature, is best compensated for by the use of:	expansion joints	union joints	union joints	rigid brackets
613	The most important factor in engine performance is the actual power output at the end of the crankshaft available for doing work. This is known as:	friction horsepower	net horsepower	brake horsepower	indicated horsepower
614	The most common contaminant of governor hydraulic fluid is.	acid	dirt	moisture	air
615	The measured gap between the face of the atomizer tip nut and the diffuser plate, is determined by the setting of the:	sprayer plate	diffuser plate	Atomizer tipnut	Distance piece
616	The means of circulation commonly found in water table boilers is:	Acceleration	Compound	Integral	Fixed
617	The MAWP of a boiler is 900 psi and the normal drop across the superheater is 20 psi. If the superheater safety valve is set to lift at 825 psi, the minimum settings of the drum safety valves allowed by Coast Guard Regulations would be:	900 psi	825 psi	850 psi	875 psi
618	The main source of fuel injection system malfunctions is:	coated fuel lines	contaminated fuel	excessive vibration	improper adjustments
619	The lowest temperature required to cause self-sustained combustion of a substance independent of any outside source of ignition is called:	combustion temperature	flash point	explosive range	ignition temperature
620	The local is always placed on the lower half of the main bearing:	2 stroke cycle	4 stroke cycle	revered cycle	double acting
621	The linear motion of a diesel engine piston is converted into the rotary motion required to drive gears, propeller shafts, and generators by the:	journal bearings	camshaft	flywheel	crankshaft

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622	The light and medium fuels utilized in diesel engines also provide a source of:	all of the above	cooling of the cylinder liner	oxygen for combustion	lubrication for the fuel injection pump
623	The latent heat of fusion of water is:	970 BTU/lb	4.168 BTU/lb	1 BTU/lb-f	144 BTU/lb
624	The formula PLAN n/33,000 is equal to?	SHP	BHP	BMEP	IHP
625	The energy associated with atoms forming molecules is known as:	potential energy	chemical energy	chemical energy	mechanical energy
626	The data of a 4 stroke diesel engine are as follows : 2900 kPa mean effective pressure, 1.4 m length of stroke, 650 m bore, 120 rpm and 8 cylinder. Compute for the power in KW:	21,554	11,777	20,554	10,777
627	The complete unit Rousing the burner, air scoop, air door and bladed cone is correctly called the:	Register assembly	Burner assembly	Atomizer assembly	Air duct assembly
628	The Brayton Cycle is one where the combustion event occurs at:	constant temperature	constant pressure	increasing pressure	All of the above
629	The amount of chloride content in the water of an auxiliary boiler can be reduced by:	adding a sulfite chloride scavenger	adding hydrazine	blowing down the boiler	adding phenolphthalein
630	The ability of a fuel particle to travel into the combustion chamber before burning.	Turbulence	Atomization	penetration	permanenu
631	Temperature measurement is an indication of the:	rate of heat transfer from one substance to another	total heat contained in any closed energy system		
632	Steam drains from the potable water system hot water heater would be collected in the:	contaminated drain inspection tank	deaerating feed water heater	gland exhaust condenser	first stage heater
633	Spring surge in diesel engine valve springs can result in:	increasing effective spring force	splitting of the valve keeper collars	failure of the valve to open	bouncing of the valve gear
634	Specific heat of water:	1 BTU/lb-f	970 BTU/lb	144 BTU/lb	4.168 BTU/lb
635	Spark ignition engine is:	steam engine	turbine	Otto engine	diesel engine
636	Small cracks in the crankshaft bearing surface of a diesel engine are an indication of:	insufficient lubrication	corrosion fretting	misalignment	fatigue failure

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637	Rate of doing work:	pressure	power	energy	force
638	Piston cooling fins are located:	at the base of the piston skirt	beneath the piston crown	inside the cylinder liner cooling water jacket	atop the piston crown
639	Phenolphthalein indicator is used in the boiler water test for:	alkalinity	dissolved oxygen	chloride content	hardness
640	Performance of a turbocharged engine can be improved by.	decreasing the amount of valve overlaps	preheating light fuels	after cooling the intake air	preheating the air intake
641	Overheating of the generating tubes will occur when a boiler reaches its end point of:	evaporation	moisture carryover	combustion	circulation
642	One power stroke produces one revolution of crankshaft is what kind of engine?	2 stroke cycle	4 stroke	one stroke	3 stroke
643	One of the main differences between the various types of screw pumps is in the:	direction of the rotation of the screw	stuffing box diameter	pitch of the screw	type of driving gears
644	One boiler hp is equivalent to:	34,475 BTU per hour	33,475 BTU per hour	33,000 ft-lb per minute	550 ft.lb per second
645	One advantage of dry cylinder liners used in a diesel engine is the.	absence of water seal rings	greater heat transfer rate than wet liners	greater wear resistance than wet liners	lower thermal expansion rate over wet liners
646	On a four-cycle diesel engine, the valve subjected to the most severe conditions during normal service is the.	cyl. relief valve	cylinder exhaust valve	air inlet valve	air starting valve
647	Most large main propulsion diesel engines use a duplex lube oil strainer to:	decrease the time required between cleanings	remove all large and small foreign objects	ensure a positive flow of oil at all times	ensure that all lube oil has been treated twice
648	Which wave length applies to a frequency of 2000 kHz?	150 meters	1500 meters		15 meters
649	What is the maximum range of a VHF radio-set from ship to ship at sea.	2 Nautical Miles	20 Nautical Miles	2000 Nautical miles	200 Nautical Miles
650	The legal type VHF-antenna has a length of_____.	10 meters	7 meters	1 meter	3.5 meters
651	The typical ?daylight-frequencies? for long distance transmission are located in the_____	8 or 12 MHz-band	4 or 6 MHz-band	16 or 22 MHz-band	24 - 26 MHz-band

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652	The squelch on the control panel of a VHF-sat serves to_____	adjust the sound level of the signal received	adjust the threshold level for admitting signals and refusing noise	adjust the volume	adjust the proportion of atmospheric noise in receiving the spoken word
653	With the squelch mode on the VHF_____	range is fixed	range is increased	another channel is chosen	undesirable noise is suppressed
654	Acoustic feedback can arise_____	because the loudspeaker works as a microphone	because the volume adjustment of the speaker is too high	because outside noise is amplified by the loudspeaker in the microphone	because the battery is strong
655	Before a mariphone is installed on board, _____	a license must be issued	contribution must be paid	a letter of registration must be applied for	the ship must pass the port state control inspection
656	When onboard channel 16 is used for a shore radio-connection, you always work_____.	duplex	simplex	semi-duplex	triplex
657	Long distance communication in the HF-bands depends on_____	ionisation layers	dimmer setting	satellites	ground wave
658	A polarisation of a radio wave is determined by a_____	height of the aerial	position of the aerial	width of the aerial	length of the aerial
659	Squelch mode serves to suppress_____	background noise in receiving a weak FM-signal	noise in absence of an FM-signal	noise in transmission	noise in speech-breaks in an SSB-signal
660	What is meant by frequency?	time lapse of vibrations.	number of vibrations	number of vibrations per unit of time	time of propagation
661	Automatic amplifier regulation is used to_____	reduce noise if there is no signal	reduce distortion of weak incoming signals	increase incoming signal	reduce distortion of the strong incoming signal

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662	The sound-level of the speaker on a MF/HF radiotelephony installation is adjusted through _____.	can not be adjusted	RF-Gain	trickle knob	AF-Gain
663	A VHF transmission range is mainly determined by_____	length of the aerial	the right position of the squelch-adjustment	the height of the aerial	the moment of propagation
664	What is the recommended connection between antenna and VHF?	coax cable connection	three vein cable connection	band cable connection	single vein cable connection
665	Which radio frequency/channels are reserved for emergency communications?	2182 kHz/VHF channel 6	2182 kHz/VHF channel 16	2128 kHz/VHF channel 16	2188 kHz/VHF channel 8
666	Which radio frequency/channels are reserved for emergency communications?	2128 kHz/VHF channel 16	2182 kHz/VHF channel 6	2188 kHz/VHF channel 8	2182 kHz/VHF channel 16
667	Wire antenna of 12 meters long is probably _____.	A VHS-antenna	None of the above	A MF/HF-antenna	An Inmarsat-antenna
668	With the DCS format specified geographical area call besides a reference position the number of the full degree difference in longitude and latitude must be fed in:	Westerly and northerly direction	All of the above	Easterly and northerly direction	Southerly and easterly direction
669	With the squelch mode on the VHF:	Another channel is choosen	Range is increased	Undesirable noises is suppressed	Any of the above
670	Which VHF channel should be used for internship navigation safety communications?	Ch. 16	Ch. 13	Ch. 12	Ch. 06
671	You are underway and hear a vessel continuously sounding her fog whistle. This indicates the Other vessel:	Is aground	Desires a pilot	Is in distress	Desire to communicate by radio

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672	You are making ship-to-shore telephone calls on VHF. You should use the:	VHF-FM service	Emergency broadcast services	Coastal harbor service	High seas service
673	What do you call the communication within the ships emergency organization or communication within the shore emergency response team?	Shore to ship communication	Shipboard communication	External	Internal communication
674	Calls, announcement and conversations from one station to another on board should be as brief as possible and consistent with _____ .	good message	understandable	Intelligibility	loud
675	What should you include in the body of a radio message seeking advice for a medical emergency at sea? I. the name and owner of the ship, its position and destination II. The patients name and next of kin III. The patients age, sex, nature of the emergency, pulse and length of illness, treatment given and diagnosis	I & III	I only	II & III	I, II & III
676	With all the responsibilities and work his position entails, the Master needs the _____ from his staffs? I. Acceptance and recognition II. Respect and compliance III. Support	I only	I, II & III	I & II	II & III

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677	What is/are the content of table #1 of radiotelephony procedures? I. Nature of distress in code from the International code of signals II. Phonetic alphabets and figure spelling III. Position in code from the International code of signals	III only	I, II & III	II only	I only
678	What is/are the content of table #2 of radiotelephony procedures? I. Nature of distress in code from the International code of signals II. Phonetic alphabets and figure spelling III. Position in code from the International code of signals	III only	I only	II only	I, II & III
679	Vessel with an EPIRB, you must check _____.	if it is attached properly to e.g. the railing with the required line	the date that the battery must be replaced	the working of the charger and check the loaded condition of the battery	Any of the above
680	What is/are the content of table #3 of radiotelephony procedures? I. Nature of distress in code from the International code of signals II. Phonetic alphabets and figure spelling III. Position in code from the International code of signals	I, II & III	I only	II only	III only
681	What are the basic rules in training communications? I. Know what to say II. Get your idea across. III. Trainees must know you	II only	I, II and III	I only	I and II

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682	Within territorial waters the use of transmitters is prohibited. In general this does not apply for:	Inmarsat-C equipment	MF-equipment	HF-equipment	All of the above
683	You received a distress alert on HF Radio. What should you do?	No response is necessary providing the vessel is more than 24 hours away	Relay the message immediately on 2182 kHz	Wait three minutes and if no acknowledgement is heard from a coast station you should relay the alert	Acknowledge receipt
684	With a distress alert via an Inmarsat-A terminal it is recommended to use the telex-mode because:	The telephone can cause misunderstanding through language problems or wrong interpretations	All vessels in the Ocean Region concerned can read it	None of the above	The telephone is slower and more prone to interference
685	With the use of INMARSAT and digital selective calling, distress alerts can be received:	With reliability	Manually	With ambiguity	With the NAVTEX
686	You are approaching a port when you see three lights in a vertical line. The upper and lower are green and the middle white. What does this mean?	Vessels may proceed. One way traffic	You may proceed with caution.	A vessel may proceed only when it has received specific orders to do so.	Vessels may proceed. Two way traffic.
687	You receive via the 8 MHz a DCS distress alert. The received DCS message is however distorted. The MMSI as well as the position are illegible. After listening at the 8 MHz telephone distress frequency, nothing is heard. This is because:	First an acknowledgement of a coastguard station must be received via the 8MHz	You should have listened on the 2182 kHz	Telephone signals in the same frequency band are generally weaker than DCS signals	Choices presented are not possible

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688	The best action to do if the main engine slows down and the cause is not detected immediately is to_____.	inform the Second engineer	inform the master	inform the Chief engineer	inform bridge immediately
689	What is the most effective way of detecting any malfunction of machinery during their operation?	Blinkering lights	Alarm gong	Electric siren	noise alarms
690	All members of the engineering watch should have adequate knowledge of the _____.I - use of appropriate internal communication II - escape routes from machinery spaces III - location of fire fighting equipments	I only	I II and III	III only	II only
691	Prior to taking over the engineering watch while the ship is underway relieving officers of the engineering watch should satisfy themselves regarding _____. I - availability of fire fighting appliances II - state of completion of engine room log III - standing orders of the chief engineer officer	II only	I II III	II & III	I only
692	The relieving engineering watch officers when underway should be familiar with the _____. I - level of fuel in the service tank II - potential adverse condition resulting from bad weather III - nature of work being performed on the machinery	I II III	I only	II only	II & III
693	When do you pump diesel oil into the burners of an auxiliary boiler?	Heavy fuel must be blended	Starting a dead ship	Overload capacity is required	Heavy smoking persists

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694	What should you do FIRST to correct a condition wherein a diesel engine is operating with excessively high exhaust temperature on all cylinders?	Increase the cooling water flow	Adjust the fuel rack	Reduce the engine load	Increase the lube oil pressure
695	What is the easiest way to locate defective exhaust valves in a propulsion diesel engine?	Listening to the engine	Taking compression readings	Exhaust pyrometer reading	Inspecting the valves visually
696	Some diesel engines are fitted with a thermometer in the cooling water outlet from each cylinder. If the cooling temperature from an individual cylinder begins to rise what should you suspect?	That there is an incomplete combustion in that cylinder	That there is an overloading of cylinder	That there is an overloading of the adjacent cylinder	That there is an increase blow-by of the cylinders
697	What is the function of an expansion tank in a diesel engine cooling system?	Increase raw water content	Allow changes of the cooling water volume due to heating or cooling	Cooling exhaust gases without using coolant	Lower lubricating oil pressure when operating long period
698	Why is the temperature of the scavenge air after the scavenge air cooler should not be lowered below recommended value?	To avoid cracking of the cylinder liner	To maintain the thermal efficiency of the diesel	To avoid misfiring and starting problems	To avoid excessive formation of condensate water
699	Prior to departure what preparations are required regarding pistons and cylinder liners of a diesel engine ?	Open indicator cocks close safety valve turn lubricators	Open starting air start booster pump start stern tube pump	Preheat cylinders and pistons turn engine turn cylinder lubricators	Close safety valve put out turning gear open air bottles
700	In an engine operation what is the effect called that describes the unstable operation of the governor that will not maintain a steady state condition ?	Sensitivity	Deadbeat	Stability	Hunting

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701	The fundamental difference between a 2-stroke and a 4-stroke engine is in the number of _____.	combustion events occurring in each stroke	piston strokes each one needs to complete a combustion cycle	strokes in each combustion cycle	piston strokes each one needs to complete a revolution
702	Diesel engine crankcase oil mist detectors are designed to analyze _____.	the concentration of oil vapours in the crankcase	fire risk in the crankcase	the temperature of the bearings in the crankcase	the temperature of the oil in the crankcase
703	If the main engine jacket cooling water expansion tank level drops rapidly what could this reaction indicate?	There is an internal leak in the engine	There is a leak in the jacket cooling water cooler	Any of these choices	There is a leakage in external piping
704	Why is it important to slow down the main engine RPM while water washing the turbocharger ?	To protect the blower side	To protect the exhaust gas economizer	To protect the bearings	To protect rotor blades from damage
705	Your vessel is entering a tropical area and high humidity is expected what should you do to avoid condensation in the main engine s air cooler ?	Decrease the air temperature so proper draining can be achieved from the air cooler	Increase scavenging air temperature to above dew point	Operate the engine with slightly open scavenging drain cocks to get rid of water	Reduce speed
706	When all preparations have been made to ensure that the main engine is operational prior to departure what will be the final test to be carried out ?	Open air to engine drain air bottles blow indicator cocks	Close safety valves blow indicator cocks fill air bottles	Put out the turning gear and turn the lubricators	Blow indicator cocks test reversing of engine short firing kick
707	To avoid the possibility of a scavenge fire what important check is to be carried out every watch and more frequently if a damaged piston ring is suspected?	The scavenge drain line is not clogged	The cylinder lubrication	The exhaust gas temperature	Overhear the cylinder for noise

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708	With full load on the main engine the RPM of the turbocharger is too low what may be the cause ?	Exhaust temperatures on the main engine are too high	The diffuser ring is damaged	Dirty nozzle ring	The lubricating oil pump is malfunctioning
709	In an automated engine the center from which the ship s engine room is controlled is called the _____.	power plant station control station (PPCS)	control plant station (CPS)	main engine nerve and control station (MENS)	engineering control room (ECR)
710	Which of the following most important measurement to check when overhauling centrifugal pumps?	Impeller diameter	Neck bush/shaft clearance	Impeller/wear ring clearance	Shaft axial clearance
711	Which of the items listed below is the correct method for removing intact engineers studs?	Stud box	Self grip wrench	Drill and use stud remover	Pipe wrench
712	If a leak is suspected in a tube heat exchanger what should be checked FIRST?	Fixed tube end for security in tube plate	Tubes for damage	Tube plates for cracking	Tightness of flared tube end
713	Which of the followingfirst check to carry put when suction gauge reading is high but no liquid is passing through the bilge pump?	clean the oil /water seperator	inspect pump internals for wear	check the suction stainers and valves	open the sea suction valve to prime pump
714	Which would you do FIRST on starting a gear pump if pumping cold oil?	throttle the suction valve	start the pump with valves closed and gradually open	start/stop the pump frequently	ease off the spring loaded pressure relief valve
715	When on passage what should be the condition of the fire main?	sea suction and fire main discharge valves always open	pressurized at all times	all pump and isolating valves closed	drained and empty to prevent leakage at hydrants
716	Before loosening pump covers how should the pressure be checked?	checking the pressure gauge	remove drain plug	remove cover slowly	air vent valve open and clear
717	How does a quick closing valve operate?	the valve can only be opened and closed hydraulically	the valve bridge is collapse remotely allowing the valve to close	a retaining collar is released allowing the valve to close	an independent mechanism closes the valve

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718	When the opening pressure of a diesel fuel injector is LOWER THAN that specified by the engine manufacturer the effect would be a/an _____.	reduction in the duration of injection	decrease in the quantity of fuel injected	delay in the start of injection	increase in quantity of fuel injected
719	Which of the following type of electric light is used in pil tanker pump room?	water proof	shock proof	flame proof	acid proof
720	The process of killing the harmful bacteria from the water so as to make it safe for use is called_____.	disinfection	evaporation	carbonization	filtration
721	Scavenging trunks are more prone to fire because they are_____ .	recipient of fresh air	always over pressure	located below the cylinder	accumulating oily substance
722	An incinerator is a waste disposal unit that will burn_____.	solid material	solid material and all types of liquid waste	gases	liquid material
723	Which of the following minimum standard rest of a rating forming part of an engineering watch within a 24-hour period	6 hours	8 hours	12 hours	10 hours
724	When an engineer on duty is inspecting an UMS-mode operated engine room at night what precaution should be taken?	switch on the dead man alarm upon entering the control room	leave the UMS selector switch to UMS mode	switch the engineer call alarm to notify other engineers	do not silence the alarm so the other engineer can hear
725	Where is the safest place to do hot work in the engine room	purifier room	electrical shop	boiler room	work shop
726	Engine room bilge water can be pumped out overboard safely by the use of which equipment listed below?	foam type filter	oil purifier	oil seperator	fine mesh filter

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727	Which of the following kind of tank is being used onboard that collects the dirty water from basins and sinks when the vessel is in port so that water pollution can be prevented?	bilge	sewage	sludge	drain
728	When there is excessive formation of frost in the evaporator coils it will _____ .	system in normal condition	lessen load on compressor	keep compartment cooler	reduce efficiency of refrigerating plant
729	Excessive vibrations created by the main propulsion machinery are detrimental to which equipment listed below?	navigation	galley	electronic	cabin
730	An engineer on duty inspecting an unmanned engine room at night should be aware of which of the following precautions?	Switch the engineers call alarm to notify other engineers	Call the oiler on duty	Silence the alarm so the other engineer cannot hear	Switch on the dead man alarm upon entering the control room
731	What should the outgoing duty engineer do before he hand over the watch to his reliever?	Soda drink is ready	Hand over the log book	Check that reliever is capable to carry out watch keeping duties	Information the first engineer before leaving engine room
732	A report when an incident takes place involving the discharge or probable discharge of oil (Annex I of MARPOL 73/78)_____.	dangerous goods report	effective report	final report	harmful substances report
733	It is necessary to transfer fuel oil to the settling tanks in order to _____.	heat the fuel to proper temperature for atomization	purge any air in the fuel	allow the sediments and water to settle	filter and purify it before being pumped to the boiler burners
734	When you are securing a steam-reciprocating pump which valves should you leave open?	Steam cylinder drain valve	Steam supply valve	Steam exhaust valve	Water cylinder drain valve

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735	Latent heat can be defined as the heart which must be added to a substance in order to change it from a _____.	Solid to vapor	Liquid to vapor	Solid to liquid	All of the above
736	Which of the following design features is most common to two-stroke/cycle low-speed main propulsion diesel engines?	Trunk type pistons	Crosshead construction	Cross-scavenging air flow	Single reduction gearing
737	The one method of constructing large marine diesel engines and reducing the total engine frame weight is through _____.	casting interlocking components	case hardening integral component	welding plates to form sections for assembly	forging integral components
738	A hand held digital tachometer give a bad reading if _____.	the tae is too shinny	positioned 5-10 inches from the shaft	aimed directly at the shaft	partially aimed at a 60 Hz fluorescent light
739	What speed is known when the rotating shaft frequency and the natural vibrating frequency become synchronized at a particular speed?	Critical speed	Breakaway speed	Synchronous speed	Sympathetic speed
740	At what temperature in degree Celsius will safety devices called fusible plug installed in air compressor or compressed air system melts in order to prevent explosion?	150	50	200	100
741	The standards of marine engines of over 23 HP for starting purposes in most cases should_____.	Hand starting	Compressed air	Electric starting	Battery starting
742	The action should take when water is found in the fuel oil setting tank is to _____.	shift to alternate or standby fuel oil service pump	sound the settling tank with water indicating paste	shift pump suction to an alternate settling tank	All of the options

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743	Diesel engine jacket water is used in distilling units in the_____.	brine cooler	final heating of the feedwater	distillate cooler	final heating of the distillate
744	The following refers to the first law work transfer?	Equal to heat transfer	Greater than heat transfer	Lower than heat transfer	Higher than heat transfer
745	What unit of measure expresses the chloride content of boiler water?	GPC	pH	Micro ohms	PPM
746	Following an overhaul of a crosshead type diesel engine, the engine is jacked over with the turning gear as part of the pre-start procedure. Which of the listed pre-start procedures should be carried out?	Open all air space drain cocks.	Open all indicator valves.	All of the above.	Ensure proper cylinder lube oil flow.
747	If the boiler trip due to water contamination in the fuel oil, what is your first preventive action.	purge the boiler furnace	reduce the load on the boiler	secure the settler tank suctions	secure the burner valves
748	To identify and recognize the amount of anchor chain paid out, specific portions of the chain are color coded and wrapped with wire. The first shot of chain is painted what color.	red on the detachable link and red on each link to either side of the detachable link	white on the detachable link and red on each link to either side of the detachable link	red on the detachable link and white on each link to either side of the detachable link	white on the detachable link and white on each link to either side of the detachable link
749	To identify and recognize the amount of anchor chain paid out, specific portions of the chain are color coded and wrapped with wire. The second shot of the chain is painted what color.	red on the detachable link	white on the detachable link	red for two links on either side of the detachable link	white for two links on either side of the detachable link

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750	In order to recognize the amount of anchor chain paid out, specific portions of the chain are color coded and wrapped with wire. The third shot of chain should have what.	three turns of wire wrapped around the stud of the third link on each side of the detachable link	three turns of wire wrapped around the detachable link	one turn of wire wrapped around the stud of the third link on each side of the detachable link	three turns of wire wrapped around the stud of the link on each side of the detachable link
751	Underway on watch in the fireroom, the bridge reports black smoke coming from the stack. This is an indication of __.	excessive air-fuel turbulence	fuel oil temperature too low	All of the above	excessive steam atomization pressure
752	Underway on watch in the fireroom, the bridge reports white smoke coming from the stack. This is an indication of _____.	low fuel oil temperature	insufficient steam atomization pressure	excessive excess air	high fuel oil viscosiity
753	When there is sufficient reason that the relieving officer is NOT capable of watch keeping duties, the outgoing in charge of the engineering watch should _.	stop the main engine immediately	notify the chief engineer officer	Notify the Master	Stay with the relieving engine officer
754	Which of the conditions listed should be immediately reported to the engineering officer on watch?	Steam leaving the vent of the gland exhaust condenser.	Lube oil passing through the bulls eye of the gravity tank overflow line.	Water trickling in through the stern gland.	Oil in the drain inspection tank.
755	The watch stander in the engine room reported that a high temperature alarm for a main engine bearing has just sounded. Your next instruction to the watch stander should be to _____.	immediately notify the bridge	increase the speed of the lube oil supply pump	bring the main engine speed to idle	check the status of the lube oil coolers
756	A polarization of a radio wave is determined by a:	position of the aerial	length of the aerial	height of the aerial	width of the aerial
757	A radio-wave travels in the air at a speed of:	300.000 meters per minute	300.000 kilometers per second	300.000 per kilometers per hour	300.000 meters per second

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758	A VHF transmission range is mainly determined by:	length of the aerial	the height of the aerial	the right position of the squelch-adjustment	the moment of propagation
759	A VHF transmission range is mainly restricted by:	atmospheric condition	reflection by the ionosphere	the curvature of the surface of the earth	the length of the aerial
760	Acoustic feedback can arise:	because outside noise is amplified by the loudspeaker in the microphone	because the volume adjustment of the speaker is too high	because the battery is strong	because the loudspeaker works as a microphone
761	All ships with periodically unattended machinery plants shall, in addition to the general alarm required by Coast Guard Regulations (46 CFR), be provided with a/an :	All of the above	accommodation space communication system	personnel alarm	engineers assistance-needed alarm
762	Automatic amplifier regulation is used for the following reasons:	in absence of incoming signals the noise is reduced	with varying incoming signals the variation in the out going signal is as small as possible	All of the above	with weak incoming signals distortion is reduced
763	Automatic amplifier regulation is used to:	reduce noise if there is no signal	reduce distortion of the strong incoming signal	increase incoming signal	reduce distortion of weak incoming signals
764	Before a mariphone is installed on board:	contribution must be paid	a license must be issued	the ship must pass the port state control inspection	a letter of registration must be applied for

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765	By DUAL WATCH in maritime VHF-communication is understood:	to keep a listening watch on two channels more or less simultaneously	None of the above	the possibility to keep radio-contact with two or more stations simultaneously	automatic reduction of transmitting power
766	By frequency is meant:	time lapse of vibrations.	number of vibrations	number of vibrations per unit of time	Any of the above
767	By the degree of selectivity of a receiver is meant:	ability to make strong station audible	ability to make weak stations audible	ability to distinguish strong stations from weak stations	ability to distinguish weak stations from adjacent stronger stations
768	By wave length is understood:	the propagation speed of a radio vibration in free space	the propagation direction of a radio vibration	the propagation of wave signal	the distance travelled by a radio vibration in a period
769	Calls, announcement and conversations from one station to another on board should be as brief as possible and consistent with _____.	understandability	clarity	Intelligibility	loudness
770	Channel 70 for digital selective calling for Distress, Safety and Calling frequency operate at:	158.526 MHz	157.526 MHz	159.526 MHz	156.526 MHz
771	Due to the volume of traffic on the radio, you are unable to communicate with the vessel in distress. What action should you take?	Broadcast Seelonce Distress	Broadcast Seelonce immediately	Key the microphone three times in quick succession	Broadcast Charlie Quebec Mayday
772	For the connection between VHF and antenna must be used:	a three vein cable with earth-connection	a coax cable of proper impedance	a copper wire of sufficient diameter to minimize loses	an arbitrary coax cable

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773	For the VHF-antenna connection is used:	an arbitrary coax cable	a properly insulated copper wire of sufficient diameter	a 50-ohm resistance coax cable	a coax cable of proper impedance
774	How should the letter D be pronounced when spoken on the radiotelephone?	DUKE	DONKEY	DA VID	DELL TAH
775	In daytime, as a result of sunlight, the number of layers of ionization will:	not change	increase	vanish	decrease
776	In making VHF communication or test transmission you must:	with DSC use, first broadcast the carrier wave for at least three seconds	identify yourself with your call sign and /or ships name	first tap on the mike several times, but not more than ten times	All of the above
777	In maritime communication two international treaties are primarily involved. They are:	The IMO at London and the ITU at Geneva	Solas and its rules	Solas and the international treaty of far messaging	Both international and local rules
778	In radiotelephone communications, the prefix PAN indicates:	the message following the prefix will be about the safety of navigation	a calling station has an urgent message about the safety of a person	the message following is a meteorological warning	a ship is threatened by grave and imminent danger and requests assistance
779	In shore-ship use, what is useful range of VHF?	About 50-70 miles Line of sight	About 40-70 miles Line of sight	About 30-70 miles Line of sight	About 30-70 miles Line of sight
780	In subjecting a metal to an axial pull, its _____can be found.	elasticity	strength	breaking strength	main haul

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781	International NAVTEX service means the coordinated broadcast and automatic reception on_____ of maritime safety information by means of narrow-band direct-printing telegraphy using the English language.	518 KHz	2182 KHz	518 MHz	500 MHz
782	Long distance communication in the HF-bands depends on:	dimmer setting	ionization layers	satellites	ground wave
783	Modulation is _____:	blending LF & HF signals	to enhance the side bands in relation to the carrier wave	controlling the wave signal	detecting frequencies
784	Moored in a harbour, transmitting with a mariphone is _____.	allowed in consultation with the harbour-master	sometimes allowed	always allowed	not allowed
785	What does MUF stand for?	most effective frequency , to make a connection with an HF-transmitter	highest possible frequency that can be made with an HF-transmitter on board	highest possible frequency that will be reflected by the ionosphere	mega/ultra high frequency
786	Of the AM-signal _____.	amplitude is variable and frequency of carrier wave is constant	both amplitude and frequency of the carrier wave are variable	amplitude modulation	amplitude and frequency of the carrier wave are constant
787	On board an accident happened. Urgent radio-medical advice is needed. We choose the category _____.	safety	routine	urgency	security

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788	On which frequency are navigational and meteorological messages normally sent on the NAVTEX system?	2182KHz	216KHz	518KHZ	214KHz
789	One wishes to have a telephone conversation with a person whose name is known. This is what is called _____.	a collect call	a personal call	a private call	a direct call
790	Pledge of secrecy applies _____:	for Management Level officers only	only to certificate holders	for everybody	only for those who want to send and/or receive a message
791	Polarization of a radio wave means _____:	transmission of radio wave	the direction of the electrical field	the beam-angle of a transmitting aerial	the propagation speed of the signal
792	Radio signals in the HF channels propagate mainly:	through hops between the ionized layers and the earth	between the earth and satellites	along the curvature of the earth	in the ionosphere
793	Radio waves used in satellite communication are not affected by ionosphere because _____.	a disc aerial is used	the frequency of the radio waves is to high	TDM-signals are used	the frequency of the radio waves is to very high
794	Regulations require that any tankship making a voyage of over a 48 hour duration must have certain tests conducted not more than 12 hours prior to leaving port. Meeting this requirement includes the testing of the:	watertight door to the shaft alley	emergency lighting system	means of communication between the bridge and engine room	fire pump relief valve
795	Squelch mode serves to suppress:	noise in absence of an FM-signal	background noise in receiving a weak FM-signal	noise in transmission	noise in speech-breaks in an SSB-signal
796	The legal type VHF-antenna has a length of:	10 meters	7 meters	1 meter	3.5 meters

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797	The call sign of a vessel is meant to:	be able to identify oneself	provide the certificate holder with unique identification	gain a quicker transit at bridges and locks	gain recognition
798	The carrier frequency is also given as _____.	suppressed frequency	frequency identity	assigned frequency	carrier frequency
799	Following an overhaul of a crosshead type diesel engine, the engine is jacked over with the turning gear as part of the pre-start procedure. Which of the listed pre-start procedures should be carried out?	Open all indicator valves.	Ensure proper cylinder lube oil flow.	All of the above.	Open all air space drain cocks.
800	If the boiler fires are extinguished by water contamination in the fuel oil, you should FIRST _____.	secure the settler tank suctions	purge the boiler furnace	reduce the load on the boiler	secure the burner valves
801	In order to recognize the amount of anchor chain paid out, specific portions of the chain are color coded and wrapped with wire. The first shot of chain is painted _____.	white on the detachable link and white on each link to either side of the detachable link	red on the detachable link and red on each link to either side of the detachable link	red on the detachable link and white on each link to either side of the detachable link	white on the detachable link and red on each link to either side of the detachable link
802	In order to recognize the amount of anchor chain paid out, specific portions of the chain are color coded and wrapped with wire. The second shot of the chain is painted _____.	white for two links on either side of the detachable link	white on the detachable link	red for two links on either side of the detachable link	red on the detachable link

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803	In order to recognize the amount of anchor chain paid out, specific portions of the chain are color coded and wrapped with wire. The third shot of chain should have _____.	three turns of wire wrapped around the detachable link	three turns of wire wrapped around the stud of the link on each side of the detachable link	one turn of wire wrapped around the stud of the third link on each side of the detachable link	three turns of wire wrapped around the stud of the third link on each side of the detachable link
804	Information from a data-logger can be helpful in determining the long term probability of machinery failure if you _____.	monitor off limit conditions only when announced by an audible and visual signal	evaluate only the latest logged data as this is the best indication of plant status	evaluate a series of readings to obtain operating trends	secure the machine under relatively steady state conditions
805	Underway on watch in the fire room, the bridge reports black smoke coming from the stack. This would indicate _____.	All of the above	fuel oil temperature too low	excessive steam atomization pressure	excessive air-fuel turbulence
806	Underway on watch in the fireroom, the bridge reports black smoke coming from the stack. This would indicate _____.	All of the above	excessive air-fuel turbulence	excessive steam atomization pressure	fuel oil temperature too low
807	Underway on watch in the fireroom, the bridge reports white smoke coming from the stack. This would indicate _____.	excessive excess air	high fuel oil viscosiity	insufficient steam atomization pressure	low fuel oil temperature
808	When the vessels steering wheel on the navigation bridge is turned, the difference existing between the position of the wheel and that of the rudder is known as _____.	the reset signal	the error signal	feedback	proportional band

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809	When there is sufficient reason that the relieving officer is NOT capable of watch keeping duties, the outgoing in charge of the engineering watch should _.	none of the above	all of these	notify the chief engineer officer	stop the main engine immediately
810	Which of the conditions listed should be immediately reported to the engineering officer on watch?	Steam leaving the vent of the gland exhaust condenser.	Oil in the drain inspection tank.	Water trickling in through the stern gland.	Lube oil passing through the bulls eye of the gravity tank overflow line.
811	You are transferring fuel from the storage tanks to day tanks by means of an electric fuel oil transfer pump. If the pump motor catches fire, you would FIRST	spray water on the fire	shut off the power ventilation	shut off the power to the pump	secure the fuel manifold
812	You have just received a call from the watchstander in the engine room reporting that a high temperature alarm for a main engine bearing has just sounded. Your next instruction to the watchstander should be to _____.	bring the main engine speed to idle	immediately notify the bridge	check the status of the lube oil coolers	increase the speed of the lube oil supply pump
813	The HF-band is in the frequency range _____:	3 - 30 kHz	3 - 30 MHz	3 - 30 GHz	3 - 30 THz
814	The holder of ship low power radiotelephone operators permit is authorized to operate equipment or station using:	A3 of F2 emissions	A1 emissions	F4 emissions	A3 or F3 emissions
815	The ID of an Inmarsat M station on board starts with:	5	7	1	3
816	The maritime radio system consisting of a series of coast stations transmitting coastal warnings is called:	SAFESEA	NAVTEX	HYDROLANT/HYDROPAC	NAVAREA

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817	The maximum range of a VHF radio-set from ship to ship at sea is _____:	20 Nautical Miles	200 Nautical Miles	2 Nautical Miles	100 Nautical Miles
818	The MF-band is in the frequency range _____:	3 - 30 MHz	300 - 3000 kHz	30 - 300 kHz	3 - 30 THz
819	The obligation to identify oneself when using VHF is _____:	always	only when navigating by radar	only when sailing in a block area	only when navigating in a heavily congested areas
820	The portable walkie talkies required to be carried by GMDSS regulations should have which channels as a minimum?	Channels 13 & 16	Channel 16 only	Channels 6 & 16	Channels 6, 13 & 16
821	The prescribed test of an approved portable VHF radio set (portophone) must be done once a _____ .	day	month	year	week
822	The presence of a VHF-installation is primarily intended to:	enhance the safety of lives at sea	take part in harbour traffic	take part in all traffic	take part in public traffic
823	The propagation of radio-signals in the VHF-band is:	almost rectilinear	dependent on the power emitted and the temperature of the atmosphere	dependent on the hour of transmission (day or night)	dependent on the weather condition
824	The recommended connection between antenna and VHF is:	cable connection	three vein cable	band cable	coax cable
825	The responsibility for the transmitting equipment lies with the:	charterer	ship owner	user of the installation	master
826	The rule for having a radio transmitter license is internationally laid down in _____:	Search and rescue treaty of Hamburg	Radio Regulations	SOLAS	Association of Radio Users

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827	The sound-level of the speaker on e.g. an MF/HF radiotelephony installation is adjusted with _____.	RF-Gain	AF-Gain	AM-Gain	can not be adjusted
828	The squelch on a mariphone serves _____:	to suppress noise	to suppress background noise in the wheelhouse when transmitting	to increase or decrease the transmission range	to adjust volume
829	The squelch on the control panel of a VHF-sat serves to:	adjust the sound level of the signal received	to suppress background noise in the wheelhouse when transmitting	adjust the threshold level for admitting signals and refusing noise	to suppress noise
830	The transmitting power of the mariphone is adjusted by setting _____:	dual watch	high/low power	squelch	volume
831	The transmitting range of an HF transmitter is mainly determined by _____:	atmospheric condition	the transmitting power	the time of day in relation to propagation	the height of the transmitting antenna
832	The type-indication of the radio set is mentioned in _____:	the safety certificate	the survey of equipment	radio license	the equipment appendix
833	The VHF radiotelephone calling/safety/distress frequency is:	156.8 MHz (channel 16)	156.7 MHz (channel 14)	156.65 MHz (channel 13)	156.6 MHz (channel 12)
834	The VHF radiotelephone frequency for Channel 13 is:	156.75 MHz	156.80 MHz	156.65 MHz	156.70 MHz
835	The VHF radiotelephone frequency for Channel 14 is:	156.75 MHz	156.7 MHz	156.80 MHz	156.8 MHz
836	The VHF radiotelephone frequency for Channel 15 is:	156.8 MHz	156.7 MHz	156.0 MHz	156.75 MHz

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837	The VHF radiotelephone frequency for Channel 16 is:	156.0 MHz	156.85 MHz	156.75 MHz	156.8 MHz
838	The VHF-band is in the frequency range _____:	30 - 300 GHz	30 - 300 MHz	30 - 300 kHz	3 - 30 THz
839	The volume button of a mariphone controls _____:	the transmitting power	the squelch	the volume	the clarity of transmission
840					
841	Cylinder oil is used for _____.	4-stroke and 2 stroke engine	gasoline engine	4-stroke engine	2-stroke engine
842	The operation of a thermostatic steam trap depends upon the_____.	difference in movement of two dissimilar bimetallic strips not fastened together	change in the amount of vapor produced within an enclosed chamber	action of a float within a chamber	fact that hot water under pressure tends to flash into steam when its vapor pressure is rapidly reduced
843	In a low pressure air compressor, the loss of volumetric efficiency normally results from_____.	inaccurate valve timing	adiabatic compression in the intercooler	heating of the air leaving the cylinders	constant enlargement of the clearance expansion volume
844	The dehydrator of a refrigeration system is located_____.	after evaporator	before expansion valve	after oil separator	before liquid receiver
845	Condensers located in the various stages of the flash evaporator are cooled by_____.	seawater	air	distillate	brine
846	A material use to protect the internal parts of air compressor from solid particles which can be sucked along with fresh air is called____.	Air cleaner	Intake filter	Paper cartridge	Unloader
847	The expansion tank for the jacket cooling water which is a closed cooling type is used to _____.	prevent water leakage	allow easy release of air	maintain constant head in a system	reduce air contamination
848	Burned gas from each cylinder is directed to the exhaust manifold which is part of_____.	internal combustion engine	2-stroke engine	both 4-stroke engine and 2 stroke engine	4-stroke engine

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849	The inlet pipe connection of dirty oil in disc type centrifugal purifier is located at the _____.	side of the bowl cover	top and bottom of bowl cover	top of the bowl cover	bottom of the bowl cover
850	The thermostatic expansion valve of a refrigeration system is opened _____.	by refrigerant pressure and close by spring pressure	by spring pressure and close by refrigerant pressure	and close by spring pressure	and close by refrigerant pressure
851	The purpose of expansion valve is to_____.	provide a chamber for the pre-expansion of the liquid	provide an orifice between the high pressure and low pressure side of the system	to speed-up the flow of refrigerant	change the gas to a liquid
852	A high reading at a salinity cell located in the loop seal between two stages of a flash type evaporator indicates_____.	chill shocking is necessary to remove scale	leakage at the second- stage condenser	carryover in the first- stage	faulty operation of the brine overboard pump
853	Which of the listed operations will cause an automatically controlled refrigeration compressor to restart?	A decrease in the suction pressure	Closing of the expansion valve	Closing of the solenoid valve	An increase in the suction pressure
854	In the refrigeration system, the refrigerant absorbs the latent heat of vaporization in the_____.	compressor	condenser	evaporator	liquid receiver
855	A squeaking sound occurring from within an operating reciprocating air compressor is an indication of_____.	tight compressor bearings	compressor overload	motor overload	badly leaking unloaders
856	The low pressure side of a refrigeration system is considered to exist from the _____.	evaporator to the condenser	expansion valve to the compressor	condenser to the expansion valve	expansion valve to the evaporator
857	Diesel engine jacket water is used in the fresh water distillation process as the _____.	coolant for the brine cooler	primary means of producing a vacuum within the distiller	means of heating the feedwater	coolant for the distillate
858	The storage tank for liquid refrigerant in a refrigeration system is called _____.	purging tank	charging tank	dehumidifier	receiver

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859	Unloader in air compressor is use to_____.	release excess oil from the compressor	prevent excessive load on the motor during starting	drain water from cylinder	equalize first stage and second stage pressure
860	What component of the freshwater evaporator on board use to boil seawater, using the main engine jacket cooling water?	Evaporator	Ejector	Condenser	Shell
861	A salinity indicating system functions on the basic principle of measuring the____.	electrical inductance of water	electrical conductivity of water	specific gravity of water	hydrogen ion concentration of water
862	Component of an engine used to increase scavenging air is called _____.	engine blower	scavenging flaps	turbocharger	scavenging valve
863	In a refrigeration system, the amount of superheat absorbed by the refrigerant is adjusted at the _____.	evaporator	expansion valve	condenser	compressor
864	The high pressure side of the refrigeration systems starts from the _____.	compressor to the condenser	evaporator to the compressor	expansion valve to the compressor	compressor to the expansion valve
865	Refrigerant is circulated through a refrigeration system by the _____.	compressor	expansion valve	evaporator	condenser
866	Short cycling of a refrigeration compressor refers to_____.	frequently grounding out	running too fast	running too slow	frequently starting and stopping
867	Air leaking into a flash type distilling plant could occur through_____.	gasketed joints, cooling tubes, and valve stem	salinometer, valve steam, and gage glass packing	gasketed joints, valve stem, and gage glass packing	gasketed joints, cooling tubes, and gage glass packing
868	A mooring winch should be equipped with mechanical brakes capable of holding_____.	the maximum expected tension of the mooring line	the full breaking strength of the mooring line	half the breaking strength of the mooring line	50% over the working tension of the mooring line
869	The separation chamber of the purifier is called _____.	pilot valve assembly	heavy liquid chamber	bowl	light liquid chamber
870	If an air compressor intercooler pressure rises above normal, it usually indicates _____.	dirty intercooler	hot environment	leaking valves	dirty lube oil

NOT FOR SALE

871	Parts of the pump used to maintain the alignment of the pump are_____.	impeller	wear rings	lantern ring	bearings
872	Fluctuations in the pressure and temperature of the steam supplied to the first-effect of a low pressure submerged tube distilling plant will cause _____.	decreased priming and lower salinity distillate	pressure and temperature fluctuations in the entire unit	first effect scale formation to be loosened	increased heat levels throughout the entire unit
873	An air compressor is equipped with an intercooler and an aftercooler to_____ .	reduce the compressed air charge density	inject water vapor into the compressed air	increase compressor efficiency	prevent overheating of first stage valves
874	It is a form of energy which crosses the boundary of a system during a change of state produced by a difference of temperature between the system and its surroundings.	Kinetic energy	Heat	first law of thermodynamics	Potential energy
875	The high pressure cut-out switch will stop the refrigeration compressor when there is_____.	a stoppage of condenser cooling water flow	lack of refrigerant	accumulation of refrigerant in the crankcase oil	restricted suction filter
876	The heat gained per pound of refrigerant in the evaporator is known as the_____.	sensible heat	refrigerating effect	latent heat of vaporization	specific heat of vaporization
877	The liquid indicator sight glass is generally located in the _____.	low pressure liquid line	low pressure vapor line	high pressure vapor line	high pressure liquid line
878	Main engine lube oil sump tank is located _____.	above the engine	at the bottom of the engine	at the same level as the main bearing	next to the engine
879	Which characteristic of the theoretical Otto cycle does not occur in the theoretical Diesel cycle.	Rapid volume increase during combustion.	Rapid pressure decrease during compression.	The entire fuel charge is present for ignition.	No pressure increase during combustion.
880	A dehydrator installed in a refrigeration system is used to remove _____.	moisture from the system	noncondensable gases and vapors	oil from the refrigerant	refrigerant from the oil

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881	If the bowl of a disk type centrifugal purifier when operated as a separator is not primed, the_____.	oil has a tendency to emulsify in the bowl	oil solids will be deposited only at the intermediate top disk	oil will be lost through the water discharge ports	purifier will act as a clarifier at the discharge ring
882	Fuel oil enters the main engine cylinder through _____.	starting valve	fuel oil injector	oil spill valve	plunger and barrel
883	The purpose of the low pressure cutout switch is to _____.	maintain a preset suction pressure to the compressor	maintain liquid refrigerant at the suction of the compressor	start and stop the compressor at preset operating pressures	operate at minimum efficiency
884	A badly leaking refrigeration compressor discharge valves will cause _____.	damage to the condenser	flooding of the receiver	overfeeding of the expansion valve	constant running of the compressor
885	It refers to an internal combustion engine practice, where there is a necessity of heating the oil, to ensure easy flow and good atomization.	Pre-heating	Pilot injection	Re-circulating	Tracing steam
886	One of the major components of centrifugal pump is_____.	screw	gear	piston	impeller
887	The purpose of wear ring in the centrifugal pump is to _____.	maintain alignment of shaft	prevent damage to shaft	minimize wear of impeller and casing	prevent leakage
888	If the temperature of the fuel oil entering in atomizer is too low, the burner will _____.	produce smoke white	require more excess air for combustion	require more fuel for atomization	produce heavy black smoke at any load condition
889	Salinity cell is installed in the distilling unit to indicate the _____.	leaking tube	quality of water produced	amount of chemical to be added	quantity of freshwater produced
890	Salinity cell is installed in the distilling unit to indicate the_____.	quality of water produced	quantity of freshwater produced	leaking tube	amount of chemical to be added
891	Type of pump which is dependent of the head is_____.	piston pump	centrifugal pump	screw pump	reciprocating pump
892	Breaking the fuel into fine spray to provide good combustion is called_____.	purifying	honing	atomizing	refining

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893	A protective device use to prevent over torque during starting of an Air Compressor is called_____.	air release device	reliever	solenoid	unloader
894	The by-products of oxidation, as a result of water contamination of hydraulic oil, are generally_____.	harmless and have no effect on system components	gums, varnishes, and acids	removed by cellulose type filters	always neutralized by oil additives
895	Which of the following descriptions best identifies the operating principle of a flash-type evaporator?	Heated sea water is injected into a vacuum chamber	Sea water is heated to boiling temperature while under a vacuum.	Sea water is passed over heated plates in a thin film.	Sea water is forced through a heated eductor
896	Boiler fire side must be kept free of soot accumulations because ____.	the fuel oil heaters will become overloaded	the steam drum internals will become clogged	soot insulates the boiler heating surfaces	soot interferes with the flow of feedwater
897	A suitable location for the installation of an impulse type steam trap would be in the_____ -	drain line from a high point in the main steam line expansion loop	horizontal run of drain line from the lowest point at the outlet of the heat exchanger	steam supply line to a feedwater heater	vacuum drag line from the atmospheric drain tank to the main condenser
898	Main component of the engine to regulate speed is the _____.	telegraph	fuel rack	governor	valve gear
899	Which of the listed types of steam traps operates on the principle that hot water flashes to steam when its vapor pressure is reached?	Ball float	Impulse	Bimetallic	Thermostatic
900	The degree of fuel atomization in a diesel engine cylinder depends primarily on _____.	the size of the holes in the fuel nozzle	timing of the pump	supply pressure to the pump	shape of the combustion chamber
901	Part of centrifugal disc purifier use to hold discs in place and directs the flow of dirty liquid to the bottom then to the discs as the oil flows upward is called _____.	bowl	distributor	top disc	main cylinder

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902	Stern tube is used to_____.	reduce vibration of engine	protect the engine from its axial thrust	support and seal the propeller shaft	transmit the power from main engine to propeller
903	Air compressor cylinder unloader enable the compressor to_____.	vary their speed according to temperature and load	reduce compressed air charge density	change speed according to overload demands	start and come up to speed before air compression begins
904	Which of the following statements regarding low pressure, reciprocating, air compressor valves is correct?	Mechanical operating valve gear is required to open and close the valves.	Due to the physical construction of the valves, a relatively small cylinder clearance space is required for operation.	A relatively large cylinder clearance space is required for valve operation.	Only the suction valve requires a push rod and rocker arm mechanism for valve operation.
905	In a low pressure air compressor, the loss of volumetric efficiency normally results from _____.	heating of the air leaving the cylinders	adiabatic compression in the intercooler	inaccurate valve timing	constant enlargement of the clearance expansion volume
906	An eccentric reducer, used as a transition piece between a centrifugal pump suction flange and the suction piping flange, must be installed with the eccentric portion below the suction pipe centerline to _____.	slope the suction line upward the pump	allow sediment to settle on the bottom	reduce vapour pressure of the water entering the pump suction	prevent the formation of air pockets
907	When renewing the shaft packing on a centrifugal pump equipped with an external liquid sealing supply, you should _____?	check the stuffing box for irregularities with a dial indicator	ensure that the lantern ring is aligned with the sealing supply opening	always turn down the shaft in a lathe to ensure a snug fit	make sure the seal cage is always positioned at the base of the stuffing box
908	When installing a new rotary pump, the suction piping should _____.	be sloped to the pump	be the next size smaller than the pump suction connection.	be of same diameter as the pump suction connection	be at least one size larger than the pump suction connection.

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909	To prevent air pockets from forming in a centrifugal pump suction line installed angled from normal, any gate valve should be installed with the _____.	stem pointing upward at right angles to the pipe	stem horizontal or pointing downward below the pipe	centreline above the suction pipe centreline	bonnet above suction pipe centreline
910	On a medium pressure, differential piston, reciprocating air compressor, lubrication of the pistons/cylinders is usually accomplished _____.	with metering type cylinder lubricators	by the splash method	gravity fed lubricators	lube oil flow from the bearing lube oil system
911	An unloader is installed on an air compressor to _____.	prevent excessive interstage pressure buildup	bypass the high pressure stage to the intercooler	control compressor discharge pressure	remove the compression load as the compressor comes up to speed during starting
912	When air compressors are arranged for automatic operation, the cylinders can be unloaded during starting by _____.	all of the above	fitting depressors which hold the suction valve plates open	applying reduced voltage to the motor	bypassing the discharge valves
913	Cylinder inlet valve failure in a low pressure air compressor can be caused by _____.	carbon buildup on the pistons from excessive lubrication	valve pounding due to valve covers being excessively tight	sticking valves due to carbon buildup on the seats	compressor overspeeding due to mechanical failure in the unloader
914	The static suction lift of a pump is the difference in elevation between the _____.	centreline of the pump and the suction liquid level when the source of the liquid is above the pump	liquid levels of the suction and discharge	centreline of the pump and the level of the discharge liquid	centreline of the pump and the level of the liquid in the suction well when the source of liquid is below the pump
915	Why is the discharge pressure of a herringbone gear pump steadier than the discharge pressure of a simple spur gear?	One discharge phase begins before the previous discharge phase has been completed.	Clearance between the gear teeth and casing is smaller.	The gear teeth are smaller than those of the simple spur gear pump.	The herringbone gear pump has four spur gears instead of two.

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916	If an air compressor is used to supply compressed air to outlets throughout the engine room and on deck of a vessel, the system is known as the _____.	supply air system	low pressure air system	ships service air system	combustion control air system
917	The function of seal cages, or lantern rings installed in the centrifugal pump stuffing boxes, is to _____.	cool the shaft	distribute the sealing liquid within the stuffing box	lubricate the packing	seal air from entering along the shaft
918	The capacity of a rotary pump, delivering a constant viscosity fluid, will decrease when the discharge pressure is increased, due to_____.	increased suction pressure	decreased suction pressure	increased slippage	reduced slippage
919	The purposes of an air compressor unloading device is to _____.	drain water from the cylinders	drain water from the air receiver	check pump alignment	delay the compression process until the motor is up to speed
920	After the installation of new impeller wearing rings by pressing them onto the pump impeller hub, it is advisable to _____.	check the shaft and impeller assembly on centers to see if the ring surfaces are true	dynamically balance the shaft and impeller	visually inspect the rings after about an hour of service	all of the above
921	A recirculating, or bleed off line is installed on a centrifugal pump in order to _____.	equalize pressure on both sides of the suction valve disc	prevent the pump from overheating when operating at shutoff head	decrease the net positive suction head	establish a back pressure at the labyrinth seal to eliminate leakage
922	If a centrifugal pump operating with a positive suction head vibrates, or becomes noisy, the cause could be _____.	worn wearing rings	air leakage into suction line	insufficient venting	excessive pump speed
923	If an air compressor is used to supply air primarily to the combustion control system and other pneumatic controllers, the entire system is known as the _____.	ships service system	forced draft air system	supply air system	control air system

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924	It is possible to mount a double suction centrifugal pump impeller with the vanes facing the wrong direction. This would cause the pump _____.	discharge to be reversed	head capacity to improve	efficiency to decrease	slippage to decrease
925	Which of the following statements is true concerning the overall efficiency of air compressors?	Two stage compressors are generally more efficient than single stage compressors.	High pressure compressors are more efficient than low pressure compressors.	Mechanical efficiency divided by compressor efficiency will equal the overall efficiency of the compressor unit.	The volumetric efficiency is decreased in multistage compressors.
926	A compressor operating with an accumulation of dust and grease on the surfaces of an intercooler would result in _____. I. a decrease in volumetric efficiency of the compressor II. higher volume of air to be discharged to the receiver	II only	Neither I nor II	I only	Both I and II
927	Which of the following statements is true concerning V-belt drives for reciprocating air compressors? I. Belts generally stretch slightly during the first few months of use II. Excessively tight belts will overload the bearings III. Belts are generally replaced as a set	I only	II & III	I & II	I, II & III

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928	When air compressors are arranged for automatic operation, the cylinders can be unloaded during starting by _____. I. bypassing the discharge to suction II. fitting depressors which hold the suction valve plates on their seats III. step unloading the cylinders in a multicylinder machine	I only	I, II & III	I & II	II & III
929	A compressor operating with an accumulation of dust and grease on the surface of an intercooler would result in _____. I. a high consumption of lube oil II. higher than normal air pressure in the reciever	I only	Both I and II	II only	Neither I nor II
930	What would be the result of throttling the suction valve to the point where the flow was less than that recommended by a centrifugal pump manufacture? I. The discharge head would be reduced II. The pump would begin to cavitate	II only	I only	Both I and II	Neither I nor II
931	What would be the probable cause if a pump were unable to maintain necessary discharge pressure to a system? I. failure of the internal parts of the pump II. failure of the pump relief valve spring	I only	II only	Both I and II	Neither I nor II

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932	What would be the result of throttling the suction valve to the point where the flow was less than that recommended by the centrifugal pump? I. The designed total net head would be reduced II. The pump would begin to cavitate	both I and II	I only	neither I nor II	II only
933	If a reciprocating air compressor has a knock occurring in frequency with its operating RPM, the cause is probably _____.	insufficient cylinder lubrication	misalignment or worn main bearings	defective or poorly fitted valves	all of the above
934	When renewing spiral packaging in a centrifugal pump stuffing box, after the packing is firmly seated, the packing gland nuts should be _____.	tightened an additional 10% to compress the packing	loosened until the gland clears the stuffing box	left in that position	loosened, and then retightened until they are only finger tight
935	To prevent overheating and scoring of the shaft after repacking the stuffing box, which of the following procedures should be carried out?	Tighten the packing in small increments while the pump is operating	Operating the pump slowly and applying oil freely to the shaft until the packing is properly seated	Tightening the gland in all the way and then backing it off slightly	Lubricate the lantern ring with cylinder oil before installing new turns of packing
936	An advantage of a helical gear pump over a simple gear pump is that the helical gear pump is capable of _____.	maintaining a steadier speed	producing a smoother discharge flow	operating for longer periods of time	delivering liquids over greater distances
937	Which of the following statements is correct with regards to the operation of a centrifugal cargo pump?	The self-priming feature of the centrifugal pump enables it to draw its own suction as it starts.	Oil is discharged from the center of the impeller through the outlet.	Gravity causes the oil to flow toward the discharge.	The discharge capacity varies directly with the speed of the impeller.
938	The function of the spring used with channel or plate-type valves for reciprocating air compressors is to _____.	reduce air intake and exhaust pulsations	open the valves during downward stroke	provide positive closing of the valves	reduce compressor discharge pulsations

939	A first stage unloader installed in a low pressure air compressor is unable to completely retract. This will result in _____.	overheating of the discharge valve	an abnormally low intercooler pressure	frequent lifting of the intercooler relief valve	loss of moisture in the air charge in the receiver
940	Liquid is kept from leaking out of the shaft ends of a helical gear pump by _____.	a stuffing box	overlapping spaces between gear teeth	a roller bearing	the use of shaft end caps
941	In a centrifugal pump, the seal piping directs liquid from the discharge side of the pump to the _____.	stuffing	wearing ring	packing gland	lantern ring
942	The purpose of the wearing rings used in a centrifugal pump is to _____.	insure a proper alignment of the pump coupling to the driver	accomodate for friction between the impeller and the casing	prevent an internal explosion in the pump when it is overheated	enable a visual inspection of the pump while it is running
943	The purpose of wearing rings as found in large centrifugal pumps is to _____.	enable a visual inspection of the pump while it is running	prevent an internal explosion in the pump when it is overheated	insure the proper alignment of the pump coupling to the driver	permit internal components that are subjected to high erosion conditions, to be replaceable thereby extending the service life of the pump.
944	A centrifugal bilge pump requires priming _____.	primarily to lubricate the shaft seals	due to the inability of this type of pump to lift water to cover the suction (eye) of the impeller	to initially unload the pump by having its head pressure equal to discharge the pressure	in order to overcome the potential energy of water in the discharge line
945	Which of the following statements describes the function of an air compressor intake filter?	Protects against the damaging effects of airborne solid particles.	Protects against suction valve float.	Provides a positive pressure on the air inlet valves.	Prevents lubricating oil contamination of the compressed air supply.
946	What would probably occur if excessive misalignment existed between a centrifugal pump and its power source?	pump cavitation will increase	flashing will occur at the impeller eye	power consumption will be reduced	shaft bearing will overheat

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947	Which of the following actions should be taken if during a routine maintenance inspection of a centrifugal pump, localized scoring on a pump shaft sleeve is detected?	Reassemble the unit and provide more water leak off for proper lubrication	Check for parallel alignment of the sleeve radial faces to the sleeve bores	Reassemble the unit and adjust the governor to obtain a slower speed	Correct the cause of the scoring and repair the sleeve or replace with a new one.
948	Which of the listed conditions can lead to cavitations in a centrifugal pump?	Partial restriction in the discharge valve	Rough casing volute surfaces	Vapor pockets formed in the suction flow stream	Worn wearing rings
949	The leakage of air into the pump casing by way of the packing gland of a condensate pump, is prevented by_____.	special packing in the stuffing box	the vacuum in the pump suction	an air seal line from the compressed air line	a water seal line to the packing gland
950	The net positive suction head of a boiler centrifugal feed pump should be calculated over and above the _____.	feedwater vapor pressure	speed of the impeller	pump capacity in GPM	impeller ratio in the pump
951	Which of the listed parts is used in a lobe-type rotay pump to allow for wear on the lobe edges?	spur gear adjusters	replaceable gib inserts	casing gear thrust bearings	replaceable liner plates
952	Which of the listed parts is used in a lobe-type rotary pump to reduce the wear of the lobe edges?	Casing gears	Liner plates	Spur gears	Gibs
953	Which of the following statements regarding low pressure, reciprocating, air compressor valves is correct?	A relatively large cylinder clearance space is required for valve operation.	Due to the physical construction of the valves, a relatively small cylinder clearance space is required for operation.	Mechanical operating valve gear is required to open and close the valves.	Only the suction valve requires a push rod and rocker arm mechanism for valve operation.
954	In a low pressure air compressor, the loss of volumetric efficiency normally results from _____.	constant enlargement of the clearance expansion volume	inaccurate valve timing	heating of the air leaving the cylinders	adiabatic compression in the intercooler

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955	An eccentric reducer, used as a transition piece between a centrifugal pump suction flange and the suction piping flange, must be installed with the eccentric portion below the suction pipe centerline to _____.	prevent the formation of air pockets	allow sediment to settle on the bottom	reduce vapour pressure of the water entering the pump suction	slope the suction line upward the pump
956	When renewing the shaft packing on a centrifugal pump equipped with an external liquid sealing supply, you should _____?	make sure the seal cage is always positioned at the base of the stuffing box	always turn down the shaft in a lathe to ensure a snug fit	check the stuffing box for irregularities with a dial indicator	ensure that the lantern ring is aligned with the sealing supply opening
957	When installing a new rotary pump, the suction piping should _____.	be sloped to the pump	be at least one size larger than the pump suction connection.	be the next size smaller than the pump suction connection.	be of same diameter as the pump suction connection
958	To prevent air pockets from forming in a centrifugal pump suction line installed angled from normal, any gate valve should be installed with the _____.	stem pointing upward at right angles to the pipe	bonnet above suction pipe centreline	centreline above the suction pipe centreline	stem horizontal or pointing downward below the pipe
959	On a medium pressure, differential piston, reciprocating air compressor, lubrication of the pistons/cylinders is usually accomplished _____.	gravity fed lubricators	lube oil flow from the bearing lube oil system	with metering type cylinder lubricators	by the splash method
960	An unloader is installed on an air compressor to _____.	remove the compression load as the compressor comes up to speed during starting	bypass the high pressure stage to the intercooler	prevent excessive interstage pressure buildup	control compressor discharge pressure
961	When air compressors are arranged for automatic operation, the cylinders can be unloaded during starting by _____.	all of the above	fitting depressors which hold the suction valve plates open	applying reduced voltage to the motor	bypassing the discharge valves

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962	Cylinder inlet valve failure in a low pressure air compressor can be caused by _____.	valve pounding due to valve covers being excessively tight	compressor overspeeding due to mechanical failure in the unloader	carbon buildup on the pistons from excessive lubrication	sticking valves due to carbon buildup on the seats
963	The static suction lift of a pump is the difference in elevation between the _____.	liquid levels of the suction and discharge	centreline of the pump and the suction liquid level when the source of the liquid is above the pump	centreline of the pump and the level of the liquid in the suction well when the source of liquid is below the pump	centreline of the pump and the level of the discharge liquid
964	Why is the discharge pressure of a herringbone gear pump steadier than the discharge pressure of a simple spur gear?	The gear teeth are smaller than those of the simple spur gear pump.	One discharge phase begins before the previous discharge phase has been completed.	Clearance between the gear teeth and casing is smaller.	The herringbone gear pump has four spur gears instead of two.
965	If an air compressor is used to supply compressed air to outlets throughout the engine room and on deck of a vessel, the system is known as the _____.	ships service air system	combustion control air system	supply air system	low pressure air system
966	The function of seal cages, or lantern rings installed in the centrifugal pump stuffing boxes, is to _____.	cool the shaft	lubricate the packing	seal air from entering along the shaft	distribute the sealing liquid within the stuffing box
967	The capacity of a rotary pump, delivering a constant viscosity fluid, will decrease when the discharge pressure is increased, due to_____.	increased suction pressure	decreased suction pressure	increased slippage	reduced slippage
968	The purposes of an air compressor unloading device is to _____.	drain water from the air receiver	delay the compression process until the motor is up to speed	drain water from the cylinders	check pump alignment

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969	After the installation of new impeller wearing rings by pressing them onto the pump impeller hub, it is advisable to _____.	all of the above	visually inspect the rings after about an hour of service	dynamically balance the shaft and impeller	check the shaft and impeller assembly on centers to see if the ring surfaces are true
970	A recirculating, or bleed off line is installed on a centrifugal pump in order to _____.	prevent the pump from overheating when operating at shutoff head	establish a back pressure at the labyrinth seal to eliminate leakage	equalize pressure on both sides of the suction valve disc	decrease the net positive suction head
971	If a centrifugal pump operating with a positive suction head vibrates, or becomes noisy, the cause could be _____.	worn wearing rings	air leakage into suction line	insufficient venting	excessive pump speed
972	If an air compressor is used to supply air primarily to the combustion control system and other pneumatic controllers, the entire system is known as the _____.	supply air system	forced draft air system	ships service system	control air system
973	It is possible to mount a double suction centrifugal pump impeller with the vanes facing the wrong direction. This would cause the pump _____.	slippage to decrease	head capacity to improve	efficiency to decrease	discharge to be reversed
974	Which of the following statements is true concerning the overall efficiency of air compressors?	Mechanical efficiency divided by compressor efficiency will equal the overall efficiency of the compressor unit.	Two stage compressors are generally more efficient than single stage compressors.	The volumetric efficiency is decreased in multistage compressors.	High pressure compressors are more efficient than low pressure compressors.

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975	A compressor operating with an accumulation of dust and grease on the surfaces of an intercooler would result in _____. I. a decrease in volumetric efficiency of the compressor II. higher volume of air to be discharged to the receiver	Neither I nor II	I only	II only	Both I and II
976	Which of the following statements is true concerning V-belt drives for reciprocating air compressors? I. Belts generally stretch slightly during the first few months of use II. Excessively tight belts will overload the bearings III. Belts are generally replaced as a set	II & III	I only	I, II & III	I & II
977	When air compressors are arranged for automatic operation, the cylinders can be unloaded during starting by _____. I. bypassing the discharge to suction II. fitting depressors which hold the suction valve plates on their seats III. step unloading the cylinders in a multicylinder machine	II & III	I, II & III	I only	I & II
978	A compressor operating with an accumulation of dust and grease on the surface of an intercooler would result in _____. I. a high consumption of lube oil II. higher than normal air pressure in the reciever	Both I and II	I only	II only	Neither I nor II

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979	What would be the result of throttling the suction valve to the point where the flow was less than that recommended by a centrifugal pump manufacture? I. The discharge head would be reduced II. The pump would begin to cavitate	I only	Neither I nor II	Both I and II	II only
980	What would be the probable cause if a pump were unable to maintain necessary discharge pressure to a system? I. failure of the internal parts of the pump II. failure of the pump relief valve spring	Both I and II	I only	II only	Neither I nor II
981	What would be the result of throttling the suction valve to the point where the flow was less than that recommended by the centrifugal pump? I. The designed total net head would be reduced II. The pump would begin to cavitate	I only	neither I nor II	II only	both I and II
982	If a reciprocating air compressor has a knock occurring in frequency with its operating RPM, the cause is probably _____.	insufficient cylinder lubrication	all of the above	misalignment or worn main bearings	defective or poorly fitted valves
983	When renewing spiral packaging in a centrifugal pump stuffing box, after the packing is firmly seated, the packing gland nuts should be _____.	left in that position	loosened until the gland clears the stuffing box	tightened an additional 10% to compress the packing	loosened, and then retightened until they are only finger tight

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984	To prevent overheating and scoring of the shaft after repacking the stuffing box, which of the following procedures should be carried out?	Operating the pump slowly and applying oil freely to the shaft until the packing is properly seated	Tighten the packing in small increments while the pump is operating	Lubricate the lantern ring with cylinder oil before installing new turns of packing	Tightening the gland in all the way and then backing it off slightly
985	An advantage of a helical gear pump over a simple gear pump is that the helical gear pump is capable of _____.	producing a smoother discharge flow	delivering liquids over greater distances	operating for longer periods of time	maintaining a steadier speed
986	Which of the following statements is correct with regards to the operation of a centrifugal cargo pump?	Gravity causes the oil to flow toward the discharge.	The self-priming feature of the centrifugal pump enables it to draw its own suction as it starts.	The discharge capacity varies directly with the speed of the impeller.	Oil is discharged from the center of the impeller through the outlet.
987	The function of the spring used with channel or plate-type valves for reciprocating air compressors is to _____.	reduce air intake and exhaust pulsations	provide positive closing of the valves	reduce compressor discharge pulsations	open the valves during downward stroke
988	A first stage unloader installed in a low pressure air compressor is unable to completely retract. This will result in _____.	overheating of the discharge valve	loss of moisture in the air charge in the receiver	frequent lifting of the intercooler relief valve	an abnormally low intercooler pressure
989	Liquid is kept from leaking out of the shaft ends of a helical gear pump by _____.	overlapping spaces between gear teeth	a stuffing box	the use of shaft end caps	a roller bearing
990	In a centrifugal pump, the seal piping directs liquid from the discharge side of the pump to the _____.	lantern ring	packing gland	wearing ring	stuffing
991	The purpose of the wearing rings used in a centrifugal pump is to _____.	prevent an internal explosion in the pump when it is overheated	enable a visual inspection of the pump while it is running	insure a proper alignment of the pump coupling to the driver	accomodate for friction between the impeller and the casing

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992	The purpose of wearing rings as found in large centrifugal pumps is to _____.	insure the proper alignment of the pump coupling to the driver	permit internal components that are subjected to high erosion conditions, to be replaceable thereby extending the service life of the pump.	prevent an internal explosion in the pump when it is overheated	enable a visual inspection of the pump while it is running
993	A centrifugal bilge pump requires priming _____.	primarily to lubricate the shaft seals	to initially unload the pump by having its head pressure equal to discharge the pressure	in order to overcome the potential energy of water in the discharge line	due to the inability of this type of pump to lift water to cover the suction (eye) of the impeller
994	Which of the following statements describes the function of an air compressor intake filter?	Provides a positive pressure on the air inlet valves.	Prevents lubricating oil contamination of the compressed air supply.	Protects against the damaging effects of airborne solid particles.	Protects against suction valve float.
995	What would probably occur if excessive misalignment existed between a centrifugal pump and its power source?	shaft bearing will overheat	pump cavitation will increase	power consumption will be reduced	flashing will occur at the impeller eye
996	Which of the following actions should be taken if during a routine maintenance inspection of a centrifugal pump, localized scoring on a pump shaft sleeve is detected?	Reassemble the unit and provide more water leak off for proper lubrication	Correct the cause of the scoring and repair the sleeve or replace with a new one.	Reassemble the unit and adjust the governor to obtain a slower speed	Check for parallel alignment of the sleeve radial faces to the sleeve bores
997	Which of the listed conditions can lead to cavitations in a centrifugal pump?	Partial restriction in the discharge valve	Worn wearing rings	Rough casing volute surfaces	Vapor pockets formed in the suction flow stream
998	The leakage of air into the pump casing by way of the packing gland of a condensate pump, is prevented by_____.	an air seal line from the compressed air line	a water seal line to the packing gland	special packing in the stuffing box	the vacuum in the pump suction

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999	The net positive suction head of a boiler centrifugal feed pump should be calculated over and above the _____.	speed of the impeller	impeller ratio in the pump	feedwater vapor pressure	pump capacity in GPM
1000	Which of the listed parts is used in a lobe-type rotay pump to allow for wear on the lobe edges?	replaceable gib inserts	spur gear adjusters	casing gear thrust bearings	replaceable liner plates
1001	Which of the listed parts is used in a lobe-type rotary pump to reduce the wear of the lobe edges?	Liner plates	Gibs	Casing gears	Spur gears
1002	The initial unloading (at start-up) of the device shown in the illustration is accomplished by _____.	holding open the high pressure stage reed-type suction valves	discharging the compressed air to the receiver with the minimum pressure valve closed	temporarily discharging the compressed air to the atmosphere	the use of an intercooler relief device
1003	The major difference between the discharge and suction valves installed in most low pressure, reciprocating air compressors is that _____.	the reed valves used on the discharge are made substantially thicker and heavier than the suction valves	the suction valve springs exert a greater tension than the discharge valve springs	one valve seats upwards, while the other seats downwards	the discharge valve springs exert a greater tension than the suction valve springs
1004	Two individual centrifugal pump impellers of the same diameter, width, and rotating speed are to be compared, one is cast with straight vanes, the other with curved vanes. Which of the following statements is correct?	The straight vane impeller always has a greater capacity	The curved vane impeller will be easier to balance	The straight vane impeller always develops a higher discharge pressure	The curved vane impeller is less likely to develop cavitation
1005	If the flow of water from the centrifugal pump is allowed to be stopped by closing the discharge valve while the pump continues to run for an extended period, which of the following will occur?	the water pressure will decrease to shut off the head	the water pressure will rise above shut off head	liquid in the pump will overheat	the wearing ring will become excessively worn

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1006	If a centrifugal pump gradually develops insufficient discharge pressure as a result of worn wearing rings, which of the following corrective actions is required?	Replace the rings	Throttle in on the discharge valve	Always replace the wearing rings and the impeller as a set	Throttle in on the suction valve
1007	An important point of consideration when replacing a dry type intake filter on an air compressor is to _____.	install a smaller size filter to allow for expansion of the element	install only a filter consisting of a treated paper element	select the proper size filter so that air flow is not restricted	use the same wetting oil on the element as is used in the compressor lubrication system
1008	To thoroughly pump out the bilges using a horizontally mounted centrifugal pump, the _____.	stuffing box should not be allowed any water leakage	pump must always be primed	suction side connection must guide the liquid to the lantern rings	volute must impart a radial and rotary motion of the water
1009	Machinery driving fuel oil transfer and fuel oil service pumps must be fitted with a remote means of stopping the machinery from _____.	within the space concerned	within the fireroom	outside the space concerned	the throttle station
1010	Clearances between the impeller hub and casing of a centrifugal pump are checked with the use of _____.	a machinists rule	a depth micrometer	wooden wedges	an accurate set of feeler gages
1011	How can we quickly reduce high water level in a steaming boiler?	By the used of surface blow valve	By the used of bottom blow valve	By the used of safety valves	By the used of water column valve
1012	What common type of air heater is used in sectional headers of marine boilers?	Harrison crossflow type	Parallel flow type	Direct contact type	Gas tubular type
1013	What could be the probable cause if a generator engine charge air pressure becomes lower than normal?	Fouled nozzle ring of the turbocharger	Pressure alarm for turbocharger is incorrect	Turbocharger air filter is dirty	Turbocharger tachometer is damage
1014	If the discharge valve is closed before the drive motor is stopped, which type of pump will most likely be damaged?	Centrifugal pump	Turbine pump	Reciprocating pump	Gear pump

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1015	If you were operating a centrifugal water service pump with worn wearing rings, the _____.	stuffing box would leak excessively	pump would be very noisy	pump would develop insufficient flow	pump would vibrate excessively
1016	One of the main functions of wearing rings, as used in a centrifugal pumps, is to _____.	allow for economical replacement of worn internal pump components during regular overhaul maintenance	maintain radial alignment between the pump impeller and casing	absorb all impeller shaft end thrust	prevent water leakage to the atmosphere
1017	Increasing the speed of a centrifugal pump will result in an increase in the pump capacity. Another means of increasing the total head pressure of a centrifugal pump is to increase the _____.	width of the impeller	diameter of the suction piping, with all other factors remaining the same	diameter of the impeller	diameter of the discharge piping, with all other factors remaining the same
1018	Which units of measurement are commonly used to express pump suction head values when calculating pump capacities and hydraulic horsepower?	Feet of water for positive head and inches of mercury for negative head	Inches of mercury for positive head and feet of water for negative head	Inches of mercury for both positive and negative head	Feet of water for both positive and negative head
1019	If the existing vapour pressure is subtracted from the indicated pressure at the pump suction, the remainder is the _____.	discharge head	apparent net positive suction head	total suction head	pump head
1020	The total static head of a system resisting the operation of a centrifugal pump is the difference in elevation between the _____.	discharge liquid level and the pump centreline	suction submergence level and the pump discharge	discharge liquid level and the suction liquid level	suction liquid level and the pump centreline
1021	Centrifugal pumps, used to handle hot liquids, must have a minimum flow through them under all operating conditions. This flow serves to _____.	prevent overheating and vapour bound conditions	maintain the net positive suction head of the pump	maintain hydraulic differential in the pump impeller passages	keep the shaft glands cool

1022	A centrifugal pump operating against a closed discharge valve has a/an _____.	efficiency of 0%	capacity of 100%	internal slippage of 0%	shut off horsepower rating of 100%
1023	The function of seal cages, or lantern rings installed in the centrifugal pump stuffing boxes, is to _____.	cool the shaft	seal air from entering along the shaft	lubricate the packing	distribute the sealing liquid within the stuffing box
1024	The function of a centrifugal pump double volute casing is to _____.	reduce hydraulic end thrust	reduce radial thrust on the impeller	double the liquid velocity through the pump when compared to a single volute	provide the effect of multi-staging
1025	Which of the following changes in pump operating parameters will lead to pump cavitation in a centrifugal pump that is operating in an open system?	steadily decreasing pump speed	steadily increasing pump discharge pressure	steadily increasing pump suction pressure	steadily increasing pump inlet temperature
1026	What should be done if localized scoring is discovered on a pump shaft sleeve during routine maintenance inspection?	Reassemble the pump and provide more water leak off for lubrication	Reassemble the pump and set the governor to obtain a slower speed	Correct the cause of scoring and install a new shaft sleeve	Check for parallel alignment of sleeve radial face to the sleeve bore
1027	While on watch, you notice that a significant amount of water is flowing out of the packing box from a centrifugal saltwater pump which had been recently overhauled. You tighten the packing gland evenly by nearly a half inch, yet the amount of water output from the packing box does not diminish. You should _____.	back off on the nuts by the same amount to prevent scoring the shaft sleeve and notify the next watch of the condition	make no further adjustments and continue to make a round of the engine room	take up evenly on the packing gland nuts another 2 or 3 full turns	shut off the sealing line valves to diminish the outflow of water from the packing box

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1028	What would be the result of throttling the suction valve to the point where the flow was less than that recommended by a centrifugal pump manufacturer? I. The designed discharge head would be reduced II. The packing life would be greatly reduced	Neither I nor II	II only	I only	Both I and II
1029	Operating a rotary gear pump far below its rated speed when handling low viscosity liquids, will cause its volumetric efficiency to _____.	increase steadily as the moving gears develop less vibration	remain unchanged due to its positive displacement characteristics	decrease to where the pump no longer develops flow	fluctuate due to the amount of slip variation
1030	The capacity of a rotary pump, when operated at a constant speed, will decrease with an increase in the pump _____.	steeped speed	rotor clearances	suction pressure	discharge volume
1031	Positive displacement, helical gear pumps are well suited for pumping oil because _____.	it is not necessary to closely maintain design clearances with this pump	stuffing boxes eliminate the leakage problems usually associated with other gear pumps	these pumps are designed with extreme tooth angles	they are essentially self-priming and capable of a high suction lift
1032	Which of the listed conditions will occur if the discharge pressure of a rotary pump is increased from the designed 50 psi to 300 psi, while maintaining the same RPM?	The pump capacity will be decreased	The pump capacity will be increased	Pump efficiency will be increased	Internal liquid slippage will be reduced
1033	Inspection of a low pressure gear pump for cavitation will usually be indicated by a wear pattern _____.	along the discharge side of the housing	along the inlet side of the housing	at the extreme upper and lower peripheries of the housing	even throughout the entire periphery of the housing when matched machine gear sets are used
1034	Which of the following methods applies to how a vacuum is created by a jet pump or an eductor?	Centrifugal force converted into potential energy	A propeller drawing a fluid through a venture nozzle	A reciprocating plunger directly applying force to a fluid	A rapidly moving stream of fluid passing through a nozzle

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1035	A twin-screw, rotary, positive displacement pump is provided with timing gears. If it were possible to change the lead (pitch) of the screws, which of the following statements would represent the true effect on the pump characteristics?	The longer the lead, the lower the flow rate	The shorter the lead, the higher the pressure potential	The shorter the lead, the higher the inlet pressure requirements	The longer the lead, the lower the axial velocity
1036	The pressure developed in the high pressure cylinder of a reciprocating air compressor, in order to assure an output near the end of its compression stroke, is _____.	the same as the line discharge pressure	below the line discharge pressure	constant throughout the discharge period	above the line discharge pressure
1037	You are unable to pump out the aft starboard engine room bilge well that is fouled, with one foot of water over the top of the bilge well, what action should be carried out?	Remove the bilge manifold valve and attempt to back flush the line	Send the wiper into the well with only a scoop and pail	It is only necessary to transfer half the contents of a drum of degreaser into the bilge well	Simultaneously operate all available bilge pumps.
1038	A decrease in the condenser vacuum is found to be caused by a loss of the air ejector loop. To reestablish the loop seal, you should _____.	Close in on the recirculating line from the DC heater to the condenser hotwell	Close the condenser loop seal valve until the loop refills and reopen slowly	Crack open the recirculating line from the DC heater to the condenser hotwell	Bypass the regulating valve in the condensate recirculating line until the loop refills
1039	Feedwater supplied to a flash type distilling plant will flash to vapor in the first-stage due to _____.	temperature being higher than the evaporation temperature of the supplied feedwater	heat exchange surfaces being directly in the path of the entering feedwater	flash chamber pressure being lower than the saturation pressure corresponding to the feedwater temperature	orifices finely atomizing the heated feedwater entering the flash chamber

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1040	While at sea, the flash type evaporator is discharging the output to the boiler water reserve feed tanks. If it becomes necessary to reduce the evaporator feed water temperature to below 165oF, you should _____.	Dump the distillate to the bilge	Secure the evaporator until the feedwater temperature can be raised to 165oF or more	Decrease the steam pressure to the air ejector	Lower the feedwater trip point temperature at the indicating panel for the three-way dump valve
1041	Irregular feeding or surging of the feedwater supply to a low pressure distilling plant may be attributed to _____.	Excessive pressure in the seawater feed heater	Erratic water flow through the air educator	A dirty strainer in the saltwater feed pump suction line	A clogged vent line from the air educator condenser
1042	If a higher than normal water level is observed through the inspection port of a low pressure distilling plant, you should suspect _____.	Improper vacuum	A leak in the feedwater heater	A clogged desuperheater water strainer	A malfunctioning brine pump
1043	The demisters installed in a flash-type evaporator serve to _____.	Deaerate the first and second effect distillate	Remove small water droplets entrained in the flashed vapor	Deaerate the first effect distillate	Filter the condensed flash vapors
1044	Excessive scale formation in a distilling plant may result from _____.	Poor distillate quality	Low brine concentration	Reduced evaporator capacity	Improper vacuum regulation
1045	While operating a two-stage flash-type evaporator, designed to operate in sea water of 70oF, the current seawater temperature is 50oF, while the salt water feed temperature is maintained at 170oF. The three-way solenoid valve trips, directing the distillate pump discharge to the bilge. Which of the following conditions is the probable cause for this occurrence?	Insufficient brine density being maintained in the second stage	Insufficient vacuum developed as a result of the sea temperature	Excessive amount of feedwater	Excessive and violent flashing in each stage

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1046	Rapid fluctuations of absolute pressure in the last effect of a multi-effect submerged tube distilling plant will tend to cause _____.	Slight foaming at the distillate feed pump	Improved operating conditions at the brine pump	Priming with increased salinity of distillate	Scale formation with increased heat transfer
1047	The inability to maintain proper vacuum in a submerged tube evaporator can be caused by _____.	Fluctuating steam pressure to the air ejector nozzle	Improper venting of the evaporator tube nests	Air leaks in the evaporator tube nests	High water level in the evaporator shell
1048	The dimension of the thinnest hydrodynamic film developed within a full journal bearing, when all other factors remain constant, depends upon the _____.	pour point of the lubricant	dielectric strength of the lubricant	interfacial tension of the lubricant	fluidity of the lubricant
1049	Which combination of the main shaft segments listed below, that are located furthest from the main engine, are connected by the inboard stern tube shaft coupling?	Thrust shaft and sterntube shaft	Line shaft and stern-tube shaft	Line shaft and thrust shaft	Stern-tube shaft and tail shaft
1050	What is the function of the aftercoolers installed in the diesel engine air intake system?	decrease the lube oil temperature	increase the exhaust temperature	decrease the air density	increase the air density
1051	Which of the following procedures should be carried out to permit the continued operation of a crosshead engine with a leaky aftercooler?	switch to diesel fuel and run at reduced speed	blank off the cooling water lines and run at reduced speed	nothing needs to be done due to the low heating value of heavy fuel	bypass the aftercooler to operate at sea speed
1052	The camshaft drive is designed to maintain proper camshaft speed relative to crankshaft speed. In maintaining this relationship, the camshaft drive causes the camshaft to rotate at _____.	crankshaft speed in a two-stroke cycle diesel engine	one-half crankshaft speed in a two-stroke cycle diesel engine	one-fourth times crankshaft speed in a four-stroke cycle diesel engine	two times crankshaft speed in a two-stroke cycle diesel engine
1053	Turbulence is created in the cylinders of a diesel engine to _____.	help mix fuel and air	obtain injection lag	utilize higher injection pressures	decrease combustion pressure

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1054	Which of the following statements describes the operating characteristics of a precombustion chamber?	Engines which are designed with precombustion chambers are more likely to suffer blocked nozzle holes, due to fuel oil impurities, than engines designed with direct injection	When operating correctly, combustion should not occur in the precombustion chamber	When fuel oil is injected into the precombustion chamber, it does not need to be as finely atomized as the fuel oil in diesel engines having direct injection	Engines when precombustion chambers, are easier to start when cold, when compared to engines with direct injection
1055	Turbulence in the cylinder of a two-stroke/cycle main propulsion diesel engine is mainly created by _____.	masked intake valves	precombustion chambers	directional intake valve ports	intake port design
1056	In a large slow-speed propulsion diesel engine, the side thrust on the crosshead is the direct result of _____.	the velocity of the crankpin during the power stroke	the angularity of the connecting rod against the crosshead during the powr stroke	the piston rod acting against the crosshead during the power stroke	cylinder pressure acting against the piston crown
1057	In a large slow-speed propulsion diesel engine, the force applied to the piston is _____.	against the crosshead during the compression stroke and away from the crosshead during the power stroke	against the crosshead during power stroke and away from the crosshead during the compression stroke	away from the crosshead during the power and compression strokes	against the crosshead during the power and compression strokes
1058	In a large, low-speed diesel engine the clearance between the piston crown and cylinder head is found to be excessive. In order to correct for this, you should _____.	insert shims between the crankpin bearing box and the connecting rod foot	build up the piston crown by metal spraying	build up the cylinder head by metal spraying	install a thinner head gasket
1059	Prior to starting, the purpose of turning over a main propulsion diesel engine with the cylinder test cocks open, is to _____.	check the compression	check for proper lube oil pressure	remove condensation and other liquids from the cylinders	test the starting system

1060	At what pressure should a cylinder relief valve of an internal combustion engine be set to relieve?	Cylinder relief valves should only be adjusted by an authorized repair facility with the permission of the OCMI	The valves should be set to just stop relieving with the engine running at full speed	Cylinder relief valves are no longer required for large low speed engines due to advancements in combustion engineering	The device should be set to relieve at a pressure not more than 40 percent in excess of the maximum firing pressure
1061	Integral water jacket liners use O-rings near the bottom of the liner. These O-rings serve to _____.	ensure proper temperature flow between the liner and engine block	form a water seal between the liner and engine block	prevent the escape of lubricating oil from the crankcase	allow for slight misalignment of the liner
1062	In a diesel engine, an integral liner is one in which the cooling water _____. I. flows through the cylinder liner jackets II. Touches the outer side of the liner	neither I nor II	I only	II only	both I and II
1063	Why are some diesel engine cylinder liners plated on the wearing surface with porous chromium?	Pores in the plating aid in maintaining the lube oil film	The chromium will not wear out the piston rings	The chromium strengthens the liners in the way of the scavenging air ports	Chromium eliminates the need for oil scraper rings
1064	A method of finishing diesel engine cylinder walls to aid in the proper ring seating and lubrication is known as _____.	angled honing	cross hatch honing	doubled honing	ribbed honing
1065	The lower water seal on a diesel engine wet cylinder liner must allow for liner axial movement. This seal is most commonly a _____.	flexible metallic seal ring	soft copper gasket	precision ground flange joint	neoprene O-ring
1066	One advantage of dry cylinder liners used in a diesel engine is the _____.	greater wear resistance than wet liners	absence of water seal rings	lower thermal expansion rate over wet liners	greater heat transfer rate than wet liners
1067	In a single-acting diesel engine. The cylinder liner area that is most difficult to lubricate is the _____.	bottom circumference	top circumference	minor thrust side	major thrust side

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1068	One advantage of a vacuum feed sight glass indicator used on cylinder lubricators over the discharge side liquid filled type sight glass is _____.	adjustments are not required	there are fewer moving parts	a lower grade of cylinder oil may be used	better visual metering adjustment
1069	One method of constructing large marine diesel engines and reducing the total engine frame weight is through _____.	casting interlocking components	case hardening integral components	forging integral components	welding plates to form sections for assembly
1070	Some engines are using auxiliary electrically driven blowers which is continuously running during maneuvering and automatically cut-off if the scavenge air pressure reaches_____load.	25%	60%	50%	80%
1071	Proper atomization of fuel in diesel engine combustion chambers will_____.	affect the injection pressure	reduce compression pressure	improve combustion	decrease power output
1072	Fuel injectors used in heavy fuel oil systems are usually provided with cooling to reduce_____.	fuel detonation in the cylinders	carbon accumulation on the nozzles	cold corrosion of the nozzles	fuel viscosity for better atomization
1073	What will happen if the needle valve in a fuel injection nozzle sticks open?	No fuel will be delivered through the nozzle	Fuel will leak into the nozzle drain line	The nozzle will overheat	Injection lag will be increased
1074	A fuel leak occurs in the high pressure fuel piping between the injection pump and fuel nozzle. This requires repair because of the_____.	serious fire hazard	high cost of fuel	possibility of pollution	poor combustion which will occur in that cylinder
1075	How is dissolved oxygen in boiler feed water minimized?	Phosphate treatment	Bottom blow down	Surface blow down	Maintain high feed water temperature

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1076	Jacket water temperature in a closed cooling system of a diesel engine is normally controlled by_____.	quick level of the fresh water expansion tank	varying the engine load to meet temperature requirements	the operation of the thermostatic valve	regulating the chromate level in the primary
1077	A leak at the intake valve of 2-stage compressor at the 2nd stage will cause high_____.	2nd stage pressure	intercooler pressure	1st stage pressure	compressor pressure
1078	What is the purpose of the dehydrator in refrigeration?	Add refrigerant to the system	Add oil to the system	Remove refrigerant oil	Remove refrigerant moisture
1079	In a mechanical compression refrigerating system what is the main cause of a very low discharge pressure?	Insufficient refrigerant in the system	Air inclusion refrigerating system	Excessive opening of expansion valve	Valve breakage inside the compressor
1080	The replacement piping for diesel engine high pressure fuel systems must be the same length and diameter as the original piping to_____.	keep torsional vibration constant	use existing supports and braces	avoid unnecessary parts inventory	maintain specified injection characteristics
1081	What part of an engine transmits the reciprocating motion of the piston to the driven unit in the form of rotary motion?	camshaft	tail shaft	crankshaft	propeller shaft
1082	Movement of the pump control rack in a fuel injection system having individual plunger-type pumps_____.	varies the quantity of fuel delivered	varies the compression of the delivery valve spring	changes the position of the fuel inlet ports	changes the length of the pump stroke
1083	Which of the listed interlocks stops the valve in the remote operating valve line of air starting system from opening when engaged?	Clutch Lever	Reversing air valves	Turning Gear	Shifting Lever

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1084	All members of the engineering watch should have adequate knowledge of the _____.I - use of appropriate internal communication II - escape routes from machinery spaces III - location of fire fighting equipments	I II and III	I only	II only	III only
1085	Prior to taking over the engineering watch while the ship is underway relieving officers of the engineering watch should satisfy themselves regarding _____. I - availability of fire fighting appliances II - state of completion of engine room log III - standing orders of the chief engineer officer	I only	II only	II & III	I II III
1086	The relieving engineering watch officers when underway should be familiar with the _____. I - level of fuel in the service tank II - potential adverse condition resulting from bad weather III - nature of work being performed on the machinery	II only	I II III	I only	II & III
1087	When do you pump diesel oil into the burners of an auxiliary boiler?	Heavy fuel must be blended	Overload capacity is required	Heavy smoking persists	Starting a dead ship
1088	What should you do FIRST to correct a condition wherein a diesel engine is operating with excessively high exhaust temperature on all cylinders?	Increase the lube oil pressure	Reduce the engine load	Increase the cooling water flow	Adjust the fuel rack
1089	What is the easiest way to locate defective exhaust valves in a propulsion diesel engine?	Exhaust pyrometer reading	Listening to the engine	Taking compression readings	Inspecting the valves visually

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1090	Some diesel engines are fitted with a thermometer in the cooling water outlet from each cylinder. If the cooling temperature from an individual cylinder begins to rise what should you suspect?	That there is an incomplete combustion in that cylinder	That there is an increase blow-by of the cylinders	That there is an overloading of the adjacent cylinder	That there is an overloading of cylinder
1091	What is the function of an expansion tank in a diesel engine cooling system?	Lower lubricating oil pressure when operating long period	Increase raw water content	Allow changes of the cooling water volume due to heating or cooling	Cooling exhaust gases without using coolant
1092	Why is the temperature of the scavenge air after the scavenge air cooler should not be lowered below recommended value?	To avoid cracking of the cylinder liner	To avoid excessive formation of condensate water	To maintain the thermal efficiency of the diesel	To avoid misfiring and starting problems
1093	Prior to departure what preparations are required regarding pistons and cylinder liners of a diesel engine ?	Open starting air start booster pump start stern tube pump	Close safety valve put out turning gear open air bottles	Open indicator cocks close safety valve turn lubricators	Preheat cylinders and pistons turn engine turn cylinder lubricators
1094	In an engine operation what is the effect called that describes the unstable operation of the governor that will not maintain a steady state condition ?	Hunting	Stability	Sensitivity	Deadbeat
1095	The fundamental difference between a 2-stroke and a 4-stroke engine is in the number of _____.	strokes in each combustion cycle	combustion events occurring in each stroke	piston strokes each one needs to complete a combustion cycle	piston strokes each one needs to complete a revolution
1096	Diesel engine crankcase oil mist detectors are designed to analyze _____.	fire risk in the crankcase	the temperature of the bearings in the crankcase	the temperature of the oil in the crankcase	the concentration of oil vapours in the crankcase
1097	If the main engine jacket cooling water expansion tank level drops rapidly what could this reaction indicate?	There is a leakage in external piping	There is a leak in the jacket cooling water cooler	Any of these choices	There is an internal leak in the engine

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1098	Why is it important to slow down the main engine RPM while water washing the turbocharger ?	To protect the blower side	To protect the bearings	To protect rotor blades from damage	To protect the exhaust gas economizer
1099	Your vessel is entering a tropical area and high humidity is expected what should you do to avoid condensation in the main engine s air cooler ?	Operate the engine with slightly open scavenging drain cocks to get rid of water	Reduce speed	Decrease the air temperature so proper draining can be achieved from the air cooler	Increase scavenging air temperature to above dew point
1100	When all preparations have been made to ensure that the main engine is operational prior to departure what will be the final test to be carried out ?	Open air to engine drain air bottles blow indicator cocks	Blow indicator cocks test reversing of engine short firing kick	Put out the turning gear and turn the lubricators	Close safety valves blow indicator cocks fill air bottles
1101	To avoid the possibility of a scavenge fire what important check is to be carried out every watch and more frequently if a damaged piston ring is suspected?	The cylinder lubrication	The exhaust gas temperature	Overhear the cylinder for noise	The scavenge drain line is not clogged
1102	With full load on the main engine the RPM of the turbocharger is too low what may be the cause ?	Dirty nozzle ring	The lubricating oil pump is malfunctioning	The diffuser ring is damaged	Exhaust temperatures on the main engine are too high
1103	In an automated engine the center from which the ship s engine room is controlled is called the _____.	power plant station control station (PPCS)	engineering control room (ECR)	main engine nerve and control station (MENS)	control plant station (CPS)
1104	Which of the following most important measurement to check when overhauling centrifugal pumps?	Impeller/wear ring clearance	Shaft axial clearance	Impeller diameter	Neck bush/shaft clearance
1105	Which of the items listed below is the correct method for removing intact engineers studs?	Pipe wrench	Drill and use stud remover	Self grip wrench	Stud box

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1106	If a leak is suspected in a tube heat exchanger what should be checked FIRST?	Tube plates for cracking	Tubes for damage	Tightness of flared tube end	Fixed tube end for security in tube plate
1107	Which of the followingfirst check to carry put when suction gauge reading is high but no liquid is passing through the bilge pump?	open the sea suction valve to prime pump	check the suction stainers and valves	inspect pump internals for wear	clean the oil /water seperator
1108	Which would you do FIRST on starting a gear pump if pumping cold oil?	throttle the suction valve	start the pump with valves closed and gradually open	ease off the spring loaded pressure relief valve	start/stop the pump frequently
1109	When on passage what should be the condition of the fire main?	sea suction and fire main discharge valves always open	pressurized at all times	all pump and isolating valves closed	drained and empty to prevent leakage at hydrants
1110	Before loosening pump covers how should the pressure be checked?	remove drain plug	checking the pressure gauge	air vent valve open and clear	remove cover slowly
1111	How does a quick closing valve operate?	an independent mechanism closes the valve	the valve bridge is collapse remotely allowing the valve to close	the valve can only be opened and closed hydraulically	a retaining collar is released allowing the valve to close
1112	When the opening pressure of a diesel fuel injector is LOWER THAN that specified by the engine manufacturer the effect would be a/an _____.	reduction in the duration of injection	delay in the start of injection	increase in quantity of fuel injected	decrease in the quantity of fuel injected
1113	Which of the following type of electric light is used in pil tanker pump room?	water proof	acid proof	shock proof	flame proof
1114	The process of killing the harmful bacteria from the water so as to make it safe for use is called_____.	disinfection	evaporation	carbonization	filtration
1115	Scavenging trunks are more prone to fire because they are_____ .	located below the cylinder	recipient of fresh air	always over pressure	accumulating oily substance
1116	An incinerator is a waste disposal unit that will burn_____.	gases	solid material and all types of liquid waste	liquid material	solid material

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1117	Which of the following minimum standard rest of a rating forming part of an engineering watch within a 24-hour period	8 hours	12 hours	6 hours	10 hours
1118	When an engineer on duty is inspecting an UMS-mode operated engine room at night what precaution should be taken?	do not silence the alarm so the other engineer can hear	switch the engineer call alarm to notify other engineers	leave the UMS selector switch to UMS mode	switch on the dead man alarm upon entering the control room
1119	Where is the safest place to do hot work in the engine room	work shop	purifier room	electrical shop	boiler room
1120	Engine room bilge water can be pumped out overboard safely by the use of which equipment listed below?	oil purifier	fine mesh filter	oil seperator	foam type filter
1121	Which of the following kind of tank is being used onboard that collects the dirty water from basins and sinks when the vessel is in port so that water pollution can be prevented?	sludge	sewage	bilge	drain
1122	When there is excessive formation of frost in the evaporator coils it will _____ .	lessen load on compressor	system in normal condition	reduce efficiency of refrigerating plant	keep compartment cooler
1123	Excessive vibrations created by the main propulsion machinery are detrimental to which equipment listed below?	electronic	cabin	galley	navigation
1124	An engineer on duty inspecting an unmanned engine room at night should be aware of which of the following precautions?	Switch on the dead man alarm upon entering the control room	Call the oiler on duty	Switch the engineers call alarm to notify other engineers	Silence the alarm so the other engineer cannot hear
1125	What should the outgoing duty engineer do before he hand over the watch to his reliever?	Hand over the log book	Soda drink is ready	Information the first engineer before leaving engine room	Check that reliever is capable to carry out watch keeping duties

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1126	A report when an incident takes place involving the discharge or probable discharge of oil (Annex I of MARPOL 73/78)_____.	dangerous goods report	harmful substances report	final report	effective report
1127	It is necessary to transfer fuel oil to the settling tanks in order to _____.	purge any air in the fuel	filter and purify it before being pumped to the boiler burners	allow the sediments and water to settle	heat the fuel to proper temperature for atomization
1128	When you are securing a steam-reciprocating pump which valves should you leave open?	Steam exhaust valve	Steam supply valve	Water cylinder drain valve	Steam cylinder drain valve
1129	Latent heat can be defined as the heart which must be added to a substance in order to change it from a _____.	All of the above	Solid to liquid	Liquid to vapor	Solid to vapor
1130	Which of the following design features is most common to two-stroke/cycle low-speed main propulsion diesel engines?	Cross-scavenging air flow	Crosshead construction	Trunk type pistons	Single reduction gearing
1131	The one method of constructing large marine diesel engines and reducing the total engine frame weight is through _____.	case hardening integral component	forging integral components	welding plates to form sections for assembly	casting interlocking components
1132	A hand held digital tachometer give a bad reading if _____.	positioned 5-10 inches from the shaft	partially aimed at a 60 Hz fluorescent light	the tae is too shinny	aimed directly at the shaft
1133	What speed is known when the rotating shaft frequency and the natural vibrating frequency become synchronized at a particular speed?	Breakaway speed	Sympathetic speed	Synchronous speed	Critical speed
1134	At what temperature in degree Celsius will safety devices called fusible plug installed in air compressor or compressed air system melts in order to prevent explosion?	100	50	200	150

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1135	The standards of marine engines of over 23 HP for starting purposes in most cases should_____.	Hand starting	Battery starting	Electric starting	Compressed air
1136	The action should take when water is found in the fuel oil setting tank is to _____.	All of the options	shift to alternate or standby fuel oil service pump	shift pump suction to an alternate settling tank	sound the settling tank with water indicating paste
1137	Diesel engine jacket water is used in distilling units in the_____.	final heating of the distillate	distillate cooler	brine cooler	final heating of the feedwater
1138	The following refers to the first law work transfer?	Lower than heat transfer	Equal to heat transfer	Greater than heat transfer	Higher than heat transfer
1139	What unit of measure expresses the chloride content of boiler water?	PPM	GPC	pH	Micro ohms
1140	Which of the following statements regarding low pressure, reciprocating, air compressor valves is correct?	Mechanical operating valve gear is required to open and close the valves.	Due to the physical construction of the valves, a relatively small cylinder clearance space is required for operation.	A relatively large cylinder clearance space is required for valve operation.	Only the suction valve requires a push rod and rocker arm mechanism for valve operation.
1141	in case Engine room is unmanned and Diesel Engine is running, when the temperature of cooling water outlet is one degree above the limit in long period of time. What is the next immediate better thing to do? _____.	Check the setting of Lube oil controller	check the setting of the RPM indicator.	Check the cleansiness of fresh water cooler	Check the setting of temperature controller
1142	In order to move the rudder, what must be created by steering gear?	Load	Force	Torque	Friction
1143	in a distilling plant, in order to achieve full liquifaction in the condenser, Refrigerant vapour from the evaporators is compressed to a higher pressure. It is because of what purpose.	Lower down the boiling point	Speed up the boiling point	maintain the boiling point	Raise the boiling point

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1144	If the exhaust oil is returned directly to the pump suction, what type of hydraulic circuit is the system?	closed loop	open loop	live line loop	low pressure loop
1145	Which of the following is not normally used in the operation of deck machinery in the merchant vessels?	steam	Electric	Hydraulic	Water
1146	What device has a vertical post to which the eye of a mooring line can be attached?	Emergency towing device	Fairlead / chock	Wire guide	Mooring bollard
1147	What do you call the machinery other than the main propulsion?	Emergency Machinery	Stand-by machinery	Auxiliary Machinery	Available Machinery
1148	Which of the equipment listed is the most effective in processing bilges slops for overboard discharge?	magnetic duplex strainer	a 100-PPM oily water separator	assembling the lube oil purifier as a separator and a ligning it to bilge overboard	A 15-PPM oily water separator
1149	In the Hydropore tank, What is the device intalled to starts/stops the pump?	Pressure switch	Timer	Temperature switch	Level Switch
1150	Which of the following fitting has an anchored sleeve with a stuffing box and gland in which an extension of the joining pipe can slide freely within imposed limits?	Stainless Steel Bellow joint	Right Angle Bend joint	Loop joint	Tie Rod Expansion Joint
1151	Increases in rotor clearance in a rotary pump will _____.	decrease reaction ring clearance	increase discharge pressure	decrease pump cavitation	decrease pump capacity
1152	Which of the following is provided so that air compressor DOES NOT run continuously when there is demand for compressed air?	Hydrophore tank	Air reservoir	Pressure gauge	Cargo tank
1153	What part is normally fitted to Piston rods in Large Diesel engines. _____.	connecting rods	gudgeon pins	crossheads	snap rings

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1154	Which part of the engine receives and transmits its full working power and is subjected to bending, torsion and wear stresses?	Crankshaft	Bottom end bearing	Crosshead	Camshaft
1155	Which of the following is specifically used to lubricate the piston rings of the main engine?	system oil	Cylinder oil	Fuel oil	lube oil
1156	In a four stroke cycle engine, what event follows after the injection of fuel oil into the cylinder?	Intake stroke	Exhaust Stroke	Power Stroke	Compression stroke
1157	The oil scraper ring of a 4-stroke engine piston is installed at this part._	3rd ring	top ring	middle ring	Lowest ring
1158	The most common problem encountered by turbo-chargers in a two-stroke engine is _____	purging	charging	surging	merging
1159	Which of the following pumps maintain the vacuum condition of the fresh water generator?	Ejector pump	Distillate pump	Air/brine pump	Jacket water pump
1160	Fuel leakage in high-pressure fuel pipe between the injection pumps and the fuel nozzle needs immediate repair because of _____.	serious fire hazard	clogging of the orifices	distortion of the spray pattern	high cost of fuel
1161	A one cylinder, single acting , 305 mm x 460 mm, four stroke diesel engine was tested for an hour with a total revolution of 12,120. What is the rated rpm of the engine?	12,120 rpm	727,200 rpm	3.37 rpm	202 rpm
1162	What procedure is advisable before a heat exchanger will be subjected for repairs or refitting?	Drain the fresh water side of heat exchanger	Clean and flush through with sea water	Flush through with chemicals	Drain the sea water side of heat exchangers

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1163	The vibration incurred by the main engine is transferred to the hull of the ship by the _____.	reduction gear	fly wheel	cross head	thrust bearing
1164	The main purpose of the oil scraper ring is to _____-.	seal the space between the piston and the liner	damp out fluctuations of the piston side thrust	transmit the heat from the piston to the cylinder liner	reduce the amount of oil burned
1165	Which of the following maintains the low pressure in the chambers and remove any gases released from the seawater of a Flash Evaporator?	Pre-heater	Brine Pump	Ejector Condenser	Air Ejector
1166	What type of valve is used to shut off or, in some cases, partially shut off the flow of a fluid?	Recirculating valve	Pressure reducing valve	Stop valve	Check valve
1167	An excessive pressure differential across a lube oil strainer could indicate the _____.	upside down Strainer needs cleaning	relief valve is stuck closed	relief valve is stuck open	strainer installed inverted
1168	A diesel engine emits blue exhaust smoke due to _____.	excessive cylinder lubrication	light load	high compression pressure	cold air intake
1169	Which of the following is fitted in an air tank to eliminate any oil/water accumulation?	Unloader	Fusible plug	Drain valve	filter
1170	Why are removable sleeves installed in a centrifugal pump shafts?	they make it easier to replace the pump shaft packing	they can be economically replace as they wear out	they can be remove when it is necessary to	they increase the strength of the shaft
1171	Which of the following is the reason why seawater is not used directly as engine coolant?	explosive effect	low specific heat	corrosive action	hard to maintain
1172	A reading of zero on a Bourdon tube instrument generally means _____.	absolute vacuum	equal to atmospheric pressure	absolute Zero	near absolute zero
1173	Which of the following may be defined as the head required to prevent cavitation?	Required net positive suction	Available net positive suction head	Suction static head	Total static head

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1174	The purpose of the thrust bearing of a propulsion diesel engine is to _____.	control axial movement of the crankshaft	prevent propeller thrust being transmitted to the hull	absorb vibrations in the propeller shafting	transmit engine thrust to the proprller shaft
1175	The most important factor in engine performance is the actual power output at the end of the crankshaft available for doing work. which is known as _____.	indicated horsepower	friction horsepower	net horsepower	brake horsepower
1176	Which type of packing is used in steam joints?	Elastic packing	Asbestos packing	Copper gasket packing	Diatherma packing
1177	What is the area of the piston if the diameter measures 0.75 m?	0.54 meter squared	0.44 meter squared	0.53 meter squared	0.43 meter
1178	Calculate the friction power of the engine with indicated power output of 190 hp and shaft power of 162 hp	28 kW	84 kW	84.4 hp	28 hp
1179	Cylinder wear may take place as a product of mechanical wear,corrosion and combustion which is hard to remove?	Adhesion	Frictional wear	Corrosion	Abrasion
1180	What part of big diesel engine is where burnt gases passes through before it reaches the funnel?	Exhaust gas manifold	Air cooler	Supercharger	Scavenging manifold
1181	In bunker tanks, which of the following tanks is used in storing fuel ready for immediate use for starting up the diesel engine?	Settling tank	Double buttom tank	Sup tank	Sercvice tank
1182	1 kPa is equivalent to _____.	3 in of Hg	10 mm of Hg	43.52 psi	2,250.2 bars
1183	When a pressure gauge reads zero, the absolute pressure is equal to _____psi.	1.74	1.47	14.7	7.41
1184	The measure of the amount of salt present in water is called _____.	SalinitySpecific Gravity	Density	Specific Gravity	Viscosity

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1185	Which of the following could greatly affect the efficiency of any heat exchanger?	oil	salt	Scale	water
1186	What causes the water inside the hydrophore tank to reach different decks on board?	control valve	Pressurized air	Superheated steam	Head pressure
1187	How do you control freshwater heating temperature in the evaporator side of a Fresh Water Generator?	Regulate vent valve	Regulate by-pass valve	Regulate inlet valve	Regulate outlet valve
1188	Which of the following is reduced as air is compressed?	Temperature	pressure	Volume	Weight
1189	Which of the following valves has a hinged flap, which is pushed to open by outward flow, and closed by its own weight?	flap check valve	side valve	relief valve	sluice valve
1190	Which of the following best describes the pressure at the outlet of a pressure reducing valve when the inlet pressure decreases?	It also decreases	It increases	It remains constant	It is equal to zero
1191	Which of the following choices is a distinguishing feature of an Eductor compared to other pumps?	ease at which the wearing rings may be	small size of impeller	lack of moving parts	discharge and being smaller than the suction end
1192	Which type of valve is used to control or limit the pressure in a system or vessel, which can build up by a process upset, instrument of equipment to fail?	Solenoid valve	Globe valve	Check valve	Relief valve
1193	Reduced capacity, vibration and noise at the centrifugal pump suction due to vapor pockets in the fluid being pumped is caused by _____.	water hammer	fluid friction	cavitation	steam knock

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1194	Which of the following components is fitted so that Air compressor can run automatically?	Pressure switch	Temperature switch	Level switch	Interlock switch
1195	What system supplies air primarily to the combustion control system and other pneumatic controllers?	Control air system	Forced draft air system	Supply air system	Ships service air system
1196	What is the term for the pressure at which liquid vaporizes at a certain temperature?	Vapor pressure	Static pressure	Precipitation pressure	Suction pressure
1197	If the surface of the liquid inside the suction tank is 3 meters below the pump, what is the approximate value of NPSHa? (net positive suction head)	3 meters	13 meters	30 meters	7 meters
1198	What chemical may be used to safety remove the scales inside a low pressure evaporator?	Hydrochloric acid	Sulfuric acid	Sulfamic acid	Nitric acid
1199	The possible cause why lube oil pumps fail to build up discharge pressure could be that the ____.	suction valve is closed	bypass valve is closed	discharge valve is open	suction vacuum is high
1200	Which of the following draws the concentrated seawater or brine remaining in the 2nd-stage flash chamber of a Flash Evaporator?	Air ejector	Distillate pump	Seawater feed pump	Brine pump
1201	Which type of centrifugal pump is used where relatively high pressure and small capacity are required?	liquid ring vacuum pump	diffuser pump	regenerative pump	vacuum pump
1202	An inadequate reciprocating bilge pump discharge is most often caused by _____.	clogged suction strainer	scarred cylinder walls	defective intake valves	clogged drain valves
1203	Which of the following pumps transfer produced water to the different freshwater tanks?	Chemical pump	Ejector pump	Seawater pump	Distillate pump

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1204	Which valve has a bulbous body housing, a valve seat and screw down plug or disc arranged at right angles to the axis of the pipe?	Angle valve	Angular Butterfly valve	Angle Gate valve	Globe valve
1205	The boiler feedwater control valve varies the relationship between steam and water flow during periods of _____.	Maximum boiler load	minimum boiler load	Gradual boiler load	steady boiler load
1206	Which of the following types of boiler can raise steam pressure the fastest?	Vertical boiler	Fire tube boiler	Horizontal boiler	Water-tube boiler
1207	In addition to a nozzle, a fuel oil atomizer uses which of the listed parts?	Sprayer plate	Air cone	Burner cone	Spacer plate
1208	The amount of supplied fuel oil on the boiler atomizer depends on the _____.	Atomiser holes	Fuel pressure	Steam pressure	boiler pressure
1209	Which of the listed refractory materials will develop required strength only after being heated at a temperature of 1095C (2000F) or higher?	Plastic fireclay	Plastic insulation	Castable insulation	Castable fireclay
1210	Boiler safety valves are set not to go above maximum operating pressure of higher than ____.	20%	15%	10%	5%
1211	The boiler water having a pH reading of 7.0 is said to be _____.	basic	acidic	alkaline	neutral
1212	If steam pressure requirement is high, the boiler must be a _____.	fire tube type	water tube type	hybrid type	composite type
1213	What is described as the condition whenever steam and water flow together in a pipeline which results in severe vibration and possible rupture of the pipeline?	Steam hammer	Thermal shock	Steam shock	Water hammer

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1214	The major heat loss in a marine boiler is from the heat _____.	carried away by combustion gases.passing through the boiler casing.	used in the economizer and air heater.	required to change water into steam.	passing through the boiler casing.
1215	What is the most destructive gas in the feed water system?	ammonia	oxygen	nitrogen	hydrogen
1216	Which will initiate the shutdown of the boiler when it has detected no flame in the furnace during initial ignition?	Dye cell	Flame eye	Switch cell	Solenoid valve
1217	When boiler is heating up a large amount of excess air, what is the color of smoke that will appear at the smoke stack?	Gray smoke	Light-brown haze	White smoke	Black smoke
1218					
1219	Full-wave rectified	A full-wave rectifier has one diode burned out in an open condition, what will be the output characteristic of the device?	Zero	Half-wave rectified	Equal to the AC input
1220	A molded-case breaker provides protection against short circuits by using a/an_____.	arc quencher	electromagnet	holding coil	shading coil
1221	A solid-state circuit is inoperative; the first action that should be taken is to_____.	change all transistors	check the DC supply voltage	check all the resistors	wiggle all the components to check for loose connections
1222	As a general rule, the first troubleshooting action to be taken in checking faulty electric control devices is to_____ .	draw a one line diagram of the circuitry	insulate the apparatus from ground	test all fuses and measure the line voltage	take megger readings
1223	Controller contacts should be routinely cleaned by_____.	blowing with compressed air	dressing with crocus cloth	filing with a bastard file	wiping with a clean dry cloth
1224	Heat sinks are frequently used with____ .	power transistors	vacuum tubes	tunnel rectifier diodes	magnet
1225	In an impressed current cathodic protection system, the anode is_____ .	connected to the hull and deteriorates with time	insulated from the hull but deteriorates with time	insulated from the hull and does not waste away.	connected to the hull but does not waste away

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1226	In order to check the performance of a transistor removed from its circuit, the instrument to be used should be a/an_____.	impedance meter	ohmmeter or transistor tester	sensitive potentiometer	voltmeter or transistor tester
1227	Most three-phase induction motors of five (5) horsepower or less, are started by_____.	reactor starters	autotransformer starters	across-the-line starters	resistor starters
1228	The charge of a lead-acid battery can be restored by_____.	by adding water to the electrolyte	adding acid to the electrolyte	passing an alternating electric current through the cell	passing a direct electric current through the cell
1229	The charging of lead-acid storage batteries will always result in_____.	a dangerously explosive gas being liberated	dangerous acid burns	the danger of lead poisoning	increased level of electrolye
1230	The division of kilowatt load between two paralleled alternators is determined by the_____	amount of field excitation to the leading machine	load-speed characteristics of the governors	amount of field excitation to the lagging machine	number of field poles per alternator
1231	The electrolyte in a lead-acid storage battery consists of distilled water and _____	calcium chloride	sulfuric acid	muriatic acid	hydrogen chloride
1232	Third color band on a resistor is used to indicate the_____.	tolerance of the resistor	second significant figure of the resistance	number of zeros following the first two significant figures in the resistance value	first significant figure of the resistance
1233	To determine if a stator coil is grounded, you should use a/an _____. .	ammeter	megger	ground detection lamp	magneto
1234	What precaution should be taken with a vessel's impressed current cathodic protection system after a drydocking period during which the hull has been painted?	Output currents should be carefully monitored to assure operation at nearly 100 % capacity for proper curing	The unit should remain off for the specified amount of time so as not to disturb curing.	Reference cell voltages should be maintained at half the normal range for approximately 48 hours.	A slight (10-15%) overcurrent to the anodes should be allowed in order to speed drying.

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1235	When a megohmmeter is being used to test insulation resistance, current leakage along the surface of the insulation is indicated by the megohmmeter's pointer _____ .	continually rising as test voltage is applied	dipping toward zero then raising slowly	fluctuating around a constant resistance reading	kicking slightly down scale as voltage is applied
1236	When testing a capacitor with an analog type ohmmeter, a good capacitor will be indicated by_____.	there is no meter deflection	the meter deflects to a low resistance value and increases rapidly to a higher value, but stays fairly low	the meter deflects to a low resistance value and slowly increases towards infinity	the meter deflects to a low resistance value and remains there
1237	When troubleshooting an electronic circuit, a cold solder joint can be located with the aid of an ohmmeter. Once the problem has been located, you should_____.	reheat connection with a soldering tool and recheck with an ohmmeter	do nothing as this is the normal condition	reheat the circuit in an oven to an even temperature and recheck with an ohmmeter	reheat the connection with a match and recheck with an ohmmeter
1238	When troubleshooting electronic equipment, the first step to be taken before testing the circuit voltage is to_____.	check the current flow through the circuit	remove the suspected component	check the voltage supply from the power source	set the meter to the lowest range
1239	When troubleshooting electronic equipment, you should use a high impedance multimeter _____.	to prevent excess current flow through the meter that would damage it	so as not to load down the circuit and obtain erroneous voltage readings	whenever a low impedance meter is not available, regardless of the components being tested	for AC measurements only and a low resistance meter for DC measurements
1240	When troubleshooting most electronic circuits, "loading effect" can be minimized by using a voltmeter with a/an_____	input impedance much less than the impedance across which the voltage is being measured	sensitivity of more than 1000 volts/ohm	input impedance much greater than the impedance across which the voltage is being measured	sensitivity of less than 1000 ohms/volt
1241	Which of the following precautions should you take when securing propulsion generators and motors for an extended period of time?	Lift the brushes from commutator collector rings and use the built-in heater to prevent moisture accumulation	Lift the brushes from commutator collector rings and circulate cool dry air through the units	Disconnect the brush pigtails from their contacts and circulate air through the units.	Disconnect the brush pigtails from their contacts and discharge carbon dioxide into the units to keep them dry.

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1242	Which of the listed items will stop a motor due to a reduction in voltage and restart it when the voltage is restored to normal?	Non-renewable link fuse	Low voltage release circuit	Renewable link fuse	Low voltage protection circuit
1243	While troubleshooting a circuit in an engine room central control console, a resistor is suspected of being faulty. Which of the following precautions must be observed if an ohmmeter is to be used to check its value?	Correct polarity must be observed because reverse bias will damage the component.	Meter leads must not be twisted so as to cancel out the individual magnetic fields.	Resistor's circuit must be de-energized and at least one end of the component isolated.	The meter case must be grounded prior to attaching the leads
1244	While troubleshooting a circuit in an engine room central control console, a resistor is suspected of being faulty. Which of the following precautions must be observed if an ohmmeter is to be used to check its value?	Meter leads must not be twisted so as to cancel out the individual magnetic fields.	Correct polarity must be observed because reverse bias will damage the component.	The meter case must be grounded prior to attaching the leads.	Resistor's circuit must be de-energized and at least one end of the component isolated
1245	Why is it a poor practice to use a high wattage soldering iron when soldering or desoldering components on a printed circuit board?	The foil wire bonded to the board may come loosened from the board	The circuit board will blister and warp.	The circuit board has a low melting temperature.	The solder is kept to a dull heat dissipating finish.
1246	With both ends of a three conductor cable disconnected and arranged without the conductors touching each other, an ohmmeter reading of 'zero' ohms between the ends of one conductor would indicate _____.	the resistance is infinite	a short circuit	continuity	a partial ground
1247	A tubular fuse should always be removed from a fuse panel with ___.	a pair of insulated metal pliers	a screwdriver	any insulated object	fuse pullers
1248	Which of the following procedures should be used to maintain a large electric motor during periods of inactivity?	Compressed air should be blown over areas where dust is deposited.	Spraying a solvent periodically to remove carbon dust.	Space heaters should be used to prevent condensation of moisture.	A thin layer of air -drying varnish should be applied on the windings.

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1249	When a nickel-cadmium battery begins gassing while connected to the battery charging circuit, you should____.	add potassium hydroxide to each cell to reduce the specific gravity of the electrolyte	increase the charging rate	add distilled water to each cell to increase the specific gravity of the electrolyte	do nothing as this is a normal condition when charging
1250	Four lamps are connected in parallel in a single circuit. If one of the lamp burns out, the others will _____.	burn with their original intensities	all go out	become dimmer	become brighter
1251	When charging lead-acid batteries, you should reduce the charging rate as the battery nears its full charge capacity to ____.	increase lead peroxide formation	prevent excessive gassing and overheating	allow equalization of cell voltages	reduce lead sulfate deposits
1252	When charging lead-acid batteries the charging rate should be reduced as the battery nears its full charge to ____.	allow equalization of cell voltages	increase lead peroxide formation	reduce lead sulfate deposits	prevent damaging battery plates
1253	The windings of electric generators during short idle periods should be_____.	allowed to cool slowly to ambient temperatures	kept warm by using strip or space heaters	relieved of all capacitive charge by grounding the conductors	flashed with direct current to remove any residual magnetism
1254	If you disconnect and arrange both ends of a three conductor cable, without any contact between the individual conductors. A low ohmic value between the ends of a single conductor would indicate _____.	continuity of the conductor	an infinite resistance	the presence of a partial ground	that the conductor is not circuit
1255	The air gap provided an induction motor should be checked periodically with a feeler gage to detect ____.	any decrease in motor magnetizing current	increase in apparent power factor	an increase in hysteresis loss	any increase in rotor bearing wear
1256	The proper way to apply plastic electrical tape to an electric cable splice is to_____.	apply the tape in one non - overlapping layer only	wind the tape so that each turn overlaps the turn before it	apply tape to the braided cover, but avoid touching it	heat the tape with a soldering iron for good bonding
1257	Regarding battery charging rooms, ventilation should be provided _____.	horizontally near the batteries	at the lowest point of the room	only when charging is in progress	at the highest point of the room

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1258	If violent gassing occurs when a lead-acid storage battery is first placed on charge, the ____.	charging rate is too high	battery must be given an emergency charge	charging rate is too low	specific gravity of the electrolyte solution is too low
1259	When a lead-acid battery begins gassing freely while receiving a normal charge, the charging should ____	shut off	be decreased	remain unchanged	be increased
1260	Maintenance of alkaline batteries should include_____.	checking the electrolyte weekly using a hydrometer	top off with sulfuric acid as needed	replacing the electrolyte every 5 years	making certain connections are tight and clean
1261	Air gap readings should be periodically taken for electrical generation equipment. The best tool to use to take these measurements is a ____.	dial indicator	tapered, long blade gage	cloth (non-metallic) tape measure	inside micrometer
1262	Which of the following statements is true concerning the cleaning of electrical contacts?	Compressed air should be used to blow out metallic dust.	Magnetic brushes should be used to remove metallic dust.	The contact surfaces should be greased to increase contact resistance.	Delicate parts should be cleaned with a brush and an approved safety solvent.
1263	Temporary repairs to an open DC propulsion armature coil can be made by_____.	disconnecting coil ends, insulating each, and short circuiting the two commutator bars	connecting the coil ends directly to a pair of negative brushes	grounding the coil ends and short circuiting the commutator bar	removing the sparking brushes
1264	A hydrometer measures specific gravity by comparing the ____.	density of a substance in water with the density of the same subject in air	difference in volume between water and the liquid measured	mass of substance measured with the density of the same substance	buoyancy of the indicator in the liquid in water with the buoyancy of the same indicator in the liquid being measured
1265	Air gap readings should be taken periodically on electrical generation equipment to ___.	provide for the correct proper tightening of the field coil bolts and correct lateral adjustment of the field coils	determine the amount of varnish that can be applied to correct insulation problems	determine the condition of the bearings	increase machine efficiency

1266	A lead-acid battery is considered fully charged when the ____.	terminal voltage reaches a constant value at a given temperature	specific gravity of all cells reaches the correct value and no longer increases over a period of 1 to 4 hours	battery charger ammeter indicates a positive reading	electrolyte gasses freely
1267	Under normal conditions, storage batteries used for starting the emergency diesel generator are maintained in a charged state by which of the following methods ?	Trickle charging	Fast charging	Equalizing charge	Reverse charging
1268	Which of the following statements best describes the material known as varnished cambric?	Paper impregnated with mineral oil, specially wrapped with nonmetallic tape, and coated with varnish.	Rubber insulation coated with a layer of tin.	Cotton cloth coated with insulating varnish.	Felted asbestos sealed with varnish.
1269	Which of the following methods should be used to dress the face of silver-plated contacts?	Filing	Sanding with 0000 sandpaper	Burnishing	All of the above are correct.
1270	Which of the listed procedures should be carried out to prevent moisture damage to electrical apparatus during extended periods of idleness?	Strap silica gel around the commutator.	Fill the motor housing with CO2 to inert the space.	Place heat lamps in the motor housings.	Cover the equipment with a canvas tarpaulin.
1271	Which of the following materials is recommended for finishing the slip rings after grinding or turning?	crocus cloth	grade 00 sandpaper	canvas wiper	smooth file
1272	Electrical leads and insulation on a motor should be painted with_____.	heat -resisting acrylic	insulating white lead	heat -resisting aluminum	insulating varnish
1273	A fuse the blows often should be replaced only with a fuse of ___.	lower current and higher voltage rating	the recommended current and voltage rating	higher current and lower voltage rating	higher current and voltage rating
1274	Which of the listed precautions should be taken when cleaning the internals of a motor with compressed air? I. Open	I & II	I only	II & III	I, II & III

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	the machine on both ends so as to allow the air and dust to escape II. Be certain that the circuit breaker is opened and tagged on the feeder panel III. Be certain that the air is clean and as dry as possible				
1275	Air gap readings should be taken on electrical generation machinery periodically to ___. I. determine the need for cleaning II. check the condition of the bearings	both I and II	I only	II only	neither I nor II
1276	If a small motor has been immersed in salt water, it should be ___. I. Thoroughly rinsed in fresh water and completely dried II. Initially started with reduced voltage	neither I nor II	both I and II	I only	II only
1277	Air gap readings for electrical generating equipment should be taken periodically to ___. I. determine the condition of the bearings II. prevent damage to the rotor and stator	I only	neither I nor II	II only	both I and II
1278	If a small electric motor is immersed in salt water it should be_____. I. washed in fresh water II. dried in an oven	neither I or II	both I and II	I only	II only
1279	When shipboard electrical distribution circuits are connected in parallel, additional parallel circuits will cause the total circuit resistance to ____.	decrease, causing an increase in the line current	increase, causing a drop in the line current	increase, causing a decrease in the line voltage	decrease, causing an increase in the line voltage
1280	Which of the following problems is indicated if lead-acid battery begins to gas violently when it is first placed on charge?	insufficient compartment ventilation is being provided	An excessive charging rate is being applied to the battery	a short circuit exists in one of the battery cells	The battery is undergoing its normal charging rate

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1281	When a replacing a fuse with one of a higher rating than the original, which of the following is true?	It creates a larger voltage drop in the circuit being protected	It increases the efficiency of the equipment by allowing more current to be used	It endangers the apparatus it is supposed to protect	It reduces the possibility of short circuits
1282	If an alternator is to be inactive for a considerable period of time, which of the following action should be taken?	It should be disconnected from the prime mover and raised off its bearing supports	Insulation resistance readings should be taken weekly to ensure resistance is not deteriorating	The windings and collector rings should be protected with a thin coat of grease or oil	The brushed should be lifted off the slip rings to prevent pitting of the metal by electrolytic action
1283	Thermal strip heaters are provided in DC main propulsion motors to_____.	prevent moisture buildup in windings	maintain a relatively constant temperature in the motor enclosure	prevent the rotor from warping	provide an additional means of starting resistance
1284	Proper storage battery maintenance includes ____.	making sure electrolyte level is below the separator plates	maintaining a high charging rate at all time	insulating the terminals with naval jelly	keeping connections light and casing surface clean
1285	Which of the listed battery charging circuits is used to maintain a wet-cell, lead-acid, storage battery in a fully charged state during long periods of disuse?	Quick charging circuit	High ampere charging circuit	Trickle charging circuit	Normal charging circuit
1286	With both ends of a three conductor cable disconnected and arranged without the conductors touching each other, an ohmmeter reading of zero ohms between the ends of one conductor would indicate _____.	the resistance is infinite	a short circuit	a partial ground	continuity
1287	A tubular fuse should always be removed from a fuse panel with ___.	fuse pullers	a screwdriver	a pair of insulated metal pliers	any insulated object
1288	Which of the following procedures should be used to maintain a large electric motor during periods of inactivity?	Compressed air should be blown over areas where dust is deposited.	A thin layer of air -drying varnish should be applied on the windings.	Space heaters should be used to prevent condensation of moisture.	Spraying a solvent periodically to remove carbon dust.

1289	When a nickel-cadmium battery begins gassing while connected to the battery charging circuit, you should____.	add distilled water to each cell to increase the specific gravity of the electrolyte	do nothing as this is a normal condition when charging	add potassium hydroxide to each cell to reduce the specific gravity of the electrolyte	increase the charging rate
1290	Four lamps are connected in parallel in a single circuit. If one of the lamp burns out, the others will _____.	all go out	become brighter	burn with their original intensities	become dimmer
1291	When charging lead-acid batteries, you should reduce the charging rate as the battery nears its full charge capacity to ____.	allow equalization of cell voltages	prevent excessive gassing and overheating	increase lead peroxide formation	reduce lead sulfate deposits
1292	When charging lead-acid batteries the charging rate should be reduced as the battery nears its full charge to ____.	prevent damaging battery plates	allow equalization of cell voltages	reduce lead sulfate deposits	increase lead peroxide formation
1293	The windings of electric generators during short idle periods should be_____.	flashed with direct current to remove any residual magnetism	kept warm by using strip or space heaters	relieved of all capacitive charge by grounding the conductors	allowed to cool slowly to ambient temperatures
1294	If you disconnect and arrange both ends of a three conductor cable, without any contact between the individual conductors. A low ohmic value between the ends of a single conductor would indicate _____.	the presence of a partial ground	that the conductor is not circuit	an infinite resistance	continuity of the conductor
1295	The air gap provided an induction motor should be checked periodically with a feeler gage to detect ____.	increase in apparent power factor	any decrease in motor magnetizing current	an increase in hysteresis loss	any increase in rotor bearing wear
1296	The proper way to apply plastic electrical tape to an electric cable splice is to_____.	wind the tape so that each turn overlaps the turn before it	apply tape to the braided cover, but avoid touching it	apply the tape in one non - overlapping layer only	heat the tape with a soldering iron for good bonding
1297	Regarding battery charging rooms, ventilation should be provided _____.	only when charging is in progress	at the lowest point of the room	at the highest point of the room	horizontally near the batteries

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1298	If violent gassing occurs when a lead-acid storage battery is first placed on charge, the ____.	specific gravity of the electrolyte solution is too low	charging rate is too high	battery must be given an emergency charge	charging rate is too low
1299	When a lead-acid battery begins gassing freely while receiving a normal charge, the charging should ____	be increased	remain unchanged	be decreased	shut off
1300	Maintenance of alkaline batteries should include_____.	making certain connections are tight and clean	checking the electrolyte weekly using a hydrometer	replacing the electrolyte every 5 years	top off with sulfuric acid as needed
1301	Air gap readings should be periodically taken for electrical generation equipment. The best tool to use to take these measurements is a ____.	inside micrometer	cloth (non-metallic) tape measure	tapered, long blade gage	dial indicator
1302	Which of the following statements is true concerning the cleaning of electrical contacts?	Magnetic brushes should be used to remove metallic dust.	Delicate parts should be cleaned with a brush and an approved safety solvent.	Compressed air should be used to blow out metallic dust.	The contact surfaces should be greased to increase contact resistance.
1303	Temporary repairs to an open DC propulsion armature coil can be made by_____.	grounding the coil ends and short circuiting the commutator bar	removing the sparking brushes	disconnecting coil ends, insulating each, and short circuiting the two commutator bars	connecting the coil ends directly to a pair of negative brushes
1304	A hydrometer measures specific gravity by comparing the ____.	difference in volume between water and the liquid measured	density of a substance in water with the density of the same subject in air	mass of substance measured with the density of the same substance	buoyancy of the indicator in the liquid in water with the buoyancy of the same indicator in the liquid being measured
1305	Air gap readings should be taken periodically on electrical generation equipment to ___.	determine the condition of the bearings	determine the amount of varnish that can be applied to correct insulation problems	provide for the correct proper tightening of the field coil bolts and correct lateral adjustment of the field coils	increase machine efficiency

1306	A lead-acid battery is considered fully charged when the ____.	battery charger ammeter indicates a positive reading	terminal voltage reaches a constant value at a given temperature	specific gravity of all cells reaches the correct value and no longer increases over a period of 1 to 4 hours	electrolyte gasses freely
1307	Under normal conditions, storage batteries used for starting the emergency diesel generator are maintained in a charged state by which of the following methods ?	Equalizing charge	Trickle charging	Fast charging	Reverse charging
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1310	Which of the listed procedures should be carried out to prevent moisture damage to electrical apparatus during extended periods of idleness?	Fill the motor housing with CO2 to inert the space.	Cover the equipment with a canvas tarpaulin.	Strap silica gel around the commutator.	Place heat lamps in the motor housings.
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1312	Electrical leads and insulation on a motor should be painted with_____.	insulating white lead	heat -resisting acrylic	heat -resisting aluminum	insulating varnish

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1313	A fuse the blows often should be replaced only with a fuse of ___.	the recommended current and voltage rating	higher current and voltage rating	higher current and lower voltage rating	lower current and higher voltage rating
1314	Which of the listed precautions should be taken when cleaning the internals of a motor with compressed air? I. Open the machine on both ends so as to allow the air and dust to escape II. Be certain that the circuit breaker is opened and tagged on the feeder panel III. Be certain that the air is clean and as dry as possible	II & III	I & II	I, II & III	I only
1315	Air gap readings should be taken on electrical generation machinery periodically to ___. I. determine the need for cleaning II. check the condition of the bearings	neither I nor II	both I and II	I only	II only
1316	If a small motor has been immersed in salt water, it should be ___. I. Thoroughly rinsed in fresh water and completely dried II. Initially started with reduced voltage	II only	I only	neither I nor II	both I and II
1317	Air gap readings for electrical generating equipment should be taken periodically to ___. I. determine the condition of the bearings II. prevent damage to the rotor and stator	both I and II	I only	II only	neither I nor II
1318	If a small electric motor is immersed in salt water it should be_____. I. washed in fresh water II. dried in an oven	neither I or II	II only	both I and II	I only
1319	When shipboard electrical distribution circuits are connected in parallel, additional parallel circuits will cause the total circuit	increase, causing a decrease in the line voltage	decrease, causing an increase in the line current	decrease, causing an increase in the line voltage	increase, causing a drop in the line current

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	resistance to ____.				
1320	Which of the following problems is indicated if lead-acid battery begins to gas violently when it is first placed on charge?	insufficient compartment ventilation is being provided	The battery is undergoing its normal charging rate	An excessive charging rate is being applied to the battery	a short circuit exists in one of the battery cells
1321	When a replacing a fuse with one of a higher rating than the original, which of the following is true?	It creates a larger voltage drop in the circuit being protected	It endangers the apparatus it is supposed to protect	It reduces the possibility of short circuits	It increases the efficiency of the equipment by allowing more current to be used
1322	If an alternator is to be inactive for a considerable period of time, which of the following action should be taken?	It should be disconnected from the prime mover and raised off its bearing supports	The windings and collector rings should be protected with a thin coat of grease or oil	The brushed should be lifted off the slip rings to prevent pitting of the metal by electrolytic action	Insulation resistance readings should be taken weekly to ensure resistance is not deteriorating
1323	Thermal strip heaters are provided in DC main propulsion motors to_____.	prevent moisture buildup in windings	maintain a relatively constant temperature in the motor enclosure	prevent the rotor from warping	provide an additional means of starting resistance
1324	Proper storage battery maintenance includes ____.	making sure electrolyte level is below the separator plates	keeping connections light and casing surface clean	maintaining a high charging rate at all time	insulating the terminals with naval jelly
1325	Which of the listed battery charging circuits is used to maintain a wet-cell, lead-acid, storage battery in a fully charged state during long periods of disuse?	Normal charging circuit	Quick charging circuit	High ampere charging circuit	Trickle charging circuit
1326	A common type of protective covering used on electrical conductors is _____.	plain paper	rubber or plastic	Babbitt sheathing	silver sheathing
1327	A common type of protective covering used on electrical conductors is _____.	fibrous braid	plain paper	silver sheathing	babbitt sheathing

1328	Which of the following statements represents the FIRSTstep in seating new brushes on slip rings?	Apply seating compound under the brushes and run atno load for 2 hours.	Press the brushes against the slip ring with a woodblock.	Lay sandpaper between the brush and the slip ring and slide the sandpaper back and forth under the brush.	Increase brush pressure and run at no load for 3 to 4hours.
1329	When removing ball or roller bearings from the shaft of a motor, you should use a_____.	rawhide hammer	wheel puller	soft iron pry bar	brass mallet
1330	The best tool to use to remove bearing from the shaft of a motor would be a ___.	rawhide hammer	brass mallet	wooden mallet	wheel puller
1331	When a battery is continuously exposed to low temperatures, the best procedure to keep it from freezing is to _____.	keep the battery fully charged	remove the battery caps	securely cover the battery	Disconnect the battery
1332	Before reassembling any machinery, you should_____.	replace all bearings regardless of length of service	clean any corroded surfaces and file all burrs smooth	coat all parts with alemite grease	apply a heavy coat of oil to all mating surfaces
1333	Which of the following precautions should be taken when a blow fuse, rated at 10 amperes, is replaced?	Fuses of 10 ampere rating and less are virtually harmless when energized and may be handled freely	Use needle-nose pliers to remove fuse form the circuits	Short out the fuse before removing it from the circuit	Replace blown fuse with one of equal voltage and ampere capacity
1334	Which of the listed precautions should be observed before spraying liquid solvent on the insulation of an electric motor?	Preheat the insulation to assist in cleaning.	Slow the motor down to low speed.	Disconnect the motor from the power source.	Secure all ventilation in the area.
1335	When the electrolyte level of a lead-acid storage battery has decreased due to normal evaporation, the level should be reestablished by adding _____.	a strong solution of sulfuric acid and distilled water	a weak solution of sulfuric acid and distilled water	sulfuric acid only	distilled water only
1336	To protect the rotor of a motor disassembled for maintenance or overhaul, it should be_____.	suspended by wire slings in one corner of the shop	supported by two V notched wood blocks	returned to the frame as soon as the bearings are removed	stowed upright on its shaft

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1337	Two contributors of electronic console failures are heat and vibration. To combine some of their effect, preventive maintenance procedures should include ____.	systematic rotation of circuit cards with those from spares to allow component cooling	all of the above	periodic changing or cleaning of console ventilation and control room air conditioning filters	daily inspection of console foundation bolts
1338	When charging a 100 amp-hour lead-acid battery ____.	always start with a trickle charge rate	the temperature of the electrolyte should not be allowed to exceed 90	The charging rate should be no greater than 125% of the battery amp-hour rating	the source of power for charging should be approximately 2.5 volts per cell
1339	Caution must be exercised during the charging of lead-acid storage batteries as ____.	the acid will become weaker	both plates are charging chemically to lead sulfate	lead peroxide in the negative plate is poisonous	hydrogen gas is being continuously liberated
1340	Which of the following statements concerning the specific gravity of a battery electrolyte is true?	The specific gravity reading is lowered when the electrolyte temperature has increased	The electrolyte becomes less dense when it is cooled	The most accurate hydrometer reading is obtained immediately after water is added	The temperature does not affect the specific gravity of the electrolyte
1341	Which of the following actions must be carried out before a voltage tester can be used to test the three line fuses to a three-phase motor?	The fuses must be removed from the circuit	Nothing need to be done as long as the motor is running under a light load	The three line connections in the motor terminal box must be disconnected and tagged	The starter must be placed in the STOP position to stop the motor
1342	The removal of paint from electrical equipment such as generators, should be cautiously undertaken because ____.	the mechanical shock of paint removal lessens the di-electric strength of the insulation	the paint dust is composed of abrasive and semi-conducting materials which impair insulation	phase windings frequently become isolated from each other due to dust interference at the terminals	paint dust build up has a tendency to cause corrosion
1343	From the standpoint of safety, you should never allow salt water to enter a lead-acid storage battery or come in contact with sulfuric acid because ____.	The primary constituent, sodium, reacts lethally with lead peroxide	combining salt water with lead-acid creates an invisible gas resulting in severe corrosion	the resulting gas is extremely flammable	The resulting gas is respiratory irritant that can be fatal
1344	To effectively clean a commutator in good physical condition, you should use ___.	a canvas wiper	trichloride ethylene	kerosene	a commutator stone

1345	When mixing electrolyte, which if the following precautions should always be observed?	Use a heavy duty aluminum pail	Mix the solution outdoors	Add the water to the acid	Add the acid to the water
1346	Periodic testing by a shoreside support technician using a special camera which can detect potentially dangerous loose or corroded bus bar and controller connections is termed_____.	corrosion electrolysis	heat sensitive thermography	electric vibroanalysis	visual pyrotronics
1347	Which of the following characteristics is most critical in determining the size of the cable to used in a particular circuit?	voltage rating	weight per unit length	current rating	inductance per unit length
1348	Complete maintenance of electrical motors should include periodic checks for machine_____.	vibration	watertight integrity	speed droop	reactive power
1349	Which of the following statements concerning the maintenance of solid-silver Contacts in relay and auxiliary control circuits is correct?	When necessary, they should be spray painted with electrical shellac	They should be filed with a fine-cut file when projections extend beyond the contact surface	When necessary, they should always be dressed with a wire wheel	When black silver oxide is present. It should always be removed from the contact surface with coarse sandpaper
1350	First aid treatment for battery acid or alkali burns, especially in the eyes, includes _____.	all of the above may be acceptable treatments depending on the severity of the burn	drying the acid or alkali with a rag followed by applying a light cream	flushing with large amounts of fresh water and seeking medical attention ashore or by radio	wiping the affected area with a clean dry cloth and resting quietly for several hours
1351	During the charging process of storage batteries, the charging rooms should be well ventilated because _____.	highly poisonous gases are released	without ventilation the battery will not take a full charge	highly explosive gases will otherwise accumulate	without ventilation excessive gassing will occur
1352	Which of the substances listed be applied to battery terminals to help prevent corrosion?	Petroleum jelly	Zinc chromate	Lead hydroxide	Lead peroxide
1353	Which of the problems listed will occur if a lead-acid battery is allowed to remain in a charged condition for a long period of time?	The concentrated sulfuric acid will attack the leas peroxide plates	The separator will harden	The electrolyte will change to lead sulfate	The battery may be unable to accept a full charge

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1354	A slow continual loss of electrolyte level from one cell of a storage battery could be due to ____.	one filler cap installed too tightly	a cracked casing	the specific gravity being higher than normal	too low a charging rate
1355	When checking the specific gravity of battery electrolyte with a hydrometer, which of the following statements is true?	The battery is fully charged when the indicator floats deep and low in the electrolyte	Any water that has been previously added to the cells will increase the specific gravity of the solution	The hydrometer reading will be inaccurate if taken immediately after water is added to the cell	Temperature has no effect on hydrometer readings
1356	To best determine the state of charge of a wet nickel-cadmium battery, you should ____.	measure the voltage while under a load	measure the output amperage	use a ohm meter on the highest scale	test the electrolyte specific gravity
1357	To determine the state of charge of a wet cell nickel-cadmium battery, you should ____.	use the constant specific gravity method	check the electrolyte with a hydrometer	check no load voltage	check voltage under nominal load
1358	The charge of a lead-acid battery is normally checked with a/an ____.	manometer	pneumercator	hydrometer	ohmmeter
1359	The state of charge of a lead-acid battery is best indicated by the ____.	ampere-hour capacity	individual cell voltage	total cell voltage	electrolyte specific gravity
1360	The specific gravity of the electrolyte in a lead-acid battery is measured by a ____.	hydrometer	gould plate	titration pipette	litmus paper test
1361	When you check the specific gravity of the battery electrolyte with a hydrometer, it should be kept in the mind that _____.	any water that has been previously added to the cells will dilute the solution and give false reading	temperature has no effect on hydrometer readings	the battery is fully charged when the indicator floats low in the electrolyte	a hydrometer reading is inaccurate if taken immediately after water is added to the cell
1362	Which of the following devices should be used to measure the temperature of a battery electrolyte?	Potentiometer	Alcohol thermometer	Thermocouple pyrometer	Mercury thermometer

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1363	When troubleshooting a lead-acid storage battery, a weak or dead cell is best detected by _____.	visually inspecting the electrolyte levels of each cell	taking an open circuit voltage test of individual cells	measuring and comparing all cells specific gravity	taking each cells temperature with a calibrated mercury thermometer
1364	In addition to testing the calibration of a circuit breaker, maintenance should include all of the following EXCEPT ___.	changing out of magnetic elements yearly	checking for corrosion, accumulation of dirt and thermal fatigue	inspecting for loose or missing parts	insure that the foreign matter does not block tripping element
1365	When a megohmmeter is used to test the winding insulation of a large motor, an initial dip of the pointer toward zero is caused by ____.	the absence of current along the surface of clean insulation	the capacitance of the winding	weak batteries in the meter	an open in the winding being tested
1366	When you are making a high potential test (megger) on the motor coils of repaired electrical machinery, a rise in leakage current indicates ___.	good insulation	high insulation power factor	a high slot discharge factor	bad insulation
1367	A megohmmeter can be used to test for ___.	reversed polarity	an open field coil	synchronous speed	undercut mica
1368	Before testing with a megohmmeter, the windings of large machines should be grounded for about 15 minutes just prior to the test as the ___.	insulation may be covered with moisture	insulation may be damaged	larger machines may acquire a charge of static electricity during operation	armature windings will have a greater number of leakage paths
1369	Which of the following precautions should be taken when troubleshooting carious power circuits using an electronic solenoid type voltage tester?	Always verify that the power source frequency is compatible with the instrument before using it to troubleshoot electrical equipment	Never use the tester on circuits of 60 Hz, as the tester may not register the voltage	Always remember that the unit is polarity sensitive and if used on DC circuits reversing the leads may result in high temperatures within the tester	Never connect the device to circuits where potentials are greater than 120 volts
1370	Accidental grounds in a shipboard electrical system must be repaired as soon as possible as they will ___.	damage circuit breakers	damage insulation and may cause outages	overload the ground detection system	result in immediate power outages
1371	Aboard ship, a grounded	galvanometer	visual inspection	megohmmeter	portable

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	field coil in an AC motor can be determined by using a ___.				growler
1372	Multiple grounds have developed and were initially indicated by the ground-detecting system as one ground. The FIRST step in locating the grounds is to ___.	check each circuit with a megohmmeter	eliminate the individual circuits one by one until the ground detecting system no longer indicates any grounds	change over generators	examine the main bus bars for signs of overheating
1373	Chattering of the collector ring brushes on a generator may be remedied by ___.	reinsulating the brushes	lubricating brush holders	increasing length of pigtatil	cleaning the collector rings
1374	To properly seat the brushes on slip rings, you should use _____.	crocus cloth	emery cloth	all of the above	sand paper
1375	The air gap in an induction motor should be periodically checked with feeler gage, to prevent possible ____.	electrical damage to the bearings	axial misalignment of the rotor	rotor contact with the stator	damage to the motor bearings
1376	The air gap in an induction motor should be checked periodically with a feeler gage, to prevent possible ____.	electrical damage to the rotor	changes in armature magnetic strength	rotor contact with the stator	excessive bearing wear
1377	The rotation of a three-phase induction motor can be reversed by ____.	Interchanging any two of the three line leads to the stator	disconnecting one of the three line leads to the stator	switching the shunt field coil leads	permanently disconnecting any two of the three line leads to the stator
1378	One method of testing for a reversed shunt field coil in a DC motor is by connecting the coil to a low voltage source, and test for polarity using a/an _____.	iron bar across each field	magnetic compass placed near each field	test lamp across adjacent fields	copper jumper across the interpole connections
1379	For routine cleaning of a commutator, you should apply ____.	an emery cloth parallel to the axis of the commutator	course sandpaper in a slow back and forth motion across the commutator slots	a canvas wiper on the commutator while running	a fine tooth file to the commutator while running
1380	Moisture damage, as a result of condensation occurring inside of the	coating the switch box internals with	venting the switch box regularly	installing a light bulb in the pedestal stand	using strip heaters inside the switch box

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	cargo winch master switches, can be reduced by ___.	epoxy sealer			
1381	Which of the instruments listed is used to check insulation resistance?	Megohmmeter	Magneto	Rheostat	Dynamometer
1382	Which of the following represents the accepted method of cleaning dust and foreign particles from electrical equipment while limiting damage to electric components?	Blowing a high velocity stream of compressed air rapidly across the components	Carefully using soft copper bristle brush	Using carbon tetrachloride as cleaning solvent to clean the components	Using vacuum cleaner to remove debris form the components
1383	The use of a high wattage soldering iron when soldering or desoldering components on a printed circuit board may cause which of the following faults to occur?	The flux may not spread evenly.	The foil circuitry bonded to the board may separate from the surface.	The solder may not harden properly.	The conductivity of the solder will decrease.
1384	A capacitor discolored due to excessive heat should be_____.	cooled with a spray can of refrigerant approved for this purpose	calibrated using a capactancewheatstone bridge	replaced and the reason for the overheating found	resoldered with care taken to insure that the origional cold solder joint is repaired
1385	To avoid damaging the components of a printed circuit board when testing it with a DC volt-ohmmeter, you should_____.	isolate sensitive components with heat sinks	avoid reversing the polarity of the leads	ground the board	all of the above
1386	Why is it a poor practice to use a high wattage soldering iron when soldering or de-soldering components on a printed circuit board?	The foil wire may become loose and separate from the circuit board.	The circuit board will blister and warp.	The solder needs to be kept to a dull heat dissipating finish.	The circuit board material may become brittle.
1387	If a delicate component must be soldered into a circuit, the component may be protected from the heat of the soldering process by_____.	operating the soldering gun not more than 60 seconds at a time	coating the leads to be soldered with a light oil film	using a thermal shunt heat sink	pre -oxidizing the leads to be soldered
1388	When replacing a power transistor fitted with a heat sink in a circuit, a coating of silicone grease is applied between the transistor case and the heat sink. This is done to_____.	lubricate the heat sink	provide maximum heat transfer	aid in the removal of the heat sink	lubricate the transistor

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1389	A full -wave rectifier has one diode burned out in an open condition, what will be the output characteristic of the device?	Zero	Equal to the AC input	Full -wave rectified	Half -wave rectified
1390	In a running electric motor one uses a sound listening bar to detect fault in_____.	armature	ball bearing	stator windings	motor windings
1391	What device is fitted to prevent the generator windings from absorbing moisture while at standstill?	Space heater	Motor heater	Generator heater	Windings heater
1392	Protection against prolonged overload periods in a molded-case circuit breaker is provided by_____.	current overload relay	over voltage relay	thermal replay trip	thermal overload relay
1393	The brushes in a generator must be positioned in the neutral plane to avoid sparking between the brushes and the_____.	field pole windings	commutator	armature windings	yoke
1394	What is an important factor in reducing DC motor commutator wear?	Provide excitation to generator	Keeping the ambient temperature as low as possible	Establishing the copper oxide surface film	Ensuring a very low brush current density
1395	What can cause sparking of DC motor brushes?	Any open interpole	Mechanical electrical or operating faults	An open commutating winding	windings grounded
1396	Which component when defective will not produce DC voltage in the excitation system of an AC generator?	Silicon rectifier	Reactor	Voltage regulator	Current transformer
1397	When the insulation values of a 440 volt feeder system drops below alarm level what component is opened to pinpoint to the operator location of the fault in the system?	Line fuse circuit breaker	Automatic circuit breaker	Air circuit breaker	Feeder circuit breaker
1398	Since fuse elements are made of zinc or any alloy of tin and lead what is the melting point of the fuse element?	Reached when the conductor it is protecting becomes white hot	Lower than that of copper	Higher than that of copper	Equal than that of copper
1399	When using a megohmmeter to test insulation What	A gradual rise in the pointer reading at the	Slight kick of the needle down scale	A downward dip followed by a gradual climb to	The initial dip of the pointer

	indicates good insulation?	outset		the true resistance value	
1400	Before working on an electric motor starter panel located on the main deck what should you do FIRST?	Drain condensate from the box	Open the circuit breaker and tag out	Spray the gasket surface with a solvent	Heat the switchboard to remove moisture
1401	The purpose of a main switchboard reverse power trip is to prevent_____.	alternator motorization	main circuit overload	circuit breaker coil from blowout	blackout
1402	When working on high voltage circuits in addition to de-energizing the circuit which of the listed precautionsshould be taken?	Check capacitor circuit polarity	Keep all radio equipment away	Measure capacitor insulation resistance	Ground the capacitor terminals
1403	Accidental ground in a shipboard electrical system must be repaired as soon as possible as they will _____.	damage circuit breakers	damage insulation and may cause severe outages	appears on the ground detection system	result in immediate power outages
1404	A diesel driven emergency generator is prevented from being parallelled with the ship service generator by _____.	the synchronizing oscilloscope	the reverse current relay	an automatic parallelling trip switch	an electrical interlock system
1405	Upon failure of the normal power supply the emergency generator is placed on the line by the _____.	power failure alarm bus	bus tie feeder	automatic bus transfer device	line connection feeder
1406	Electrically operated safety devices on auxiliary diesel engines functions to stop the engine by _____.	shutting off fuel supply	shutting off air supply	shutting off cooling water supply	shutting off lube oil supply
1407	If a DC generator was rotated in the wrong direction it would fail to come up to voltage because the _____.	brushes would burn out	generator would burn out	armature field would oppose the field current	circuit breaker would not energize
1408	Motor controllers or starter contacts may become pitted and welded together if the contact is _____.	open under loaded conditions	close slowly with light pressure	close quickly with proportionate pressure	open too quickly and arc
1409	What will be result if the AC generator operating in parallel looses its excitation without tripping	Not affect the faulty generator due to the compensation	Cause a low voltage differential to develop	Cause high currents to be induced in the field windings	Cause the slip rings to melt

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	the circuit breaker?	of the other generators	between the armture & the bus		
1410	AC generators voltage failure may be caused by_____.	Failure of the exciter generator	Excessive prime mover speed	A tripped bus circuit breaker	High mica segments on the bus bar
1411	Upon failure of the normal power supply the emergency generator is placed on the line by the _____.	Line connection feeder	Automatic bus transfer device	Power failure alarm bus	Bus on the feeder
1412	What will happen to prime mover of AC generator if the load is removed?	Speed will remain the same	Speed of the engine will decrease slightly then return to original speed	Speed of the engine will increase slightly then return to original speed	Engine will shut down
1413	The slowing down of AC generator prime mover speed every time a load is added will be raised back to original speed by the_____.	governor	Field rheostat	Fuel injector	Nozzle valve
1414	The frequency of an AC generator if the load is removed?	Governor control of the diesel engine driving the AC generator	Raise field excitation	Transformer adjustment	Raise or lower load in the system
1415	An AC vessel which of the ff. statements the most difficult problem involved in obtaining a DC potential suitable for used by the computer components?	Vessel vibration affect the voltage source	Rectifier cannot operate with voltage regulator	A step-down transformer is always required	The voltage must be rectified and made ripple free
1416	The frequently of an alternator is controlled from the main switchboard by adjusting the ____.	Synchroscope switch	Governor control	Frequently motor	Voltage regulator
1417	Which of the ff. problem will occure if the circuit breaker of the incoming alternators is closed and it is 180 degree out of phase with the loaded alternators?	Both alternators will be out of phase by 180 degrees	The rotor of the incoming alternator will stop	The rotor of the incoming alternator will hunt	it could damage the incoming alternator due to serve cross current
1418	When applying the left-hand rule generators your fore finger will point to the_____.	Direction of magnetic flux	Direction of current flow	Direction of induced voltage	Direction of rotation
1419	Electrostatic forces in the high voltage circuits cause	highly accurate readings	highly intuitive readings	parallax readings	inaccurate readings

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	indicating instruments to give _____.				
1420	The rated temperature rise of an electric motor is the _____.	permissible difference in the ambient temperature of the motor due to existing weather conditions	temperature rise above ambient temperature at rated load	average temperature at any given latitude	temperature rise to resistance above 10 overload
1421	For the sake of economical operation the dual electro-hydraulic steering unit should be operated with _____.	only when the rudder is moved amidship	follow-up gear disconnected	one pump on standby	both pumps on line at the same time
1422	The part of a fuse that melts and opens the circuit is made of _____.	Zinc or an alloy of tin and lead	Copper and antimony	Steel and babbit	Aluminum or berryllium alloy
1423	Why is it a poor practice to use a high wattage soldering iron when soldering or desoldering components on a printed circuit board?	The solder is kept to a dull heat dissipating finish	The circuit board will blister and warp	The circuit board has a low melting temperature	The foil wire bonded to the board may come loosened from the board
1424	The timer element found in a reverse power relay obtains its operating torque via _____.	A separate battery source	The main bus	Line voltage	Electromagnets
1425	On a switchboard if all these round detection lamps remain burning at half intensity when the test buttons depressed which of the listed condition is indicated?	All these phases are grounded	The test switch is grounded	No grounds exist	The current transformers are shorted
1426	What is the function of the interpoles installed in DC motors?	To provide sparkles commutation without having to shift brushes	To provide greater torque by strengthening the main field	To limit the production of counter-electromotive force	To limit the starting surge current
1427	The freezing point of electrolyte in a fully charged lead-acid battery will be _____.	Higher than in a discharged battery	Lower than in a discharged battery	Higher than in a discharged battery but the specific gravity will be less	The same as in a discharged battery
1428	When charging lead-acid batteries you should reduce the charging rate as the battery nears its full charge capacity to _____.	Apply the tape in one non-overlapping layer only	Allow equalization of cell voltages	Heat the tape with a soldering iron for good bonding	Prevent excessive gassing or over heating

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1429	The insulation resistance of electric equipment and machinery should be tested for lowest normal insulation valves _____.	Immediately after starting up the machine	Immediately after shutting down of the machine	Every time the brush rigging is adjusted	Every 30 days whether the machine is in use or not
1430	A grounded switch or cable will be indicated by a mega ohmmeter reading of _____.	Zero	Infinity	Being unsteady in the high range	Being unsteady in the low range
1431	Which of the following devices should be used to measure the temperature of a battery electrolyte ?	Mercury thermometer	Alcohol thermometer	Thermocouple pyrometer	potentionmeter
1432	To determine if a starter coil is grounded you should use a/an _____.	Ground detection lamp	Magnet	Megger	Ammeter
1433	The charging of lead-acid storage battery will always result in _____.	Dangerous acid burns	All of these choices	The danger of lead poisoning	A dangerously explosive gas being liberated
1434	Violent gassing from a lead-acid battery while it is being charged indicates that the _____.	Charging rate is too high	Plate separators are grounded	Battery compartment ventilation is inadequate	Electrolyte specific gravity is low
1435	Which of the listed forms of water should be added to a lead-acid battery?	Saltwater	Distilled water	Light water	Brackish water
1436	A megohmeter is connected to each end of an individual motor winding. A low ohm reading indicates _____.	An open coil	A loose coil	A dirty coil	Good continuity
1437	What device is a low voltage circuit protective device that automatically opens (trips) in case of malfunction in the system?	Over current relay	Overload relay	No fuse circuit breaker	Thermal relay
1438	MCCB-type circuit breakers are called	Mounted-case circuit breaker	Molded-case circuit breaker	Mechanical contact circuit breaker	Monoblock-case circuit breaker
1439	In a cartridge type fuse the metal element is contained in _____.	Fiber tube	Porcelain case	Thermal case	Flash cube
1440	A tubular fuse should always be removed from a fuse holder with	Screw driver	Fuse puller	Electrician s plier	Two insulated pliers

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	_____.				
1441	Circuits are protected from overheating by means of a/an _____ _	Amplifier	Diode	Transformer	Circuit breaker
1442	A ground can be defined as an electrical connection between the wiring of a motor and its _____.	Interpoles	Metal framework	Circuit breaker	Shunt field
1443	In a three-phase electrical system three ground detecting lamps are provided. One lamp goes dark and the others increase in brightness. When the test button is pushed all lamps have equal illumination. You should conclude that _____.	There is a ground on the line with the dark lamp	The dark lamp must be replaced	There are grounds on the lines with the bright lamps	All of these choices
1444	The ground indicating light on the main electrical switchboard is indicating a ground. The best procedure for locating grounded circuit is to _____.	Check circuit resistance with a megohmmeter	Trace the circuit paths while looking for burned spots	Open the circuit breakers on the distribution panel one at a time until the light no longer indicate a ground	Check all circuits for continuity
1445	In order to increase its range of measurement a resistance would be placed in series with which of the following instruments?	Frequency meter	DC voltmeter	DC ammeter	Power factor meter
1446	Electric strip heaters are used in motor controllers to _____.	Prevent freezing of movable contacts	Keep the components at their design ambient temperature	Prevent condensation of moisture	Minimize resistance in internal circuits
1447	Reversing the current flow through a coil will _____.	Reduce the power consumed	Reduce the amount of flux produced	Have no effect on the eddy currents produced	Reverse its two-pole field
1448	Voltage generated by most AC generators is fed from machine to the bus by means of _____.	Direct connections from the starter	Brushes on a commutator	Brushes on slip rings	Slip rings on a commutator
1449	A hydrometer indicates specific gravity by	Density of a substance in	Buoyancy of an object in water	Differences in weight between	Mass of substance

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	comparing the _____.	water with the density of the same substance in air	with the buoyancy of the same object in the liquid being measured	water and the liquid measured	measured with the density of the same substance
1450	Line losses in a distribution circuit are kept to a minimum by _____.	Adding a rubber insulation conductors to the circuit	Increasing the number of thermal relays in the circuit	Using higher voltage and lower current	Using higher current and lower voltage
1451	When a console indicating lamp burns out attempts to renew it should not be made while maneuvering because _____.	A new lamp may have higher wattage and may cause heat damage to the lens	Removing a faulty lamp may cause an alarm to sound on the bridge	Attention should be paid on engine orders	A socket/wiring fault may cause a vital function to shut down
1452	To test fuses in an unenergized circuit you should use a _____.	Resistance meter	Megger	Ampere meter	Voltmeter
1453	A fuse will blow if _____.	The current exceeds the rated value of the fuse	A load is suddenly removed from the circuit	Unequal resistance was introduced to the circuit	The flow of current is reversed
1454	A fuse will blow as per below EXCEPT _____.	Excessive vibration	Loose fuse clips	Low resistance in the fuse	Extremely hot temperature
1455	If a fuse of correct size and type blows frequently look for _____.	Next higher fuse rating	Trouble in the circuit	Next lower ampere rating	Reduce the applied voltage by 10%
1456	Using a fuse whose rating is higher than necessary _____.	Increase the efficiency of the apparatus	Reduce the possibility of fuse getting blown	Endangers the apparatus it is supposed to protect	Waste money because they are more expensive
1457	A megohmmeter can be used to test for _____.	An open field coil	Speed of the motor	Insulation varnish condition	Reversed polarity
1458	Grease coatings on electrical contact surfaces increase contact resistance and should be removed with a/an _____.	10% solution of carbon solvent and water	Small wire brush	Compressed air jet	Clean dry cloth
1459	A lead-acid battery may become hotter than normal during a charge if the _____.	Specific gravity is too high	Charging voltage is too low	Battery has a shorted cell	Battery room door is secured
1460	Prior to using an analog type ohmmeter the leads are purposely shorted together. Which of the following actions	The test reading should be added to each final reading	The batteries should be replaced	The test reading should be subtracted from each final reading	The lead clips should be replaced

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	should be taken if when adjusting to zero ohms the indicating needle cannot be returned to zero on the scale?				
1461	Time delayed or delayed action fuses are designed to _____.	Prevent an open in motor circuit	Prevent grounds in branch circuits	Permit momentary overloads without melting	Guard lighting and electric circuits
1462	An insulation resistance is performed on a particular piece of electric equipment. In addition to resistance readings what information listed below should be entered in the electrical log?	The temperature of the machine at the time the resistance reading was taken	The maximum allowable operating temperature of the machines	The normal temperature rise of the machine	The complete name plate data from the resistance test instrument used to obtain the reading
1463	An adjustable resistor whose resistance can be changed without opening the circuit in which it is connected is called a _____.	Variable shunt ship	Bridge	Rheostat	Bleeder resistor
1464	Magnetic controller contacts may become welded together curing operation due to _____.	An open coil	Low contact pressure	Excessive magnetic gap	Excessive ambient temperature
1465	A DC ammeter is always connected _____.	Without regard to polarity	In parallel with a circuit	In series with a circuit	With internal shunts only
1466	To avoid damage in pulling out a defective PC board connector inside the group starter panel circuit board it should be kept at _____.	An angle with the circuit board	In line with the circuit board	None of these choices	Parallel with the circuit board
1467	In a cartridge-type fuse the metal element is contained in a _____.	Fiber tube	Porcelain window	Thermal cut-out	Flasher device
1468	When using an ohmmeter to test a semiconductor diode you find a low resistance in both forward and reverse bias direction. This indicates that the diode is _____.	Good capacitive quality	Short	Open	Good resistive quality
1469	Which of the listed conditons describes the effect on intrinsic semiconductor operation	Additional heat sink will be required	Conductivity will decrease	Resistivity will increase	Conductivity will increase

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	as a result of a temperature increase?				
1470	In electronic industry the abbreviation PCB commonly means _____.	Positive conduction board	Polysaturated braid	Printed circuit board	Pulse coded board
1471	Which one of the possible causes why an indicator diagram of a two-stroke diesel shows fuel ignition taking place too early?	Combustion pressure too high	Leaking fuel pump	Exhaust temperature is higher than normal	The fuel pump plunger has been set too high
1472	Which of the following items below is the hardest tool s tip that can endure the highest speed and have the smallest wear when used in the operation of a center lathe or electric driven shaper onboard?	Diamond	Cast alloy	High speed steel	Ceramics
1473	For feed and cutting works most modern lathes are provided with _____.	universal chucks	jaw chucks	all of these choices	quick change gear
1474	Which among the cutting tool materials retains the lowest wear resistance when the tool bit is used in machining hard metal materials through the modern center lathe machine onboard?	Cast alloy	High speed steel	Cemented carbide	Ceramics
1475	What is the kind of metal material to be given the highest revolution using the center lathe onboard with a high-speed tool bit without coolant for a safe and effective machining?	Cast iron	Bronze	Mild steel	Aluminum
1476	What refers to the kind of operation of the center lathe machine onboard wherein the inside diameter is increased little by little up to the point where the desired measurement is met?	Threading	Boring	Drilling	Boring
1477	If electric motor on an electric driven compressor fails to start the cause may be a_____.	tripped circuit breaker	defective pop valve	leaking unloader	control leak

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1478	To repair a small electrical motor that has been submerged in salt water you should _____.	Renew the windings	Send it ashore to an approved service facility	Rinse all electrical parts with a carbon tetrachloride cleaning solvent and then blow dry the motor with compressed air	Wash it with fresh water and apply an external source of heat
1479	Routine maintenance of lead-acid batteries should include _____.	Keeping the terminals clean	All of these choices	Coating cable connections with petroleum jelly	Maintaining a trickle charge
1480	Burning of controller contacts when opening is prevented by _____.	An over current reload	Coating the contact surfaces lightly with petroleum jelly	Magnetic blow out coils	An over voltage reload
1481	Which of the listed faults cannot be eliminated EXCEPT by turning or grinding a commutator with a rigidly supported tool ?	Eccentricity	Sparking brushes	High mica	Blackened commutator
1482	Which of the following statements regarding maintenance of silver coated contacts and auxiliary control circuit is correct?	When necessary they should be cleaned by sand paper	If necessary they should be sprayed with contact cleaner	None of these choices	They should be filed with fine-cut file to even up the surface
1483	If the relay coil is not on when all indicates that it should be energized with rated voltage measured across the coil is present probably the cause would be _____.	Auxiliary contact in series with coil is defective	Coil is open	Fuse is blown	Transformer is defective
1484	Due to the operating characteristics of the system time lag fuses (or dual element fuses) are necessary for use in _____.	Main lighting circuits	General alarm	Motor starting circuits	Emergency lighting circuits
1485	When changing tubular fuses always use a _____.	Fuse puller	Electrician s plier	Screw driver	Rubber boots
1486	During maintenance of circuit breakers _____	Check condition of contactors burned surfaces	Always smooth roughened contact surfaces with a fine file	Inspect for wear and contacts misalignments	Replace with spare
1487	Which of the following physical characteristics does a wound-rotor	Centrifugal switch	End plates	End rings	Slip rings

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	induction motor possess that a squirrel-cage motor does not?				
1488	The air gap provided in induction motors should be checked periodically with a feeler gage to detect an unequal air gap and _____.	Hysteresis losses	Decreased motor magnetizing current	Increased power factor	Mechanical damage to rotor
1489	A three-phase squirrel-cage induction motor will run hot due to _____	Open stator coils	High power factor	Dirty or corroded slip rings	Reversed commutating poles
1490	Encrusted dirt accumulated inside a motor should be removed with a _____.	Pointed welding rod	Hammer and chisel	Paint scraper	Fiber scraper
1491	When disassembling motors for maintenance or overhaul _____.	Punch mark frame and end balls for proper assembly	Tag and store small parts in a box	All of these choices	Wrap bearings in lint free cloths if they are to be re-used
1492	Which of the following materials is a good electrical insulator?	Steel	Glass	Copper	Aluminum
1493	During the charging process of storage batteries the charging rooms should be well ventilated because _____.	Highly explosive gases will otherwise accumulate	Without ventilation excessive gassing will occur	Highly poisonous gases are released	Without ventilation the battery will not take a full charge
1494	The timer element of a reverse power relay cannot be energized unless _____.	One generator is fully motorized	The power flow is opposite to the tripping direction	The movement of the disk is damped by a permanent magnet	The power flow is the same as the tripping direction
1495	On tank vessel with an electrically driven capstan the motor should be meggered periodically to test _____.	Capacitance	Armature capacitance	Insulation resistance	Eddy currents
1496	To test fuses in an energized circuit you should use a _____.	Low voltage light bulb	Resistance meter	Megohmmeter	Voltmeter
1497	Which of the following actions must be carried out before a voltage tester can be used to test three line fuses to three-phase motors?	The three line connections in the motor terminal box must be disconnected and tagged	The starter must be placed in the STOP position to stop the motor	The fuses must be removed from the circuit	Nothing must be done as long as the motor is running under a light load

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1498	What do you call a procedure or sequence of operations for determining whether a component or equipment is functioning or working normally?	Recording	Evaluating	Precision	Test
1499	What is a damping?	It is the process of smoothing out the oscillation in a meter movement	It is the process of cutting out the oscillation in a meter movement	It is the process of clamping	It is the process of healing
1500	According to 46 CFR, Subchapter J (Electrical Engineering), emergency generators are required to have specific safety shutdowns, including prime mover overspeed. If a direct coupled emergency diesel generators rated rpm is 1200, what is the maximum setting of the overspeed trip device allowed?	1440 rpm	1380 rpm	1260 rpm	1320 rpm
1501	What is being measured when the middle area of an ohmmeter scale is used?	in measuring capacity	in measuring electricity	in measuring circuits	in measuring voltage
1502	How does a voltmeter connected to the circuit to be measured?	by shorted	by parallel	by series	open
1503	How does an ammeter connected to the circuit to be measured?	by series	open	by shorted	by parallel
1504	What is used to allow an ammeter to measure different ranges?	Series Resistors	Shunt resistors	Internal Resistors	External Resistors
1505	What are the two types of ohmmeters?	open and shorted	SDE and FGR	series and shunt	series and parallel
1506	What is a normal indication on a megger when checking insulation?	Negative Value	Infinity	One	Zero
1507	What is the word used in measurement where the degree of exactness compared to the expected value of the variable is being measured?	Error	Deviation	Accuracy	Precision

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1508	What is the basic unit for measuring current flow?	Ampere	Volt	Decibels	Power
1509	What is the reason for having a mirror on the scale of a multimeter?	To smoothen the meter	To prevent RDF	To clear the view	To stop parallax error
1510	Which type of meter requires its own power source?	Potentiometer	galvanometer	ohmmeter	megger
1511	What is the type of meter movement of an Electrostatic?	It has an erratic movement	It reacts to voltage rather than current	It reacts like a magnet	It has a static movement
1512	How are precision and reproducibility related?	they are the same	precision is better	reproducibility is better	they are incomparable
1513	What will happen to the voltage measuring capability, if you increase the value of the series resistor of a voltmeter?	it remains constant	it increases	nothing happens	it decreases
1514	What do you call the art or process of determining the existence or knowing the magnitude of something, directly or indirectly in terms of a recognized standard?	Evaluating	Testing	Measurement	Recording
1515	What is Precision?	It is a measure of consistent factor	It is a measure of deviation	It is a measure of error	It is a measure of consistency or repeatability of measurements
1516	What causes the initial dip of the pointer toward zero when testing a dielectric strength of wire insulation using a Megohmmeter?	the leakage of current along the surface of dirty insulation	the dielectric absorption effect of the insulation	the capacitance of the circuit	good insulation
1517	What is the degree of exactness of measurement when compared to the expected value of the variable being measured?	Accuracy	Error	Deviation	Precision
1518	An instrument used to detect and measure the presence of electrical current is generally called	Electro dynamometer	galvanometer	Potentiometer	megger test
1519	Kirchhoffs current law is applicable to only	closed loops in a network	electronic circuits	junction in a network	electric circuits
1520	Superposition theorem can be applied only to circuits having	non-linear elements	linear bilateral elements	resistive elements	passive elements
1521	The concept on which	linearity	reciprocity	duality	non-linearity

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	Superposition theorem is based is				
1522	An ideal voltage source should have	large value of e.m.f.	zero source resistance	infinite source resistance	small value of e.m.f.
1523	Which of the following is non-linear circuit parameter ?	Condenser	Transistor	Wire wound resistor	Inductance
1524	A capacitor is generally a	non-linear and active component	linear and bilateral component	bilateral and active component	active, passive, linear and nonlinear component
1525	For high efficiency of transfer of power, internal resistance of the source should be	equal to the load resistance	none of the above	less than the load resistance	more than the load resistance
1526	For maximum transfer of power, internal resistance of the source should be	equal to load resistance	less than the load resistance	greater than the load resistance	none of the above
1527	The circuit whose properties are same in either direction is known as	unilateral circuit	bilateral circuit	irreversible circuit	reversible circuit
1528	The circuit has resistors, capacitors and semi-conductor diodes. The circuit will be known as	bilateral circuit	linear circuit	non-linear circuit	none of the above
1529	The superposition theorem is applicable to this:	linear, non-linear and time variant responses	none of the above	linear and non-linear resistors only	linear responses only
1530	The superposition theorem is applicable to	current voltage and power	voltage only	current only	both current and voltage
1531	A passive network is one which contains	only some sources of e.m.f. in it	no source of e.m.f. in it	only two sources of e.m.f. in it	only variable resistances
1532	A terminal where three on more branches meet is known as	terminus	combination	anode	node
1533	Which of the following is the passive element ?	Ideal voltage source	Capacitance	Ideal current source	All of the above
1534	Which of the following is a bilateral element ?	None of the above	Constant current source	Constant voltage source	Capacitance
1535	A closed path made by several branches of the network is known as	loop	branch	circuit	junction
1536	The number of independent equations to solve a network is equal to	sum of number of branches, chords and nodes	sum of the number of branches and chords	the number of branches	the number of chords
1537	Efficiency of power transfer when maximum	75%	50%	100%	80%

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	transfer of power c xerosis				
1538	Kirchhoff s current law states that	no current can leave the junction without some currententering it.	total sum of currents meeting at the junction is zero	Hebraic sum of the currents meeting at the junction is zero	net current flow at the junctionis positive
1539	According to Kirchhoffs voltage law, the algebraic sum of all IR drops and e.m.fs. in any closed loop of a network is always	determined by battery e.m.fs.	negative	positive	zero
1540	To determine the polarity of the voltage drop across a resistor, it is necessary to know	direction of current through the resistor	value of current through the resistor	value of resistor	e.m.fs. in the circuit
1541	The lines of force due to charged particles are	none of the above	sometimes curved	always curved	always straight
1542	The electric field at a point situated at a distance d from straight charged conductor is	none of the above	inversely proportional to d	proportional to d	inversely proportional to d
1543	The direction of electric field due +0 positive charge is .	towards the charge	away from the charge	none of the above	both (a) and (6)
1544	A field line and an equipotential surface are	always at 90	always parallel	inclined at any angle 0	none of the above
1545	The ability of charged bodies to exert force on 6ne another is attributed to the existence of	neutrons	electric field	electrons	protons
1546	If the sheet of a bakelite is inserted between the plates of an air capacitor, the capacitance will	remains unchanged	decrease	become zero	increase
1547	The capacitance of a capacitor is not affected by	distance between plates	thickness of plates	all of the above	area of plates
1548	Two plates of a parallel plate capacitor after being charged from a constant voltage source are separated apart by means of insulated handles, then the	charge on the capacitor decreases	Voltage across the plates increases	charge on the capacitor increases	voltage across the plates decreases
1549	Which of the following statements is correct ?	Electrolytic capacitor must be connected in the correctpolarity	Air capacitors have a black band to indicate the outside foil	Ceramic capacitors must be connected in the correctpolarity	Mica capacitors are available in capacitance value of 1 to 10pF
1550	For which of the following	Distance	Nature of	Area of the	Thickness of the

	parameter variation, the capacitance of the capacitor remains unaffected ?	between plates	dielectric	plates	plates
1551	Which of the following statement is true ?	The current in the discharging capacitor decreasesconstantly	The current in the discharging capacitor grows linearly	The current in the dicharging capacitor grows exponentially	The current in the discharging capacitor decaysexponentially
1552	Which of the following capacitors can be used for temperature compensation ?	None of the above	Air capacitor	Paper capacitor	Ceramic capacitor
1553	When the dielectric is homogeneous,the potential gradient is	any of the above	non-uniform	uniform	zero
1554	_____field is associated with the capacitor.	Electric	Both (a) and (b)	None of the above	Magnetic
1555	The total deficiency or excess of electrons in a body is known as	current	voltage	charge	potential gradient
1556	The phenomenon of an uncharged body getting charged merely by the nearness of a charged body is known as	pholoelectric effect	chemical effect	magnetic effect	induction
1557	A unit tube of flux is known as tube	None of the above	Michale	Faraday	Newton
1558	at a point may be defined as equal to the lines of force passing normally through a unit cross section at that point.	Electric intensity	Magnetic flux density	Electric flux	None of the above
1559	Electric intensity at any point in an electric field is equal to the at that point	magnetic flux density	potential gradient	electric flux	none of the above
1560	at a point is equal to the negative potential gradient at that point.	Electric flux	Magnetic flux density	Magnetic flux	Electric intensity
1561	Dielectric strength _____ with increasing thickness	increases	none of the above	decreases	remains unaltered
1562	The property of a capacitor to store electricity is called its	capacitance	charge	energy	none of the above
1563	In a cable capacitor, voltage gradient is maximum at the surface of the	sheath	insulator	conduction	earth
1564	The time constant and R-C circuit may also be defined	63	73	42	37

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	as the time during which the charging current falls to _____ percent of its initial maximum value,				
1565	A capacitor consists of two	insulators separated by a dielectric	conductors separated by an insulator	silver-coated insulators	ceramic plates and one mica disc
1566	Dielectric strength of a material depends on	moisture content	temperature	thickness	all of the above
1567	Which medium has the least dielectric strength ?	Air	Paraffin wax	Quartz	Glass
1568	The presence of an uncharged conductor near a charged one increases the	all of the above	charge of the charged conductor	potential of the charged conductor	capacity of the charged conductor
1569	Paper condenser is	electrolytic condenser	a variable condenser	usually of fixed value	always polarised
1570	The ohmmeter reading for a short circuited capacitor is	infinity	zero	few kilo ohms	few megohms
1571	An electrolytic capacitor is generally made to provide	large value of capacitance	low capacitance	fixed capacitance	variable capacitance
1572	A region around a stationary electric charge has	none of the above	both (a) and (b)	a magnetic field	an electric field
1573	When a dielectric is placed in an electric field the field strength	reduces to zero	decreases	remain unchanged	increases
1574	In a capacitor, the electric charge is stored in	dielectric as well as metal plates	metal plates	none of the above	dielectric
1575	If an ohmmeter reading immediately goes practically to zero and stays there, capacitor is:	short-circuited	charged	lossy	satisfactory
1576	A crack in the magnetic path of an inductor will result in	zero inductance	unchanged inductance	reduced inductance	increased inductance
1577	A coil is wound on iron core which carries current I. The self-induced voltage in the coil is not affected by	change of number of turns of coil	the resistance of magnetic path	variation in coil current	variation in voltage to the coil
1578	The polarity of the induced voltage can be determined by using the left-hand generator rule	Maybe	Undeterminable	Yes	No
1579	An air gap is usually inserted in magnetic circuits to	prevent saturation	increase m.m.f.	increase the flux	none of the above
1580	The relative permeability of a ferromagnetic	less than one	more than 10	more than one	more than 100 or 1000

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	material is				
1581	The unit of magnetic flux is	ampere/metre	weber	henry	ampereturn/weber
1582	Permeability in a magnetic circuit corresponds to_____ in an electric circuit.	conductivity	resistance	resistivity	conductance
1583	Point out the wrong statement.	increases their cost of manufacture	lowers their power efficiency	leads to their increased weight	produces fringing
1584	Relative permeability of vacuum is	1/4JI	1	1 H/m	2 H/m
1585	Permanent magnets are normally made of	aluminium	wrought iron	cast iron	alnico alloys
1586	Those magnetic materials are best suited for making armature and transformer cores which have____permeability and_____hystersis loss.	low, high	high, high	low, low	high, low
1587	When both the inductance and resistance of a coil are doubled the value of	time constant remains unchanged	initial rate of rise of current is doubled	final steady current is doubled	time constant is halved
1588	A material for good magnetic memory should have	low hysteresis loss	high permeability	low retentivity	high retentivity
1589	Conductivity is analogous to	inductance	resistivity	permeability	retentivity
1590	In a magnetic material hysteresis loss takes place primarily due to	rapid reversals of its magnetisation	it high retentivity	molecular friction	flux density lagging behind magnetising force
1591	Those materials are well suited for making permanent magnets which have _____ retentivity and _____	high, high	low, high	high, low	low, low
1592	If the area of hysteresis loop of a material is large, the hysteresis loss in this material will be	zero	none of the above	small	large
1593	Hard steel is suitable for making permanent magnets because	its hysteresis loop has large area	its mechanical strength is low	it has good residual magnetism	its mechanical strength is high
1594	Silicon steel is used in electrical machines because it has	high coercivity	low hysteresis loss	low retentivity	low coercivity
1595	Conductance is analogous to	permeance	reluctance	flux	inductance
1596	The ratio of volume of displacement to a block	Area of waterplane	Block ratio	Block coefficient	Beam-draft ratio

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	having the same length, breadth and draft of the vessel is known as_____.				
1597	What is not usually a concern when loading a single-hulled tanker?	draft	trim	Bending moments	Initial stability
1598	The value of KM at any draft may be taken from the_____.	Trimming Table	Hydrostatic Table	Building plans of the ship	Stabilty Table
1599	A vessel's stability normally increases when tanks are ballasted because the vessel's_____.	center of buoyancy is lowered	reserve buoyancy is increased	center of gravity is lowered	freeboard is increased
1600	What is a danger of a half full tank onboard tanker vessel?	Holing of the tank bottom from the weight of the shifting liquid	Rupturing of bulkheads from the shifting liquid	Corrosion from the shifting liquid	Loss of stability due to free surface effect
1601	The purpose of the inclining experiment is to _____.	determine the lightweight center of gravity location	verify data in the vessel's operating manual	verify the hydrostatic data	determine the location of the metacenter
1602	The purpose of the inclining experiment is to_____.	determine the location of the metacenter	verify data in the vessel's operating manual	verify the hydrostatic data	determine the lightweight center of gravity location
1603	The elevated perforated bottom of a chain locker which prevents the chain from touching the bottom of the chain locker and allows water to flow to the drain is a_____.	harping	draft	manger	craddle
1604	A vessel would be referred to as "tender" when the weight of the cargo is _____.	concentrated low and the double bottoms are empty	concentrated high and the double bottoms are empty	evenly distributed vertically and the double bottoms are full	concentrated low and the double bottoms are full
1605	Control of flooding should be addressed _____.	following control of fire	first	following restoration of vital services	only if a threat exists
1606	The inward curvature of the ship's side is the_____.	sagging	flare	hogging	tumble home
1607	The most detrimental effect on initial stability is a result of liquids _____.	pocketing in a slack tank as a vessel heels	flowing from side to side within the vessel	flowing in and out of a holed wing tank	flowing from fore to aft within a vessel
1608	Metacentric height is an	for all angles of	for small angles	in no case	for large angles

	indication of a vessel's stability _____.	inclination	of inclination		of inclination
1609	The percentage of the total surface area or volume of a flooded compartment that can be occupied by water by damage is called_____.	permeability	form gain	one compartment standard	center of buoyancy
1610	The volume of all watertight enclosed spaces above water line is called_____.	freeboard	reserved bouyancy	marginal stability	free surface
1611	The strake next to the keel is_____.	gangplank	gunwale	keelson	garboard
1612	When cargo is shifted from the lower hold to the main deck the_____.	center of buoyancy will move downward	All of the above	center of gravity will move upwards	GM will increase
1613	What represents the center of gravity?	M	G	GZ	B
1614	Which statement is TRUE of a stiff vessel?	She will have a large metacentric height.	Her period of roll will be large due to her large metacentric height.	She will have an unusually high center of gravity.	She will pitch heavily.
1615	Addition of weight to a vessel will ALWAYS _____.	increase GM	increase righting moments	All of the above	reduce reserve buoyancy
1616	As the displacement of a vessel increases, the detrimental effect of free surface _____.	may increase or decrease depending on the fineness of the vessel's form	remains the same	decreases	increases
1617	Which statement is TRUE of a tender vessel?	It has a very low center of gravity.	It has a good transverse stability.	It has a large GM.	Its period of roll is long.
1618	Which statement about the free surface effect is TRUE?	It decreases at increased angles of heel due to pocketing when a tank is 90% full.	It increases in direct proportion to the length of the tank times the breadth squared.	It decreases in direct proportion to increasing specific gravity of the liquid in the tank.	In practice, the correction is considered to be a virtual reduction of KG.
1619	In regards to the center of bouyancy, which of the following statement is correct?	It moves toward the low side of an inclines vessel	It is located in the same position regardless of displacement	It moves toward the high side of an inclines vessel	It is the measure of metacentric height
1620	Your vessel is damaged	Jettison the	Pump-out	Jettison deck	Press up an

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	and partially flooded. It is listing 12 deg to port and trimmed 2.5 meters down by the head. It has a long, slow, sluggish roll. What action will you take first?	anchors and anchor cables	forepeak tank	cargo from the port side	after, slack, centerline double bottom tank
1621	The quality of initial stability is indicated by_____ .	KM	GM	Deck load	Maximum allowed KG
1622	Free communication effect is in direct proportion to _____.	length and width of space	length of space only	width of space only	neither length nor width
1623	Which of the following will increase the height of the center of buoyancy of your vessel?	Shifting weight from lower to upper decks	Discharging weight from lower decks	Shifting weight from upper to lower decks	Loading weight in upper decks
1624	With no environmental forces present, the center of gravity of an inclined vessel is vertically aligned with the_____.	longitudinal centerline	original vertical centerline	center of flotation	center of buoyancy
1625	A tank which carries liquid is dangerous to the stability of a vessel when it is _____.	completely full	low in the vessel	slack	completely empty
1626	The purpose of bilge keels is to _____.	reduce pitching	reduce yawing	lower the center of gravity of the ship	reduce the amplitude of roll
1627	In order to minimize the effects of a tender vessel, when carrying a cargo of lumber, you should _____.	place the heaviest woods in the lower holds	maximize your deck load	distribute lumber so that those stowing most compactly per unit of weight are in the upper holds	keep the vessel's frame spaces free from lumber
1628	The point to which your vessel's center of gravity (G) may rise and still permit the vessel to have positive stability is called the _____.	tipping center	metacenter	metacentric point	metacentric radius
1629	A continual change in the list, or trim of any floating MODU indicates_____ .	negative 'GM'	an immediate need to counter flood	structural failure	progressive flooding
1630	Your vessel has been damaged and is partially flooded. The first step to be taken in attempting to save the vessel is to	pump out the water inside the vessel	plug the hole(s) in the outer shell	establish flooding boundaries and prevent further spread of flood	calculate the free surface effect and lost buoyancy to determine the

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	_____.			water	vessel's stability
1631	You are fighting a fire in a cargo hold on your vessel. Which action is most important concerning the stability of the vessel?	Draining fire-fighting water and pumping it overboard	Shutting off electricity to damaged cables	Maneuvering the vessel so the fire is on the lee side	Removing burned debris from the cargo hold
1632	Metacentric height is a measure of _____.	All of the above	initial stability only	maximum righting arm	stability through all angles
1633	The bilge keel is for the purpose of_____.	adding strength to main structural members	acting bumper when vessel is on drydock	reducing rolling	strengthening the bilge
1634	The bilge keel is for the purpose of:	Strengthening the bilge	Adding strength to main structural members	Reducing rolling	Acting bumper when vessel is on drydock
1635	In a longitudinally framed vessel, the longitudinal frames are held in place and supported by athwartship members called_____.	margin plates	floor	stringers	web frames
1636	A vessel's stability is greatly reduced by liquid free surface. Which of the listed conditions would develop the greatest adverse effect?	Tanks which are 95% full.	Tanks which have been pressed up to full capacity.	Tanks which have been completely emptied.	Tanks which are 40% full.
1637	GM is a measure of_____.	The initial stability of the vessel	The amount of reserve bouyancy	both A & B	neither A nor B
1638	What must be accurately determined to assess the potential for progressive flooding after a vessel has been damaged?	The operation of emergency bilge system	The operation of the machinery space bilge level alarms	The capacity of the water sprinkler systems	The integrity of the water tight boundaries
1639	Where should you pay particular attention to be able to maintain adequate stability in loading deck cargo?	The under deck cargo	The vertical distribution of the deck cargo	The cargo in the lower hold	The horizontal distribution of the deck cargo
1640	Freeboard is a measure of_____.	neither A nor B	both A & B	the amount of reserve bouyancy	the initial stability of the vessel
1641	Which factor has the greatest effect on the value of the free surface correction?	The width of the tank	The length of the tank	The draft of the vessel	The specific gravity of the liquid in the tank
1642	What will happen when cargo is shifted from the main deck into the lower	The center of buoyancy will move upward.	The GM will increase.	All of the above	The metacenter will move upward.

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	hold of a vessel?				
1643	The tendency of a ship to resist a change in trim is call_____.	the righting arm couple	metacentric height	longitudinal stability	transverse inclination
1644	When making a turn (course change) on most merchant ships, the vessel will heel outwards if _____.	the vessel has very little draft	the vessel is deeply laden	G is below the center of lateral resistance	G is above the center of lateral resistance
1645	An intact bouyancy means_____.	an intact space below the flooded area	the volume of all intact spaces above the waterline	an intact space when flooded will not cause the vessel to sink	the space where all the vertical upward forces of buoyancy are considered to be concentrated
1646	An intact bouyancy means:	An intact space when flooded will not cause the vessel to sink	The space where all the vertical upward forces of buoyancy are considered to be concentrated	The volume of all intact spaces above the waterline	An intact space below the flooded area
1647	GM cannot be used as an indicator of stability at all angles of inclination because_____ .	there is no "G" at large angles	"G" is not fixed at large angles	"M" is not fixed at large angles	there is no "M" at large angles
1648	A stress called compression is being placed on the sheer strakes if the vessel is _____?	under shearing force	hogging	inclined	sagging
1649	The trim of a vessel is the_____.	value of the mean draft	amount of roll	difference in fore and aft drafts	degree of list
1650	Which does NOT affect the value of the free surface correction?	Registered tonnage	Width of the tank	Length of the tank	Specific gravity of the liquid in the tank
1651	A negative metacentric height _____.	will always cause a vessel to capsize	should always be immediately corrected	always results from off-center weights	All of the above are correct
1652	A negative metacentric height _____.	will always cause a vessel to capsize	All of the above are correct	should always be immediately corrected	always results from off-center weights
1653	A vessel trimmed down by the bow has _____ .	a greater draft aft than forward	a low mean draft	zero trim	a greater draft forward than aft
1654	On a tanker vessel, what is the required combined capacity of the inert gas generating system as compared to the total	0.5	0.75	1.25	1

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	capacity of all the cargo pumps which can be operated simultaneously?				
1655	Each inert gas system must be designed to supply the cargo tank with a gas, or mixture of gases, that has an oxygen content by volume of _____.	5% or less	10% or less	15% or less	20% or less
1656	What is the required gas supply capacity of an inert gas system?	125% of forced draft rate	125% of fan capacity	125% of shore side loading rate	125% of cargo pump capacity
1657	The difference between the initial trim of a vessel and the trim after anew load condition is known as _____.	change of draft	angle of trim	change of trim	angle of list
1658	Static water pressure of a hull of a ship is greatest at the _____.	Stern	Bow	Boot topping	Keel
1659	When securing the operation of an inert gas system the final step should be _____.	Close the deck isolating valve	Close the flue gas isolating valve	Secure the salt water supply to the scrubber	Secure the inert gas blower
1660	On a tanker vessel, what is the required combined capacity of the inert gas generating system as compared to the total capacity of all the cargo pumps which can be operated simultaneously?	1.25	0.5	0.75	1
1661	Each inert gas system must be designed to supply the cargo tank with a gas, or mixture of gases, that has an oxygen content by volume of _____.	15% or less	20% or less	5% or less	10% or less
1662	What is the required gas supply capacity of an inert gas system?	125% of shore side loading rate	125% of cargo pump capacity	125% of forced draft rate	125% of fan capacity
1663	Each vessel designed to carry more than 49 passengers must have _____.	A continuous longitudinal watertight bulkhead	At least one watertight bulkhead to prevent fire advancement for 2 hours	A collision bulkhead	A minimum of four watertight bulkheads
1664	The difference between the initial trim of a vessel and the trim after anew	angle of list	change of trim	change of draft	angle of trim

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	load condition is known as _____.				
1665	Static water pressure of a hull of a ship is greatest at the _____.	Keel	Bow	Stern	Boot topping
1666	When securing the operation of an inert gas system the final step should be _____.	Secure the inert gas blower	Close the flue gas isolating valve	Secure the salt water supply to the scrubber	Close the deck isolating valve
1667	An inert gas system incorporating a separately fired inert gas generator shall be provided with visual and audible alarms to indicate failure of the power supply to the generator, the automatic control system and _____.	Cooling water flow	High sea water temperature	Combustion air temp too low high sea water temperature	Insufficient fuel supply
1668	An inert gas system is designed to reduce the possibility of tank explosion by _____.	Eliminating sparks and fire in the vicinity of cargo tanks	Reducing the oxygen concentration below levels necessary for combustion	Blanketing cargo tanks with inert foam	Removing all hydrocarbon gases from the cargo tanks
1669	Which of the following methods is used to supply inert gas from a flue gas system to the cargo tanks?	Natural aspiration	Exhaust gas pressure	High capacity fan	Inert gas compressor
1670	The component in an inert gas system use for cleaning the gas of solid and sulfur combustion products, while simultaneously cooling the inert gas, is called the _____.	Scrubber	Filter	Cooler	Purifier
1671	If a vessel loses its reserve buoyancy, it will _____.	remain unaffected if the hull remains intact	most likely sink	capsize and float on its side	float upright with the main deck awash
1672	The purpose of the deck seal in an inner gas system is to prevent _____.	Flue gas escaping to atmosphere	Inert gas escaping to atmosphere	Flow reversal of tank vapors into the machinery space	Air entering inert gas system
1673	A vessel which is subjected to hogging _____.	Has its bottom plating under ductile stress.	Has its bottom plate under tensile stress.	Has its main deck under compressive stress.	Has its main deck plating under tensile stress.
1674	Excessive recirculation of inert gas is _____.	Likely to over pressurize the cargo tanks	Highly recommended	Likely to overheat the deck water seal	Undesirable and it may lead to high oxygen content of the

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					inert gas
1675	Corrosion resistant material and non-corrodible material will include which of the following _____. I. Plastics II. Silver III. Copper nickel	I & II	I, II & III	I only	II & III
1676	Which of the following methods of finished applications is/are considered to be satisfactory for resisting corrosion? I. Electroplating with cadmium II Sherardizing III. Galvanizing	II & III	I & II	I only	I, II & III
1677	Corrosion resistant material and non-corrodible material will include which of the following _____. I. Brass II. Copper nickel III. Plastics	I, II & III	I only	I & II	II & III
1678	The blowers of an inert gas generation system aboard a tanker, will be automatically secured if _____. I. Normal water supply at the water seal is lost II. The temperature of the inert gas being delivered to the cargo tanks is more than 150oF III. The cooling water supply to the scrubbers is lost	I only	II & III	I, II & III	I & II
1679	The function of the scrubber in an inert gas system is to _____. I. Cool the gases II. Remove solids from the gases III. Remove sulfur compounds from the gases	I & II	II & III	I only	I, II & III
1680	Where are self-closing doors required on a vessel?	in each stair tower	To the engine room	To each sleeping room	In the galley
1681	Stability is determined principally by the location of two points in a vessel: The center of buoyancy and the _____.	geometric center of the water plane area	center of gravity	keel	center of flotation

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1682	The difference between the forward and the aft drafts of a vessel would be the _____.	list	flotation	heel	trim
1683	Yawing is the angular motion of the vessel about what axis?	Longitudinal	Centerline	Vertical	Transverse
1684	The value of the maximum righting arm is dependent upon the position of the center of buoyancy and the _____.	transverse center of waterplane area	longitudinal center of waterplane area	downflooding angle	position of the center of gravity
1685	Which of the listed functions is the purpose of a gas scrubber in an inert gas generation system?	Cools the inert gas	Maintains the oxygen content at 5% by volume	Drains off static electricity in the inert gas	Maintains the water seal on the gas main
1686	The purpose of swash bulkheads is to _____.	Restrict flooding within a tank	Reduce liquid movement and surging within a tank	Separate cargoes in a common tank	Minimize the effect of a listing condition
1687	When a vessel is inclined, the tendency for it to return to its original position is caused by the _____.	increased free surface in the buoyant wedge	upward movement of the center of floatation	movement of the center of gravity	movement of the center of buoyancy toward the low side of the vessel
1688	The collision bulkhead is located _____.	On the bridge deck	At the stern of the ship	As the first watertight bulkhead aft of the bow in the ship	Between the passenger and cargo areas
1689	Penetrations and openings in watertight bulkheads in a vessel of less than 100 gross tons must _____.	Be kept as high and as far inboard as practicable.	Only be placed in transverse watertight bulk heads that extend to the bulwark deck.	Be provided with non-packed slip joints for expansion to permit passage of piping of electric cable.	Incorporate approved sluice valves.
1690	Which of the following conditions will result in an automatic shut down of the flue gas inert gas system?	High temperature gas entering the scrubber	Oxygen content of the gas falls below 5%	High temperature gas discharge from inert gas blowers	Low temperature water leaving the scrubber seal
1691	Vertical support members used to strengthen bulkheads are called _____.	Stanchions	Stiffeners	Panels	Brackets
1692	The result of a blow delivered by a heavy sea causing rapid vibrations of the elastic portions of the ships hull is identified as	Hogging	Pitching	Sagging	Pounding

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	_____.				
1693	The double bottom in a vessel is a space comprised of _____.	Doubler plating installed over the flat keel plate	Compartments between the inner and outer bottoms	Plating forming the engine room tank top	A watertight boundary formed by the inner and outer bottoms
1694	An inert gas system on a tanker should be used to _____.	Dilute tank atmospheres to keep gas concentrations below the lower explosive limits	Prevent the generation of flammable or combustible gas in tanks	Blow out cargo lines to prevent gas concentrations	Prevent fires in the pump room by continually displacing flammable vapors
1695	Which of the following describes the purpose of a striker or doubler plate?	Provides a surface for the application of force, or the installation of machinery	Provides landing surface of the sounding bob of a tank sounding tape	Absorbs machinery vibration	Prevents valve stem over travel
1696	Free surface effect occurring in partially filled cargo or fuel storage tanks on board a vessel should be avoided to _____.	all of the above	reduce hogging and sagging	prevent oil pollution	maintain vessel stability
1697	When flooding occurs in a damaged vessel, reserve buoyancy _____.	decrease	increase	remains the same	shifts to the low side
1698	When the height of the metacenter is the same as the height of the center of gravity, the upright equilibrium position is _____.	negative	neutral	stable	positive
1699	What standard mathematical formula is commonly used to calculate a vessels waterplane area for stability purposes?	Standard Logarithmic Rule	Pythagorean Rule	Simpson Rule	Reynolds Number Rule
1700	Angular motion about the vertical axis of a vessel is known as _____.	surge	roll	yaw	hog
1701	The reserve buoyancy of a ship consists of _____.	the percentage of the volume of a compartment which can be occupied by water if flooded	the part of the enclosed and watertight portion of a vessel above the waterline	the void portion of the ship below the waterline which is enclosed and watertight	all cofferdams, double bottoms, and wing tanks that are slack
1702	Propeller pitch speed minus ship speed divided by the propeller pitch	Apparent slip	True slip	Propulsive efficiency	Pitch

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	speed is termed _____.				
1703	The part of deck machinery that is known as the bitter end, is the _____.	looped end of the mooring cable	end of anchor chain fastened to the vessel	end of chain shackled to the anchor	fixed end of the mooring cable fastened to mooring winch drum
1704	What will happen when a vessel loses its reserve buoyancy?	Float upright with the main deck awash	Capsize and float in its side	Most likely sink	Remain unaffected if the hull remains intact
1705	A ship designed to carry either oil or solid cargoes in bulk is known as_____.	special vessel	oil tanker	general cargo vessel	combination carrier
1706	Which of the following deals with the construction of ships?	STCW Convention	MARPOL Convention	COLREG Convention	SOLAS Convention
1707	The pollution prevention regulation state that liquid waste collected in drip pans buckets or tanks should be disposed by _____.	sealing in disposable plastic barrels aboard ship	discharging ashore into the sewer system	discharging into slop barge or shore tank	transferring to the local port authority incinerator
1708	Which of the following should a mechanical brake- fitted anchor winch be capable of holding?	The full breaking strength of the mooring line	Maximum expected tension of the mooring line	Half the breaking strength of the mooring line	The minimum expected bending moment of the mooring line
1709	What is the total volume of all the enclosures inside the cargo holds measured after the construction of a ship?	Dead weight ton	Gross tonnage	Net tonnage	Light displacement
1710	What is the weight of the cargo that tends to sink the vessel exactly 10 millimeters during loading?	Fresh water allowance	Tons per centimeters immersion	Buoyant force	Dock water allowance
1711	Having a high reserve buoyancy after loading if the ship will be accidentally holed during navigation the importance of it is what?	Avoid capsizing	Avoid liating	Avoid sinking	Avoid heeling
1712	Which of the following is NOT included in the requirements to be met in a general cargo ship after loading in order to maintain proper stability during navigation?	Ship initial G.M. not less than 15 CM	Ship s draft be maintained at assigned freeboard	Cargo hold must maintain allowed slack if loaded with grain	Ship s cargo must not allow slack to be loaded with grain
1713	What is the condition of	Decrease draft	Increase draft	Ship will heel	Ship will list

	the vessel that is loaded inside a river with water density of 1.000 when it goes out to the open sea with a higher water density?				
1714	What is the displacement of a vessel if it is floating on sea water exactly on her summer draft?	Net tonnage	Fresh water allowance	Loaded displacement	Loaded displacement
1715	The weight of the cargo loaded to a ship that tends to sink it deeper exactly 10 millimeters is called what?	Bouyant effect	Dock water allowance	Tons per centimeters immersion	Fresh water allowance
1716	What is the priciple or theory that proves that the weight of a floating object is equal to the weight of the displaced water?	Law of gravity	Archimedes Principle	Law of bouyancy	Newton s law
1717	What is the weight of the ship s hull machineries spare parts and boiler water measured immediately after construction?	Gross tonnage	Net tonnage	Light displacement	Total displacement
1718	What is termed as the total weight of the ship s hull machineries spare parts boiler water fresh and ballast including the full weight that can be loaded?	Dead weight ton	Fresh water allowance	Net tonnage	Loaded displacement
1719	What is the ratio between the underwater volume of a ship and that of a box shape barge having the same breadth and length?	Sea water allowance	Fresh water allowance	Center of gravity	Block coefficient
1720	What is the volume of the ship s hull between the water line and the freeboard deck?	Fresh water allowance	Center of gravity	Block coefficient	Bouyancy
1721	Which of the following is NOT included in the water tight doors to be met during construction as provided in the International Load Line Convention ?	Be constructed in watertight plastic material	Be watertight both sides	Gaskets be installed at door frames	Be contructed in steel
1722	What is the ability of the vessel to return to its upright position after it	Inclination	Stability	Bouyancy	Static

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	was heeled to either side?				
1723	What is the volume of all enclosure of the cargo holds measured after the construction of the ship?	Light displacement	Dead weight ton	Gross tonnage	Net ton
1724	What is direction of the force called bouyancy under the vessel which is equal to the weight of the displaced water?	Upward	Backward	Downward	Sideward
1725	What do you call the weights of the hull machinery spare parts and boiler water of a vessel measured in the floating dock after its construction?	Dead weight	Gross tonnage	Light displacement	Net tonnage
1726	In ship construction which strength members act to support the decks?	Longitudinal	Girders	Pillars	Bulkhead
1727	What term indicates the rise of the deck in going from the side to the center of the vessel?	Freeboard	Deadrise	Camber	Flare
1728	The bottom of a ship in the midship region is usually flat but not necessarily horizontal. If the line of the bottom is extended out to intersect the moulded breath line the height of this intersection above the keel is called_____.	camber	deadrise	keel height	slope
1729	What term indicates the vertical distance between the bottom at the centerline and the bottom at any given point?	Rise of bottom	Camber	Rake	Sheer
1730	Freeboard is the difference between the depth at side and the_____.	summer load waterline	winter load waterline	deck line	draught
1731	The point that is halfway between the forward and after perpendicular and is a reference point for vessel construction is the_____.	amidships	half length	center line	mid-body
1732	Which of the following statements describes the	Lock two dogs adjacent to the	Snugly lock up two dogs on the	All of these choices	Lock one dog on the opposite

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	correct procedure for closing a watertight door?	hinges then evenly set up all the remaining dogs.	opposite side from the hinges then evenly set up all the remaining dogs		side from the hinges; then evenly lock remaining dogs
1733	Which denotes the total force that the vessel or part of the vessel should withstand when floating under a given condition?	Stress	Elastic limit	Load	Strain
1734	What is known as the total force that the vessel or any part of the vessel should withstand under a given condition?	Elastic limit	Load	Stress	Strain
1735	What refers to the amount of load which a particular part of the ship structure is subjected? It is usually expressed in kg./sq.cm.?	Elastic limit	Load	Stress	Strain
1736	The point beyond which an added stress will produce deformation of material is known as _____.	load	elastic limit	malleability	strain
1737	What is known as the stress due to the unequal distribution of weight?	Stress in loaded condition	Local stress	Stress floating light	Stress in the seaway
1738	What is known as the water pressure exerted in the direction normal to the immersed part of the ship?	Hydrostatic pressure	Pressure in loaded condition	Pressure in light condition	Panting pressure
1739	The kind of local stress that is due to the hammering effect of the fore end of the ship head on to the sea in light condition is the _____.	Swaying	Pounding	Panting	Engine vibration
1740	The section aft of amidships is called after _____	peak	perpendicular	body	frames
1741	What is known as the compartment that is forward of the stern generally below the load water line?	Fore peak	After peak	Double bottom	After body
1742	An open space to protect two bulkheads in case of fire or collision is called	cofferdam	hold	coaming	double bottom tanks

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	_____.				
1743	How are the hulls of most modern towing vessels constructed today being fabricated?	Corrosion resisting steel	Mild steel	Wrought iron	High alloy steel
1744	A connection between bilge and ballast line must be made by installing a _____.	Globel Valve	Gate Valve	Ball Valve	Non-Return Valve
1745	The bilge system has been performing well. However the aft starboard engine room bilge-well suddenly fails to be pumped out. Which of the following should be done first to determine the cause?	Open the bilge for inspection	Attempt to pump out another bilge well to determine if the entire system is affected	Remove only the manifold valve to the affected bilge-well	Remove each of the manifold valves
1746	A ballast tank which is one third full is further ballasted until it is two thirds full. The increased amount of liquid in the tank will have the greatest influence on the _____.	transverse stability	free surface effect	virtual rise in the center of gravity	value of the moment to trim 1 inch
1747	A cofferdam is a/an _____.	cement baffle in a fresh water tank	tank for storing chemicals	empty space separating compartments to prevent the contents of one compartment from entering another in case of leakage	empty space between tank tops and bilges
1748	A crack in the deck plating of a vessel may be temporarily prevented from increasing in length by _____	Slot welding the crack	drilling a hole at each end of the crack	Welding a doubler over the crack	Cutting a square notch at each end of the crack
1749	A free surface effects of a partially filled tank in a floating vessel, increase with the	Displacement volume of the vessel	none of the above	Draft of the vessel	Surface area of the fluid in the tank
1750	A segregated ballast system is a system where _____.	all ballast is processed through the oily water separator	ballast is taken on and discharged through a separate main deck riser	all ballast lines, tanks, and pumps are independent of those used for oil	ballast and cargo tanks are separated by cofferdams
1751	A slow and easy motion in a seaway is an indication	large GZ	low center of gravity	stiff vessel	small GM

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	of a _____?				
1752	A stress called compression is being placed on the sheer strakes if the vessel is _____?	hogging	sagging	under shearing force	inclined
1753	A three inch overboard discharge line, located six feet below the waterline, has ruptured and separated from the hull. What would be the minimum number of strokes per minute required from a 10 x 8 x 12 duplex double acting reciprocating bilge pump, of	98 strokes per minute	87 strokes per minute	56 strokes per minute	45 strokes per minute
1754	A vessel center of gravity is lowered when the:	freeboard is increased	reserve buoyancy increases	trim increased	tanks are ballasted
1755	A vessel continually lists to one side and has a normal rolling period. Which of the following statements is true?	the list can be corrected by reducing KM	the center of gravity is on the centerline	the vessel has asymmmetrical weight distribution	a vessel has negative GM
1756	A vessel lists and trim about the_____?	Center of flotation	Centroid of the underwater volume	Center of buoyancy	Center of gravity
1757	A vessel should normally be have as if all of its weight is acting downward through the center of gravity and all of its support is acting upward through the _____.	tipping center	keel	amidships section	center of buoyancy
1758	A vessel that has a concentration of weight toward the top of the vessel is said to be _____	Tender	Stiff	Neutral	Buoyant
1759	A vessel that is trimmed down by the bow has _____	A low mean draft	Zero trim	A greater draft forward than aft	A greater draft aft then forward
1760	The change in stability of a vessel caused by liquids moving about freely in a tank or hold.	severe hogging	severe sagging	serious loss of reserve buoyancy	free surface effect
1761	A vessel will have a greater degree of heel	is deeply loaded and down by	is deeply loaded and down by	has very little stability	is deeply loaded

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	caused by rudder action when it _____?	the head	the stern		
1762	A vessel with a large metacentric height will _____?	tend to ship water on deck in heavy weather	be subject to severe racking stresses	have small amplitude of roll in heavy weather	be less likely to have cargo shift
1763	A vessel would be referred to as tender when the weight of the cargo is _____.	concentrated low and the double bottoms are empty	concentrated low and the double bottoms are full	evenly distributed vertically and the double bottoms are full	concentrated high and the double bottoms are empty
1764	A vessels immediate protection in the event of a broken stern tube is a/an _____ bulkhead	aft machinery space WT	stern frame	after peak	aft collision
1765	A virtual rise in the center of gravity may be caused by _____.	filling a partially filled tank	using fuel from a pressed fuel tank	emptying a partially filled tank	transferring ballast from the forepeak to the after peak
1766	A wooden plug fitted tightly in the vent of a damaged tank may prevent the tank from _____.	collapsing	filling completely	developing free surface moment	developing free surface
1767	Air gap is the vertical distance between the bottom of the hull and the _____.	wave crest	wave crest plus the charted water depth, plus tidal correction and storm surge	still water level	wave crest plus the charted water depth and tidal corrections
1768	An adverse effects due to free surface?	The vessels is draft is decreased exposing more surface are to the wind and current	A portion of the liquid is removed from a full tanks	The vessel is trimmed by the stern	The vessels draft increases this increasing the vessels water plane area
1769	An inclined ship way having a cradle on wheels that run on rails	Gravity decks	Caissons	Railways	Slipways
1770	As the curves of GZ plotted in a base of displacement for constant angles of heel:	Curves of statistical Stability	Sets of curves	Cross curves of stability	Heel correction curves
1771	Center of flotation is defined as _____?	Center of the volume of the immersed portion of the vessel	center of gravity of the waterplane	Point of which all the vertical downward forces of weight are considered to be concentrated	Point at which all the vertical upward forces of buoyancy are considered to be concentrated

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1772	Difference between the starboard and port drafts due to wind or seas is termed _____	flotation	heel	list	Trim to decrease
1773	For a vessel with no sheer, which of the following will not provide extra buoyancy?	lighter draft	raised poop	raised forecastle head	higher bulwark
1774	For a vessel with transverse inclination, an increase in GMT causes _____.	list to stabilize at an angle	list to decrease	list to increase	trim to decrease
1775	For a vessel with trim, a decrease in GMT will cause the angle of inclination to _____.	decrease	remain constant	stabilize at an angle	increase
1776	For a vessel with trim, an increase in GMT will cause the inclination to _____.	stabilize at an angle of loll	decrease	increase	remain constant
1777	For an upright vessel, draft is the vertical distance between the keel and the _____.	waterline	freeboard deck	Plimsoll mark	amidships section
1778	GM cannot be used as an indicator of stability at all angles of inclination because _____.	G is not fixed at large angles	there is no M at large angles	M is not fixed at large angles	there is no G at large angles
1779	GM is the measure of	the total stability of the vessel	the initial stability of the vessel	the amount of reverse buoyancy	the list of the vessel
1780	If a ship is supported on the crest of a wave amidships, the vessel is subjected to _____.	sagging stresses	yawing stresses	hogging stresses	pitch poling
1781	If a weight is loaded aboard a ship, what would this weight do in the vessel?	It causes the ship to sink down in the water in a small amount	It is loaded in the cargo hold	It stablised the vessel	It is the cargo
1782	If fuel is burned from only the starboard tanks, the ship will _____.	list to starboard	list to port	go down by the head	trim by the stern
1783	If fuel oil is burned from the port side tanks alone, the ship will _____.	go down by the head	list to port	trim by the stern	list to starboard
1784	Your vessel is damaged and is listing to port. The rolling period is short. There is sufficient freeboard so that deck	Flood any empty double bottom tanks to add weight low down	jettison topside weights to reduced KG and KB	shift any off center weights from port to starboard	press up any slack double bottom tanks to add weight low down

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	edge submersion is not a problem. What corrective action should be taken first in regards to the vessels stability?				
1785	Your vessel has run aground and is touching bottom for the first one-quarter of its length. What is the LEAST desirable method from the standpoint of stability to decrease the bottom pressure?	shift deck cargo aft	flood an after double bottom tank	pump out the forepeak tank	discharge forward deck cargo
1786	Your vessel has been damaged and is partially flooded. The first step to be taken in attempting to save the vessel is to _____	establish follding boudaries and prevent further spread of flood water.	plug the hole (s) in the outer shell	pump out the water the vessel.	calcualte the free surface effectm and lost buoyancy to determine the vessels stability
1787	You must shore up the collision bulkhead due to solid flooding forward. The bulkhead approximates a triangle. The center of pressure of the shores on the bulkhead should be located.	approximately one-third of the height of the bulkhead	at the bottom of the bulkhead	approximately one-half of the height of the bilkhead	evenly over the surface of the bulkhead
1788	You may improve a vessels stability by _____.	increasing the free surface effect of liquid storage tanks	keeping double-bottom fuel tanks topped off	keeping fuel tanks at least half full	keeping at least one fuel tank empty for slops
1789	Which statement about a vessels stability while dry-docking is true?	When the ship touches the blocks, the beam for stability purposes increases to the beam of the dry-dock.	Every ton of weight bearing on the blocks acts as if a ton of weight was removed at keel level.	The stability of the vessel increases as a dock is pumped out due to the support of the keel blocks.	As the dock begins to support the weight of the vessel, stability calculations are based on the ship and dock as a single unit.
1790	Which of the listed initials is used to represent the indicator of initial stability?	KM	GZ	KG	GM
1791	Which of the listed conditions will occur to the ships center of gravity if 200 tons of steel is transferred to the ships cargo hold from shore	The reserve buoyancy will rise.	The center of gravity will remain in the same position.	The center of gravity will be lowered.	The reserve buoyancy will remain the same.

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	side?				
1792	Which factor does NOT affect the required freeboard of a cargo vessel?	Geographic zone of operation	Condition of trim in normal operation	Density of the water	Season of the year
1793	When the period of a beam seas equals the natural rolling period of a vessel, which of the following will most likely to occur?	excessive pitching	no change should be evident	excessive rolling	excessive yawing
1794	When is the best time to safely beach the vessel?	high water slack	on the falling tide, just after high water	low water slack	on the rising tide, just after low water
1795	When any tank or compartment is partially filled with a liquid free to move as the ship rolls, the free surface effect is present. This condition will usually _____.	reduce ship stability	increase reserve buoyancy	cause a permanent list	change the ships trim
1796	Angular motion about the vertical axis of a vessel is known as _____.	hog	roll	surge	yaw
1797	The reserve buoyancy of a ship consists of _____.	all cofferdams, double bottoms, and wing tanks that are slack	the void portion of the ship below the waterline which is enclosed and watertight	the part of the enclosed and watertight portion of a vessel above the waterline	the percentage of the volume of a compartment which can be occupied by water if flooded
1798	If weight is added at the keel, the ships center of gravity will _____.	move up	pass through the center of flotation	move down	merge with the metacenter
1799	In a compartment that has been completely flooded, the greatest pressure will be exerted _____.	along the bottom of any bulkhead	on the overhead of the compartment	along the top of any bulkhead	at the center of all bulkheads
1800	A vessel trimmed down by the bow has	Zero trim	A low mean draft	A greater draft aft than forward	A greater draft forward than aft..
1801	Clogged limber holes can endanger a ships stability by _____.	increasing water area on the keelson	decreasing off center weight	preventing water from draining to the bilge well	preventing the free surface effect
1802	In general, on what does the position of the center of buoyancy depends?	Freeboard	Draft	Length	Depth
1803	For a vessel with a block coefficient of 1, the addition of weight at the center of flotation will	increase the forward draft and decrease the after draft	decrease the forward draft and increase the after draft	have no effect on the trim	have no effect on the stability

	_____.				
1804	Buoyancy is a measure of the ships	freeboard	ability to float	midship strength	Deadweight
1805	In and out motion of the plating in the bows of a ship and is caused by equal	panting	sagging	hogging	Pounding
1806	In an upright vessel, draft is the vertical distance between the keep and the;	Amidship section	water	none of the above	Plimsoll mark
1807	In ship construction, structural hull members installed athwart ship are _____.	girders	deck beams	stringers	breasthooks
1808	In ship construction, the frames spacing will be;	Increase in length at the beams	To have enough strength at frames	Reduced at the bow and stern	Increase girder bottom plate
1809	In ship construction, the vessels bilge keels are designed primarily to _____.	improve vessel steering response	reinforce the vessels garboard strake	reinforce the vessels shear strake	assist in reducing vessel rolling
1810	In ships, the hull structural members which run athwarthship are:	breasthooks	deck beams	stringers	girders
1811	In war ship members support of decks are called:	Deck beam	Pillars	Deck girders	Stanchions
1812	It is part that supports the beam and supply the rigidity to the deck	Beams	Floors	Pillar	Longitudinal
1813	Ships are less stable when water or fuel tanks are partially filled because of the _____.	increase in buoyancy	decrease in draft	reduction in trim	free surface effect
1814	The average of the observed drafts is known as _____.	true mean draft	mean draft	mean of the calculated drafts	draft at the center of flotation
1815	The center of buoyancy rotates around the metacenter on a radius called:	metacentric radius	angle of inclination	metacentric height	righting arm
1816	The center of gravity of a freely swinging load suspended from a pedestal crane acts as if it were located at the _____?	Pedestal	Point of suspension	Counterweight	Longitudinal centerline
1817	The distance of the propeller would advance during one revolution of	Level	Pitch	Stroke	Discharge

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	the water were a solid without slippage:				
1818	The end of the joint with the exterior threads is called the _____.	stand	box	stern	pin
1819	The horizontal distance between the vertical lines of the gravitational and buoyant forces is called the _____.	metacentric height	metacentric radius	righting arm	height of the center of buoyancy
1820	The maximum draft to which a vessel can legally be submerged is indicated by the _____.	Load Line mark	Certificate of Inspection	Muster List (Station Bill)	Tonnage mark
1821	The maximum height that a pilot should be required to climb on a pilot ladder before reaching the deck or stepping onto an accommodation ladder platform is:	15 mtrs	12 mtrs	9 mtrs	6 mtrs
1822	The moment of a force is a measure of the _____.	turning effect of the force about a point	stability characteristics of the vessel	center of gravity location	instantaneous value of the force
1823	The point through which the vertical upward support in a floating vessel, is assumed to act is known as the center of _____?	Floatation	Forces	Buoyancy	Gravity
1824	The result of a blow delivered by a heavy sea causing rapid vibrations of the elastic portions of the ships hull is identified as _____.	sagging	pounding	pitching	hogging
1825	The tendency of a vessel to return upright after being inclined by an external force is called _____?	Buoyancy	Transverse stability	Longitudinal stability	Equilibrium
1826	This is the curvature given to the decks in the longitudinal direction and is measured at a point by the difference between the height and the side at the side point and the high side amid-ship	The flare	The bilge	Sheer	The camber
1827	This was intended to relate the earning power of ship, is derived from	Net tonnage	The loaded displacement	The light tonnage	The dead weight

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	gross tonnage spaces that may have no earning capacity				
1828	What is the main purpose of carlings?	To act as boundary stiffner for the hatches	To acct as the vertical support of a deck	To act as the girder to stiffen the deck	To act as a longitudinal and to add strength to the inner-bottom
1829	What is the usual effect of moving weight from the main deck to a position lower in the vessel?	The vessel will list in proportion to the volume of the cargo shifted.	The trim of the vessel is changed substantially.	The stability of the vessel is significantly decreased.	The stability of the vessel is increased.
1830	When flooding occurs in a damaged vessel, reserve buoyancy _____.	remains the same	decreases	shifts to the low side	increases
1831	A vessel going from salt water to fresh water would _____?	remain at same draft	decrease her freeboard	decrease her draft	none of these
1832	A vessel is subjected to hogging when it _____.	has its bottom plating under tensile stress	supported on wave whose crests are at the bow and stern	is supported on a wave whose crest is amidships	has its main deck under compressive stress
1833	A vessels center of gravity is lowered when the _____.	trim is increased	tanks are ballasted	freeboard is increased	reserve buoyancy increases
1834	Displacement refers to the _____	dead weight carrying capacity of a vessel	gross tonnage of a vessel	number of long tons of water displaced by a vessel afloat	maximum capacity of a vessel
1835	For a vessel with longitudinal inclination, an increase in GM would cause the	Trim to decrease	none of the above	List to stabilize at an angle of loll	trim to stabilize at an angle of loll
1836	If fuel tank levels are found to have increased after a grounding, you should suspect _____.	improper record keeping of fuel transfer activities	contamination of the contaminated steam supply system	a puncture, crack, or hole in the skin of the vessel	a damaged pneumercator line
1837	A fire can spread by convection as a result of _____.	the transfer of heat across an unobstructed space	transmitting the heat of a fire through the ships metal	burning liquids flowing into another space	hot combustion gases flowing through ventilation systems
1838	A foam-type portable fire extinguisher would be most useful in combating a fire in	combustible metallic solids	solid materials such as wood or bales of fiber	a piece of electrical equipment	flammable liquids or oil fires
1839	A foam-type portable fire extinguisher is most useful	generators	oil drums	the bridge controls	combustible metals

	in fighting a fire in _____.				
1840	A foam-type portable fire extinguisher would be most useful in combating a fire in	solid materials such as wood or bales of fiber	combustible metallic solids	a piece of electrical equipment	flammable liquids
1841	A grade A petroleum product is _____.	a flammable liquid	a combustible liquid	jet fuel	lubricating oil
1842	A safety outlet is provided on the CO2 discharge piping to prevent _____.	over pressurization of the space being flooded	flooding of a space where personnel are present	over pressurization of the CO2 discharge piping	rupture of cylinder due to temperature increase
1843	What is the minimum number of fire pumps required on a cargo vessel of 2,000 GT?	4	3	1	2
1844	What is the minimum number of fire pumps required on a cargo vessel of 900 GT?	2	1	4	3
1845	The Oil Record Book on a vessel NOT engaged on a foreign voyage shall be maintained on board for not less than _____.	24 months	12 months	36 months	48 months
1846	Under SOLAS passenger ships and ships other than passenger ships of _____ and upwards constructed on or after 2002 must carry Voyage Data Recorders (VDR) to assist in accident investigation.	10,000 GRT	2,000 GRT	4,000 GRT	3,000 GRT
1847	According to Coast Guard Regulations (46 CFR), a power driven auxiliary steering gear for a vessel capable of a 12 knot service speed, must be able to meet the rudder movement requirements at which of the minimum vessel speeds listed below?	7 knots	6 knots	9 knots	12 knots
1848	Lifeboats for ocean-going vessels shall carry in excess of the required regulation by_____.	25% of persons on board	75% of persons on board	100% of persons on board	50% of persons on board
1849	As per SOLAS Regulation, the minimum Fuel supply for fast Rescue Boat shall last for_____.	12 hours	16 hours	4 hours	8 hours

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1850	Part C, Chapter VI of SOLAS deals with:	General Provision	bulk cargoes other than grain	radioactive materials	carriage of grain
1851	The ISPS Code was Adopted by Contracting Government with Part A & B. The mandatory requirements & guidance is under the provisions of _____ of the SOLAS as amended.	Chapter X-1	Chapter XI-2	Chapter IX-2	Chapter XX-1
1852	Any completed pages of the Oil Record Book must counter sign by the_____.	Master	Chief Engineer	Designated Officer	Master and Chief Engineer
1853	Who is given the authority to carry out assessment for a certification as required by Chapter XI-2 of SOLAS as amended of the ISPS Code?	Port State Control	Security Administration	Recognize Security Organization	Contracting Gov?t Coast Guards
1854	Sludge are to be disposed off at sea	25 miles offshore	disposal prohibited	during darkness only	50 miles offshore
1855	When oily ballast has been pumped overboard, an entry must be made in the _____.	engine rough log	deck rough log	Oil Record Book	Official Logbook
1856	What form of oil discharge in large quantities that affects birds at sea and may strand on beaches if these do not disperse into the water?	emulsions	patches	spills	slicks
1857	According to SOLAS requirement for lifeboat fall, what action must be taken with the fall at interval of not more than 5 years?	Renewed	Proof tested	weight tested	reverse
1858	Coast Guard Regulations (46 CFR) require that electric and electro-hydraulic steering gear motors shall be	protected by a circuit breaker and a thermal overload device	served by two electric power feeder circuits	provided with a motor running overcurrent protection device	served by a single two conductor cable
1859	Coast Guard regulations (46 CFR) require the upper ends of sounding tubes, terminating at the weather deck, to be closed by a	self-closing gate valve	globe valve	screwed cap	quick-closing valve
1860	____ is contained in Annex II of MARPOL 73/78?	Regulations for the Prevention of Pollution by	Regulations for the Control of Pollution by	Regulations for the Prevention of Pollution by	Regulations for the Prevention of Pollution by

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		Oil	Noxious Liquid Substances	Harmful Substances in a Packaged Form	Sewage
1861	At what security level is further specific protective security measures to be maintained for a limited period of time when a security incident is probable or imminent, although it may not be possible to identify the specific target?	Security level 4	Security level 2	Security level 3	Security level 1
1862	Under the New Regulations, what does SOLAS Chapter XI-1 deals with?	Additional provisions to combat Terrorism	Special measures to enhance Maritime Safety	Security planning and Ship and Port Facility	Special provisions for Ship Security and Port Facilities
1863	Annex V of MARPOL 73/78 contains requirements pertaining to the discharge into the marine environment of_____.	Garbage	Sewage	Oil	Noxious liquid substances
1864	One of the many objectives of the _____ is to ensure the early and efficient collection and exchange of security-related information.	FTP Code	STCW Code	Code of Safe Practice for the Handling of Cargo	ISPS Code
1865	The ISM Code requires ship owners or shipping companies to assign onboard their ship a _____ .	Logistics Committee	Welfare Committee	Safety Committee	Overseeing Committee
1866	According to regulations, all pressure vessels other than unfired steam boilers shall be protected by pressure-relieving devices that prevent the pressure from rising more than _____ above the maximum, allowable pressure.	5 percent	10 percent	15 percent	20 percent
1867	According to regulations, a power driven auxiliary steering gear for a vessel capable of a 20 knot service speed, must be capable of producing a	20 knots	15 knots	10 knots	7 knots

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	specific range of rudder movement at which of the minimum speeds listed below?				
1868	According to regulations, all pressure vessels other than unfired steam boilers shall be protected by pressure-relieving devices that prevent the pressure from rising more than _____ above the maximum, allowable pressure.	5 percent	10 percent	15 percent	20 percent
1869	According to regulations, a power driven auxiliary steering gear for a vessel capable of a 20 knot service speed, must be capable of producing a specific range of rudder movement at which of the minimum speeds listed below?	10 knots	7 knots	15 knots	20 knots
1870	Which of the following statements is correct concerning the regulations regarding internal combustion engine exhausts, boiler and galley uptakes, and similar sources of ignition?	All exhausts and uptakes shall run as close as possible to the vertical and shall exit the machinery space at a point above the highest load line.	They shall be kept clear of and suitably insulated from any woodwork or other combustible matter.	This protection shall be such as to be capable of preventing an excessive temperature rise in the space containing the emergency source of electric power.	The general construction of the vessel shall be such as to minimize smoke hazards insofar as is reasonable and practicable.
1871	Regulations require that an indicating light, located at the propulsion control station, be illuminated if there is an overload what would cause overheating of the _____.	Fuel pump motor	Forced draft blower motor	Steering gear motor	Condensate pump motor
1872	If accidents are considered as an unexpected contact, you will be able to perform a better job by observing which of the following practices?	Inspecting for unsafe conditions.	Analyzing jobs for safer methods.	Looking for unsafe practices.	Doing all the choices
1873	The regulations regarding hydrostatic testing of main steam piping state that _____.	the hydrostatic test shall be applied from the boiler drum	not less than fifty percent of the lagging shall be removed	the hydrostatic pressure must be maintained on the piping for	a pipe with a nominal size of six inches or more is not

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		to the throttle valve	each time the hydrostatic test is applied	a minimum of one hour	required to be hydrostatically tested
1874	The master or person in charge of a MODU must record the date of each test of emergency lighting systems, power systems, the condition of each and the performance of the equipment_____.	on the Certificate of Inspection	in the Operations Manual	on the station bill	in the official log
1875	In accordance with regulations, a steam propelled cargo vessel over 25 gross tons may have a Certificate of Inspection issued for _____.	one voyage only	Any of the choices depending upon the pertinent circumstances	a time period not exceeding 2 years	a specific period of time to cover a described situation
1876	According to regulations, the master or person-in-charge of a vessel is required to submit a report of a loss of life _____.	only when it happens while underway	to the nearest coroner	to the nearest Marine Safety or Marine Inspection Office	to the next of kin
1877	The duties of a chief engineer upon taking charge of the department include _____.	determining if any vital engine room equipment is inoperative	preparing a list of engine department personnel for the Masters signature	taking a complete personal inventory of all engine room spare parts	obtaining a valid Certification of Inspection from the Coast Guard
1878	If you must enter the water on which there is an oil fire, you should _____.	wear very light clothing	keep both hands in front of your face to break the water surface when diving head first	enter the water on the windward side of the vessel	protect your lifejacket by holding it above your head
1879	Hydraulic hose assemblies are permitted by regulation to be installed between two point of relative motion _____.	To prevent the formation of loading stresses	But shall not be subjected to torsional deflection under any conditions of operation	Provided the entire length of the device is visible to the operator at all times	Provided proper releasing mechanisms are available to enable quick disconnect capabilities
1880	The regulations require that all electric and electro-hydraulic steering gear motors shall be _____.	Served by a single two conductor cable	Provided with a motor running overcurrent protection device	Protected by a circuit breaker and a thermal overload device	Served by two electric power feeder circuits
1881	Each pressure vessel containing refrigerants, which may be isolated, shall be _____.	protected by a relief valve set to relieve at a pressure not	subject to annual hyrdrostatic tests to be	protected by a relief valve set to relieve at a pressure not	stored in an upright position in addition to being secured

		exceeding the maximum allowable working pressure of the vessel	performed in the presence of a marine inspector	exceeding 110 percent of the maximum allowable working pressure of the vessel	so as to prevent accidental release of the refrigerant within a confined space
1882	In the case of an injury, causing a person to be incapacitated for more than 72 hours, the master or person- in-charge of a mobile offshore drilling unit must submit a report to _____.	the American Bureau of the Shipping	the Department of Energy	the nearest hospital	the nearest Marine Safety or Marine Inspection Office
1883	In accordance with regulations, the hailing port marked on the stern of a vessel indicates _____.	where one or more of the owners reside	the place in the same marine inspection zone where the vessel was built	the port where the vessel is permanently documented	all of the above
1884	The regulations require a method for the relief of an over pressurized refrigeration system. Which of the following statements complies with these regulations?	The relief valve settings shall be 1 1/4 times the maximum allowable working pressure.	A rupture disk may be fitted in series with the relief valve.	The rupture disk shall burst at a pressure not higher than 10% above the relief valve setting.	The relief valve from the receiver must relieve to the condenser first.
1885	According to regulations, all pressure vessels other than unfired steam boilers shall be protected by pressure-relieving devices that prevent the pressure from rising more than _____ above the maximum, allowable pressure.	10 percent	5 percent	15 percent	20 percent
1886	According to regulations, a power driven auxiliary steering gear for a vessel capable of a 20 knot service speed, must be capable of producing a specific range of rudder movement at which of the minimum speeds listed below?	15 knots	20 knots	10 knots	7 knots
1887	Which of the following statements is correct concerning the regulations regarding internal combustion engine	They shall be kept clear of and suitably insulated from any woodwork	This protection shall be such as to be capable of preventing an excessive	The general construction of the vessel shall be such as to minimize smoke	All exhausts and uptakes shall run as close as possible to the vertical and

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	exhausts, boiler and galley uptakes, and similar sources of ignition?	or other combustible matter.	temperature rise in the space containing the emergency source of electric power.	hazards insofar as is reasonable and practicable.	shall exit the machinery space at a point above the highest load line.
1888	Regulations require that an indicating light, located at the propulsion control station, be illuminated if there is an overload what would cause overheating of the _____.	Forced draft blower motor	Steering gear motor	Fuel pump motor	Condensate pump motor
1889	If accidents are considered as an unexpected contact, you will be able to perform a better job by observing which of the following practices?	Analyzing jobs for safer methods.	Looking for unsafe practices.	Inspecting for unsafe conditions.	Doing all the choices
1890	The regulations regarding hydrostatic testing of main steam piping state that _____.	a pipe with a nominal size of six inches or more is not required to be hydrostatically tested	the hydrostatic pressure must be maintained on the piping for a minimum of one hour	the hydrostatic test shall be applied from the boiler drum to the throttle valve	not less than fifty percent of the lagging shall be removed each time the hydrostatic test is applied
1891	The master or person in charge of a MODU must record the date of each test of emergency lighting systems, power systems, the condition of each and the performance of the equipment_____.	in the Operations Manual	in the official log	on the station bill	on the Certificate of Inspection
1892	In accordance with regulations, a steam propelled cargo vessel over 25 gross tons may have a Certificate of Inspection issued for _____.	a time period not exceeding 2 years	one voyage only	a specific period of time to cover a described situation	Any of the choices depending upon the pertinent circumstances
1893	According to regulations, the master or person-in-charge of a vessel is required to submit a report of a loss of life _____.	to the nearest coroner	to the next of kin	to the nearest Marine Safety or Marine Inspection Office	only when it happens while underway
1894	The duties of a chief engineer upon taking charge of the department include _____.	preparing a list of engine department personnel for the Masters	determining if any vital engine room equipment is inoperative	taking a complete personal inventory of all engine room	obtaining a valid Certification of Inspection from the Coast Guard

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		signature		spare parts	
1895	If you must enter the water on which there is an oil fire, you should _____.	enter the water on the windward side of the vessel	protect your lifejacket by holding it above your head	keep both hands in front of your face to break the water surface when diving head first	wear very light clothing
1896	Hydraulic hose assemblies are permitted by regulation to be installed between two point of relative motion _____.	To prevent the formation of loading stresses	Provided the entire length of the device is visible to the operator at all times	Provided proper releasing mechanisms are available to enable quick disconnect capabilities	But shall not be subjected to torsional deflection under any conditions of operation
1897	The regulations require that all electric and electro-hydraulic steering gear motors shall be _____.	Provided with a motor running overcurrent protection device	Served by a single two conductor cable	Served by two electric power feeder circuits	Protected by a circuit breaker and a thermal overload device
1898	Each pressure vessel containing refrigerants, which may be isolated, shall be _____.	stored in an upright position in addition to being secured so as to prevent accidental release of the refrigerant within a confined space	subject to annual hyrdrostatic tests to be performed in the presence of a marine inspector	protected by a relief valve set to relieve at a pressure not exceeding 110 percent of the maximum allowable working pressure of the vessel	protected by a relief valve set to relieve at a pressure not exceeding the maximum allowable working pressure of the vessel
1899	In the case of an injury, causing a person to be incapacitated for more than 72 hours, the master or person- in-charge of a mobile offshore drilling unit must submit a report to _____.	the Department of Energy	the nearest hospital	the nearest Marine Safety or Marine Inspection Office	the American Bureau of the Shipping
1900	In accordance with regulations, the hailing port marked on the stern of a vessel indicates _____.	the port where the vessel is permanently documented	the place in the same marine inspection zone where the vessel was built	where one or more of the owners reside	all of the above
1901	The regulations require a method for the relief of an over pressurized refrigeration system. Which of the following statements complies with these regulations?	The rupture disk shall burst at a pressure not higher than 10% above the relief valve setting.	The relief valve from the receiver must relieve to the condenser first.	The relief valve settings shall be 1 1/4 times the maximum allowable working pressure.	A rupture disk may be fitted in series with the relief valve.
1902	As per International Regulations requirement	5	3	4	2

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	how many bolts & nuts are permitted in a bolted flanged oil hose couplings?				
1903	How many miles from the nearest land does floating cargo associated waste not plastic or otherwise regulated under MARPOL Annexes can be discharge?	12	50	25	20
1904	Following a Serious Marine Incident a mariner involved in the incident is prohibited from consuming alcohol until after being tested or_____.	12 hours following the incident	8 hours following the incident	2 hours following the incident	4 hours following the incident
1905	What is the period of validity of a Safety Management Certificate?	60 months	36 months	48 months	42 months
1906	A reinspection of the vessel shall be made between which of the following months while the Certificate of Inspection is valid?	8 - 12 months	10 - 12 months	12 - 14 months	10 - 14 months
1907	A vessel in ocean service that does not have an approved means of processing oily bilge slops or oily ballast must have_____.	All of the above	a fixed piping system for ballast discharge to a reception facility	one portable adapter for a shore connection to the ballast line	a discharge outlet for the ballast system on each side of the weather deck
1908	A person is found operating a vessel while under the influence of alcohol. He/she is liable for_____.	a fine of not more than $3 000	imprisonment for up to three years	a fine of not more than $10 000	a civil penalty of not more than $5 000
1909	What is NOT required to be contained in the oil transfer procedures?	The location and capacity of all fuel and cargo tanks on the vessel	Any special procedures for topping off tanks	The number of persons on duty during oil transfer operations	A line diagram of the vessel s oil transfer piping
1910	If after examination by the Quarantine Officer your vessel is found to have a specific deficiency you may be issued_____.	Free Pratique	Notice to Comply	Bill of health	Controlled Free Pratique
1911	You are operating a 150 GT towing vessel. What is NOT required on the vessel?	Certificate of Documentation	Your Coast Guard credential	Certificate of Inspection	FCC station license

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1912	Where can we find the official identification of a vessel?	Classification Certificate	Certificate of Inspection	Load Line Certificate	Certificate of Documentation
1913	A person who willfully violates safety regulations may be fined up to $5 000 and_____.	forbidden to work in the fishing industry	imprisoned for up to five years	imprisoned for up to a year	no other penalty may be applied
1914	The Certificate of Inspection for a containership_____.	shows the due date of the quadrennial test of the cargo gear	must be posted under transparent material in a conspicuous place	is issued by the Coast Guard and is usually valid for 2 years.	lists all of the stability limitations and conditions imposed on the vessel
1915	Your vessel has completed an inspection for certification and is issued a temporary certificate. This_____.	has the full force of a regular Certificate of Inspection	must be exchanged for a regular Certificate of Inspection before going foreign or out of state	expires six months after it is issued	must be posted in the vicinity of the officers licenses
1916	How long must a Declaration of Inspection be kept on board?	Three months	Two weeks	One month	One week
1917	International Regulations require that a rubber mat or wood platform shall be installed in switchboards and starter panels in order to _____.	protect the hull from electrolysis	protect personnel from electrical shock	prevent electrical grounds to the deck	prevent water from touching maintenance personnel
1918	The type of vessels that should carry two (2) anchors and cables according to the ABS Shipping Rules are _____.	I and III	I and II	I II and III	I only
1919	USCG regulation 46 CFR requires that the emergency lighting and power system _____.	Sewage plant	Two radars	Oil bilge separator	Evaporating plant
1920	As per USCG 33 CFR 164.35 the vessel is not permitted to be operated in US waters unless it has onboard and properly operating condition of _____.	particular supply oil is exhausted	water has cleared with any residual	voyage is completed	U.S. port where upon it must sent ashore for chemical analysis
1921	In accordance with International regulations it is the duty of the Chief Engineer to acquire and	tested within 12 hours after leaving port	hydraulically powered only for closing	electrically controlled from a remote station	tested at each inspection for certification

	seal a sample of fuel oil received whenever fuel bunkers are taken. This sample must be preserved until the _____.				
1922	International Regulations require watertight doors in cargo vessels to be _____.	No freigt or passenger are allowed to be carried when the vessel is issued the permit	The permit can only be issued upon written request from the Master agent or owner representative	All of these choices	The permit can only be issued if the vessel has a valid certificate of inspection
1923	A kind of passage where the freedom of navigation was exercised solely for the expeditions travel as provided in the United Nation Convention Law of the Sea.	Innocent	Pilotage	Survey	Transit
1924	A load line for a MODU is assigned by the:	a recognized classification society approved by the Coast Guard	Department of Energy	Corps of Engineers	Minerals Management Service
1925	A vessel is in compliance with federal regulations regarding the discharge of sewage by:	holding all sewage onboard	all of the above	treating sewage in an approved system	pumping the sewage ashore to an approved container
1926	According to 46 CFR Part 199, on a cargo vessel, fire and boat drills must be held within 24 hours of leaving port if the percentage of the crew replaced is more than.	5%	10%	25%	40%
1927	According to Coast Guard Regulations (46 CFR), a single steel hull cargo vessel operating exclusively in freshwater, shall be dry-docked, or hauled out, at intervals not to exceed:	2 years	1 year	3 years	5 years
1928	According to Coast Guard Regulations (46 CFR), each fire hydrant must have at least.	all of the above	a spanner wrench	a hose rack or other device for stowing hose	one length of fire hose with an approved nozzle
1929	All amendments of the STCW convention shall be referred to what body of the organization?	International Labour Organization	World Maritime University	Maritime Safety Committee	International Shipping Federation

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1930	All inspections and repair to be done during dry docking are in accordance with the_____.	Grade steel certificate	Rules of S.M.E. code	Rules of the shipyard	Rules of the classification society
1931	An abandoned vessel in the high seas was found to be classed. Where will the owner file a claim for recovery of his property?	Coast guard	Insurance Company	Port authorities	Classification society
1932	As per 46 CFR Part 61, which of the following machinery remote control shutdowns is/are required to be tested during each regular inspection for certification?	All of the above	Induced draft fan	Fuel oil transfer pump	Forced draft fan
1933	As per Coast Guard Regulations (46 CFR Part 58), a power driven auxiliary steering gear for a vessel capable of a 12 knot service speed, must be able to meet the rudder movement requirements at which of the minimum vessel speeds listed below?	9 knots	12 knots	6 knots	7 knots
1934	As per Coast Guard Regulations (46 CFR), pump room ventilation on a U.S. flag tanker may be accomplished by:	steam or air actuated gas ejectors	natural ventilators	all of the above	power blowers
1935	As per the ISM Code, in matters of safety and pollution prevention, the commitment, competence, attitudes and motivation should be the main concern of _____	top management	designated person ashore	management level officers	individuals at all levels
1936	As provided in the 73/78 MARPOL conventions, what do you call the tank constructed adjacent to the shell plating of tanker vessels?	Wing tank	Deep tank	Slop tank	Sludge tank
1937	As stipulated in the Coast Guard Regulations (46 CFR), which of the following statements is correct regarding the steering apparatus requirements for a vessel	On hydraulic type steering gears, a suitable arrangement of check valves in the main piping system may be	All of the above.	A separate auxiliary means of steering is not required where the main gear is of the dual power hydraulic	Hydraulic structural rudder stops are mandatory.

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	over 250 feet in length?	considered as a means of steadying the rudder.		type, having two independent pumps and connections.	
1938	Carrying out of boiler inspection for Philippine flag vessel is done by _____.	Bureau of Customs	Marina	P.C.G	Class surveyors
1939	Coast Guard Regulations 46 CFR, stipulate that in addition to emergency signals, muster lists must specify:	the duties assigned to different members of the crew	all of the above	the order to abandon the vessel	actions to be taken by persons on board when each signal is sounded
1940	During remuneration among ship owner, master and the salvaging vessel, what law to be followed?	Law of masters nationality	Law of ship owner	Law of savaging vessel	Law of ships registry
1941	For each passenger vessel, according to 46 CFRs Part 199, normally operating above 32 degrees north latitude, the minimum number of immersion suits to be carried for each lifeboat is at least.	3	2	1	4
1942	How many miles is the economic zone of a coastal state?	300	200	100	150
1943	How many nautical miles is the breadth of territorial sea of coastal state?	24	50	100	12
1944	A fire station located in the engine room, is required by regulations to have _____.	lined or unlined hose, depending upon its location	a spanner wrench suitable for the size of hose at that station	all of the above	a 6 foot or 10 foot low velocity fog applicator
1945	A firemans outfit carried onboard cargo vessels, must have a _____.	self-contained breathing apparatus	canister-type gas mask	fresh-air breathing apparatus	combustible gas indicator
1946	A fully charged standard SCBA can be expected to supply air under non-stressful conditions for approximately _____.	15 minutes	30 minutes	60 minutes	45 minutes
1947	A handle used in hinged watertight doors to force the door frame agains its gasket:	Doney	Flax	Capstan	Dog
1948	A ketch is a sailing vessel with _____	two masts: with the mizzen stepped abaft	one mast	two masts: with the mizzen stepped forward	two mast: a foremast and a mainmast

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		the rudder post		of the rudder post	
1949	A legislative body that proposes conventions in the sphere of maritime labor law that gained wide international approval	United nation organization	International labor organization	European economic community	International shipping association
1950	A life line must be connected to the liferaft _____.	all around	at the bow	at the stern	in the middle
1951	A life raft which has inflated bottom-up on the water _____.	will right itself when the canopy tube inflate	should be righted by standing on the carbon dioxide cylinder, holding the righting straps and leaning backwards	should be righted by standing on the lifeline, holding the righting straps and leaning backwards	must be cleared of the buoyant equipment before it will right itself
1952	A life raft with a capacity of 8 people in ocean service is required by regulation to carry _____.	8 liters of fresh water	24 units of provisions	12 liters of fresh water	12 units of provisions
1953	A lifeboat is designed to carry a maximum of thirty person. A per Solas requirements, how many Thermal Protective Aids must be provided onboard?	Two	Three	Six	Four
1954	A lower edge of a propeller blade when the blade is in a horizontal position and moving downward	leading edge	tip edge	trailing edge	root edge
1955	A pilot ladder shall, to prevent twisting, be fitted with battens. The lowest batten shall be the 5th step from the lower end of the pilot ladder. At what intervals should there be further battens upwards on the pilot ladder?	At intervals not exceeding 15 steps.	It does not matter where the battens are fitted.	At intervals not exceeding 9 steps.	At intervals not exceeding 12 steps.
1956	A saltwater leak shorts out your switchboard causing a fire which does $(USA)27,500 damage to the electrical equipment. This must be reported to	port engineer	insurance underwriter	harbormaster	U.S. Coast Guard

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	the _____.				
1957	A ship other than those which navigate exclusively in areas whose port regulation apply as define under Article II of STCW is known as:	domestic	Seagoing	Overseas	off-shore
1958	A standard procedure for the emergency disinfection of water in a potable water tank is to add a small amount of standard laundry liquid chlorine bleach to the water tank. Approximately how much bleach would be considered appropriate to add to a tank con	one pint	one quart	one gallon	two gallons
1959	A tank has been sealed and unventilated for a long period of time. Which of the following statements is true?	Carbon monoxide is present.	Water vapor present when the tank was sealed has oxidized.	The tank is safe to enter.	The tank is especially dangerous to enter.
1960	A tank or compartment is gas free when there is an absence of dangerous concentrations of _____.	any combustible liquid	residues from cargo oil	flammable or toxic gases	all flammable liquids
1961	A tank or compartment is considered gas free when it is free of dangerous concentrations of _____.	any combustible liquid	all flammable liquids	all cargo oil	flammable or toxic gases
1962	A termed referred to a space which have booked but not used. No common law or lien for it can arise:	Gross freight	Dead freight	Tonnage freight	Neat freight
1963	A useful means of moving a casualty if a ladder or stairway has to be climbed is:	Firemans lift	Neil Robertson stretcher	Drag lift	Three-handed seat
1964	A vessel defined under Article II of the STCW 95 Convention, that catches living resources is called;	off-shore	cargo	fishing	seagoing
1965	A vessel has eight B-II CO2 fire extinguishers. How many spare charges must the vessel carry?	4	2	1	0
1966	A vessel has eight B-II CO2	0	1	2	4

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	fire extinguishers. How many spare extinguishers must the vessel carry?				
1967	A vessel has eight B-II CO2 fire extinguishers. How many spare units must the vessel carry?	8	4	2	1
1968	AMVER is a system which provides _____.	position reporting service	satellite communications	navigational information	weather information
1969	IMO was established to adopt legislation while the signatory governments are responsible for its _____.	seafarers deployment	training	implementation	deregulation
1970	In accordance to 46 CFR, a cargo hatch fluid-power operating system is considered to be fail-safe if a component failure will result in:	a safety interlock producing a regulated shutdown of the system	the guaranteed safe and efficient operation of the system at all times	a slow and controlled release of the loading so as not to endanger personnel	continuous operation of the system
1971	In accordance to Coast Guard Regulations (46 CFR), on a freight vessel, each fire pump must be capable of supplying the two highest outlets simultaneously, at a Pitot tube pressure of:	the pump relief valve setting	75 psi	125 psi	50 psi
1972	In accordance with Coast Guard Regulations (33 CFR), each pressure gage used in fuel transfer operations must be calibrated to indicate pressure within what percent of the actual pressure?	5%	10%	3%	7%
1973	In accordance with Coast Guard Regulations (46 CFR), what quantity of B-II extinguishers would be required in an oil fired boiler space on a 25,000 gross ton cargo vessel in which no sand, soda impregnated sawdust, or other approved dry materials are provided?	2	1	3	4
1974	In reference to the Coast Guard Pollution Prevention Regulations	each part of the transfer system not necessary	all of the above	each scupper or drain in a discharge	the discharge containment is in place

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	(33 CFR), no person may transfer oil to or from a vessel unless:	for the transfer operation is securely blanked or shut off		containment system is closed	
1975	Is the service of pilot necessary for docking and undocking of vessels within Phils. Ports?	Required	Not required	It depends to the master	Mandatory and required
1976	It is the UN Convention that govern the basic principle of vessel nationality and is called _____.	1986 UN Convention on registration of ship	1973 MARPOL Convention	1978 STCW Convention	1958 Convention of the high seas
1977	QMS requires that the documents should be _____.	printed	accessible	read	controlled
1978	Responsible to ensure that all records required by regulations are retained onboard a vessel involved in casualty is the:	Officer - in - charge, Marine Inspection	Fire man	Owner	Engineer
1979	Safety Construction Certificates, Safety Equipment Certificates, Safety Radio Telegraphy Certificates, International Loadline Certificates are statutory certificates issued to vessel under which convention?	1966 Loadline Convention	1974 SOLAS Convention	1978 MARPOL Convention	1972 COLREG Convention
1980	Special machinery surveys must be carried out at prescribed intervals of _____ years.	6 years	2.5 years	5 years	1 year
1981	The certificate which has the shortest validity is the _____.	derrating	radiotelegraphy	radiotelephony	inoculation
1982	The construction of vessel made of steel should have a grade in accordance with the _____.	rules of S.M.E. code	grade steel certificate	rules of the classification society	rules of the shipyard
1983	The construction of vessel of hull made of steel should have a grade in accordance with the _____.	Rules of S.M.E.C.	Rules of the classification society	Rules of shipyard	Grade steel certificate
1984	The documents containing particulars relating to the terms of agreement between the master of the	Notice of Readiness	Assignment Clause	Contract of Affreightment	Shipping Articles

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	vessel and the crew are called _____.				
1985	The Exclusive Economic Zone extends from the baseline of territorial sea of the United States seaward.	100 miles	200 miles	53 miles	300 miles
1986	The Federal Water Pollution Control Act requires the person in charge of a vessel to immediately notify the Coast Guard as soon as he/she knows of any oil discharge. Failure to notify the Coast Guard can lead to a monetary and imprisonment up to:	5 years	3 years	2 years	1 year
1987	The International Convention that gave immunity to hospital ships in time of war, and formulates rules the settlement of international disputes is the _____..	Mariners Convention	SOLAS Convention	Hague Convention	MARPOL Convention
1988	The International Loadline Certificate shall be issued to _____.	vessel built by an accredited shipyard	vessel surveyed and covered by convention	only ships registered in the Philippines	vessel whose country is a signatory to the convention
1989	The location used for loading or anchoring situated partly of territorial sea of a coastal state is called its _____.	roadstead	breakwater	economic	anchorage area
1990	The most important of all UN treaties dealing maritime safety is the _____.	IMCO	GMDSS	SOLAS	IMO
1991	Any act or activity undertaken to assist a vessel or any other property in danger in any navigable water is considered as_____.	Distress Assistance	Salvage Operations	Rescue Operations	Emergency Assistance
1992	As provided under Article II, Section 2, Part II on the Convention of the Law of the Sea, what is considered NOT an	Container Terminal	ports	off-shore platform	quays

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	integral part of the harbor system?				
1993	Authorize to cancel load line certificate o vessel	none	ship chartere	port state control	ship administration
1994	During a stay in port, what shall always be ready at the gangway?	Life buoy with line.	Air breathing apparatus.		Survival suit.
1995	For how long is the health certificate valid for a seafarer in foreign trade?	Three months.	Two years.	No time limit.	One year.
1996	For how long should a tank be ventilated when people are working inside?	For as long as it is deemed necessary by the chief officer.	For as long as people are working in the tank.	Until the tank is gas free.	For at least 60 minutes.
1997	For the protection of personnel, moving parts of rotating machinery are required to be fitted with _____.	reflective tape	bright lights	audible alarms	cover guards
1998	For the purpose of training and drills, rescue boats on an OSV should be launched if reasonable and practicable _____.	once a year	twice a year	once a month	once a week
1999	For the safety of personnel working with fire hoses, fire pumps are fitted with a/an _____.	air priming valve on the impeller housing	automatic suction valve shut off	butterfly valve on the discharge side	pressure gage and relief valve on the discharge side
2000	Free of turn in chartering means	Steamers time will commence to occur for loading or dischargine from her arrival	Time to refuse cargoes	Time to accept cargoes	Time for discharging of her cargo
2001	GMDSS regulations require that vessels carry two-way VHF for survival craft. How many are required, and when do the regulations apply?	One per lifeboat and one spare from August 1993	3 sets. New-builds from February 1992, other vessels from February 1995	3 sets. All vessels from August 1993	None at present. 3 sets on all ships from August 1995
2002	Good training schemes and certification of competency requires a close cooperation between companies, national administration and _. I. Ship operating countries; II. Port state companies; III. Manning companies	Both I and II	III only	I only	Both I and III

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2003	High concentrations of hydrogen sulfide gas are most dangerous to personnel because they can _____.	cause involuntary skeletal muscle contractions	cause eye inflammation	paralyze your breathing system	cause dizziness
2004	Highly toxic concentrations of hydrogen sulfide gas are most likely to be found in which of the locations listed?	Sewage compartment bilges where leaked sewage has accumulated.	Fire room bilges where hydrazine has accumulated.	Emergency battery storage compartment where discharge gases have accumulated.	Engine room bilges where chemical cleaners and solvents have accumulated.
2005	How is loss of electric power or other fault conditions of fire-detection and fire-alarm systems to be indicated? (SOLAS II-2/13.1.2)	By semi-automatic test systems at the control panel	By check systems on the control panel	By fully automatic separate test boards where any faulty condition is initiated by audible and visual signals	By audible and visual signals at the control panel
2006	How is the activation of any detector or manually operated call point of fixed fire- detection and fire-alarm systems to be indicated? (SOLAS II-2/13.1.4)	By all the indication methods listed	By visual and audible signal at the control panel and indicating units	By sounding the ships fire alarm signal in crew accommodation and service spaces	By alarm signals at the bridge and engine room control panels
2007	How many degrees are there on a compass card?	380?	390?	360?	420?
2008	If personnel are required to enter a cargo tank that has not been certified as gas free, _____.	self-contained breathing apparatus should always be used	breathing apparatus would not be necessary, if expected to be in the tank for only a short period of time	entry without a breathing apparatus may be made at the top of the tank, since petroleum vapors are heavier than air	a person may work safely without breathing apparatus in cold weather, since the vapors are less volatile
2009	If the chemical material is a mixture, what must the Material Safety Data Sheet (MSDS) identify?	None of the above.	Other similar mixtures of liquids, solids or gases.	Paints or coatings that are safe to use with it.	The name of each hazardous ingredient.
2010	In port, after chemically cleaning a fuel oil tank, you should dispose of the waste oil by _____.	circulating it through an oil and water separator	pumping it into the sewer connection	discharging it into a slop barge or holding tank	centrifuging and reclaiming it
2011	In the event of a casualty to a VESSEL, who is responsible to make records available to the Coast Guard official authorized to investigate the casualty?	The owner	Officer-in-Charge, Marine Inspection	The person who caused the casualty	The company man

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2012	In what language/languages shall the fire control plans/folders (or copies of plans and folders) be? (SOLAS II-2/20.1)	The Flag State language	The Flag State language with copies in English or French	The English language	The Flag State language with copies in English
2013	Load line regulations are designed to insure that a VESSEL has adequate structural strength and sufficient _____.	lifesaving equipment	mooring tension	stability	riser tension
2014	Loadline is assigned to a vessel to insure adequate stability and _.	structural strength	riser tension	lifesaving equipment	none of the above
2015	Loadline markings indicate the drafts at which, for various conditions and types or classes of vessels, there will still be left a sufficient percentage of _____ to ensure the vessels saftey:	reserve buoyancy	longitudal stability	transverse stability	intact buoyancy
2016	The maximum number of personnel allowed on a personnel transfer basket is _____.	3	5	4	2
2017	There is a fire aft aboard your vessel. To help fight the fire, you should put the _____.	wind off either beam	Stern into the wind and decrease speed	Stern into the wind and increase speed	Bow into the wind and decrease speed
2018	Fire hose stations shall be marked in red letters and figures such as Fire Station No. "1", "2", "3", etc. The height of the letters and figures must be at least _____.	2 inches	1 inch	1/2 inch	1-1/2 inches
2019	One of the requirements for an oil tanker operating with Dedicated Clean Ballast shall be that it is equipped with_____.	Segregated Ballast Tanks and PL	Two separate slop tanks	An oil content meter	A COW system
2020	The primary concern in aiding a back injury patient is _____.	c. preventing convulsions and muscle spasms caused by the pain	Avoiding possible injury to the spinal cord by incorrect handling	a. relieving the patient's pain by giving aspirin or stronger medication	d. providing enough fluids to prevent dehydration
2021	To treat a person suffering from heat exhaustion, you should _____.	Give him sips of cool water	Administer artificial respiration	Put him in a tub of ice water	Cover him with a light cloth

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2022	When administering first aid you should avoid _____.	Instructing bystanders	Unnecessary haste and appearance of uncertainty	Any conversation with the patient	Touching the patient before washing your hands
2023	When instructing a crew member concerning the right way to lift a weight, you would instruct him to _____.	. bend his back and stoop with arms straight	bend his back and stoop	arch the back to add strength to the muscles	bend his knees and lift with his legs
2024	How does low expansion foam act as an extinguishing agent when dealing with oil fires?	The heat from the fire causes the foam to produce an inert gas which gradually extinguishes the fire.	By smothering only	By smothering and also providing some cooling	By cooling only
2025	Which activity will have the greatest fire-fighting effect in case of a fire?	All fire-fighting teams are organized as soon as possible	Extinguishing attempt is started immediately	Call the Chief Officer	All possible fire-fighting equipment is brought to the scene
2026	Which of the following is false why there may not be enough oxygen in an enclosed space or tank?	Enclosed space has no proper circulation of air.	Tank may have been coated with preservatives.	Cargo inside may have absorb the oxygen.	Oxygen is depleted as oxidation may have taken place.
2027	When bunkering is complete, the hoses should be _____.	stowed vertically and allowed to drain	drained, blanked off, and stored securely	cleaned internally with a degreaser	washed out with hot soapy water
2028	If you observe any situation which presents a safety or pollution hazard during fuel transfer operations which action should you take first ?	Notify the person in charge of the shore facility.	Close the valves at the manifold.	Sound the general alarm.	Shut down the operation.
2029	If you have a fire in the engine room, your first act should be to _____.	have all of your crew get into the liferaft	secure the fuel supply and ventilation to the engine room.	maneuver your vessel into the wind	discharge the fixed CO2 system into the engine room
2030	Small oil spills on deck can be kept from going overboard by _____:	closing the lids on the vents	plugging the sounding pipes	driving wooden plugs into the vents	plugging the scuppers
2031	Which extinguishing agent is the best for use on electrical fires?	CO2	Dry chemical	Foam	Water fog
2032	When oil is discharged overboard, an entry is required in the _____.	deck rough log	Official Logbook	Oil Record Book	engine rough log

OIC ENGINE WATCH

2033	Injuries resulting from slips and falls constitute the largest percentage of accidents that occur in the catering department. What shall be done to reduce this high accident rate?	Do not wash off all rubbish to prevent persons slipping.	Install thermostat to avoid water from freezing to ice.	Keep the floors and decks free from fat and grease.	Ensure that slippery substances are not left where several persons are expected to be around.
2034	If heavy smoke is coming from the paint locker, the FIRST firefighting response should be to _____.	Release the CO2 flooding system	Enter and use a portable extinguisher	Open the door to evaluate the extent of the fire	Secure the ventilation
2035	The spread of fire is prevented by _____.	All of the above	removing combustibles from the endangered area	increasing the oxygen supply	heating surfaces adjacent to the fire
2036	The spread of fire is prevented by _____.	All of the above	increasing the oxygen supply	removing combustibles from the endangered area	heating surfaces adjacent to the fire
2037	Control of fire should be addressed _____.	immediately after restoring vital services	following establishment of fire boundaries	following control of flooding	immediately
2038	After an engine is started you should _____.	run the engine at idle until the temperature has increased	check operating pressures and temperatures, and check for leaks	. pay no attention unless there are unusual noises from the engine	increase engine speed to insure adequate flow of oil to all parts of the engine
2039	In order to discharge a CO2 portable fire extinguisher, the operator must FIRST _____.	remove the locking pin	invert the CO2 extinguisher	squeeze the two trigger handles together	open the discharge valve
2040	One of the limitations of foam as an extinguishing agent is that foam_____.	cannot be made with salt water	is corrosive and a hazard to fire fighters	is heavier than oil and sinks below its surface	conducts electricity
2041	Which statement is TRUE of a gasoline spill?	It will sink more rapidly than crude oil.	It is visible for a shorter time than a fuel oil spill.	It is not covered by the pollution laws.	It does little harm to marine life.
2042	Which statement is FALSE regarding Halon as a fire extinguishing agent?	It leaves no residue.	It is more effective than CO2.	It is noncorrosive.	It is always non-toxic.
2043	Fire in an engine compartment is best extinguished with carbon dioxide gas (CO2) and by _____.	completely closing the compartment	leaving the compartment open to the air	closing the compartment except for the ventilators	increasing the air flow to the compartment by blowers

2044	Each fireman's outfit and its spare equipment on a tankship must be stowed in a(n) _____.	unlocked cabinet in the machinery space	. location near a fire hydrant	locked cabinet in the machinery space	separate and accessible location
2045	Before CPR is started, you should _____.	Insure the victim is conscious	establish an open airway	treat any bleeding wounds	make the victim comfortable
2046	A patient in shock should NOT be placed in which position?	Flat on their back with head and feet at the same level	On their side if unconscious	Head down and feet up, no injuries to face or head	Arms above their head
2047	The number and type of hand portable fire extinguishers required outside and in the vicinity of the paint locker exit is _____.	one B-II	one A-I	two A-IIs	one C-II
2048	Oil discharge in large quantities form _____ which will affect birds at sea and may strand on beaches if these do not disperse into the water as water droplets before reaching shore:	emulsions	spills	slicks	patches
2049	What is a contingency plan for ships?	Plan for maintenance and repair	Plan for safety preparedness	Loading plan for general cargo	Plan for next voyage
2050	A precaution you should take before bunkering is to _____	plug the vents	plug the sounding pipes	plug the scuppers	close the lids on the vents
2051	The scuppers had been plugged as required at the time an oil spill occurs on deck. After shutting down the transfer, the engineroom should first be informed and then _____.	spread an absorbent material, such as sawdust	rig a fire hose and call for water on deck	remove the plugs from the scuppers	sound the general alarm
2052	Before using a fixed CO2 system to fight an engine room fire, you must _____.	secure the work	secure the tools	secure fuel oil supply	evacuate all engine room personnel
2053	Fire and abandon ship stations and duties may be found in the _____.	Certificate of Inspection	crewman's duty list	muster List	shipping articles
2054	Fire hose couplings _____.	should be painted red in order to identify hose lengths	should be greased frequently	are made of bronze, brass, or soft alloy metals	are specially hardened to prevent crushing
2055	To prevent the spread of fire by convection you	close all openings to the	shut off all electrical power	remove combustibles	cool the bulkhead

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	should _____.	area		from direct exposure	around the fire
2056	Which fire-fighting equipment is most efficient and with least side effects in case of a large fire in the engine room?	Powder extinguishing system	Central gas extinguishing system and/or water fog.	Central foam extinguishing system	Sprinkler system
2057	To ensure the early and efficient collection and exchange of security-related information is one of the objectives of_____.	Code of Safe Practice for the Handling of Cargo	FTP Code	ISPS Code	STCW Code
2058	Since electrical burn victims may be in shock, the FIRST medical response is to check for _____.	Bleeding injuries	Indication of broken bones	Symptoms of concussion	Breathing and heartbeat
2059	Each hand portable fire extinguisher must be marked with _____.	an identification number	the name of the vessel on which it is located	the date that it was installed	. the names of the individuals qualified to use it
2060	Each hand portable fire extinguisher must be marked with _____.	the name of the vessel on which it is located	an identification number	the date that it was installed	. the names of the individuals qualified to use it
2061	You are fighting a fire in the electrical switchboard in the engine room. You should secure the power, then _____.	use a portable foam extinguisher	use a portable CO2 extinguisher	determine the cause of the fire	use a low-velocity fog adapter with the fire hose
2062	When two fire hose teams are attacking a fire they should _____.	not attack the fire from opposite sides	not wear protective clothing	use fire hoses of different sizes	use different fire hose pressures
2063	What equipment must be on a life float? (small passenger vessel regulations)	Two paddles, painter, and six red flares	Water-light and painter only	Water-light, painter, and signal mirror	Two paddles, a light, painter, lifeline and pendants
2064	What is the most important consideration when determining how to fight an electrical fire?	The amount of toxic fumes created by the extinguisher	Maintaining electrical power	Whether the fire is in machinery or passenger spaces	Danger of shock to personnel
2065	The inspection of portable fire extinguishers on a vessel must be _____.	completed every six months	all of the above	recorded by the person-in-charge	accomplished by an authorized servicing representative
2066	An immersion suit should be equipped with a/an _____.	whistle and handheld flare	whistle, handheld flare, and sea dye marker	air bottle for breathing	whistle, strobe light, and reflective tape

2067	Which of the following statements concerning immersion suits is correct?	The suits provide for limited body movement such as walking, climbing a ladder, and picking up small objects like a pencil.	All models will automatically turn an unconscious person faceup in the water.	The immersion suit seals in all body heat and provides protection against hypothermia for weeks.	The suit is flameproof and provides protection to the wearer while swimming through burning oil.
2068	The external floatation bladder on an immersion suit should be inflated _____.	after you enter the water	before you enter the water	after one hour in the water	after you notice that your suit is losing buoyancy
2069	Which of the following statements is TRUE concerning lifejackets?	Kapok lifejackets must have plastic-covered pad inserts.	Buoyant vests may be substituted for lifejackets.	Lifejackets must always be worn with the same side facing outwards.	Lifejackets are not designed to turn a persons face clear of the water when unconscious.
2070	At the required fire drill conducted aboard a MODU, all persons must report to their stations and demonstrate their ability to perform the duties assigned to them _____.	by the tool pusher	at the previous safety meeting	by the person conducting the drill	in the station bill
2071	Topping lifts and runners supporting flexible cargo hoses should be made fast to the _____.	manifold riser	capstan	cleats	gypsy head
2072	Which of the following conditions can contribute to accidents?	Inspections	Good housekeeping	Unsafe conditions	Intelligent work habits
2073	To determine the number of portable fire extinguishers required on a mobile offshore drilling unit, you should check the _____.	Safety of Life at Sea Certificate	Certificate of Inspection	hot work permit	operations manual
2074	Kapok lifejackets require proper care and should NOT be _____. I. stowed near open flame or where smoking is permitted II. Used as seats, pillows, or foot rests III. Left on open decks	I & II	I only	II & III	I, II & III
2075	Which of the following statements concerning immersion suits is correct?	Small leaks or tears may be repaired using	During the annual maintenance,	Immersion suits should be worn during routine	After purchasing, the suit should be

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		the repair kit packed with thesuit.	the front zipper should be lubricated with paraffin or beeswax.	work on deck to provide maximum protection.	removed from its storage bag and hung on a hanger where it will be readily accessible.
2076	Which of the following statements concerning immersion suits is correct?	After purchasing, the suit should be stowed in the storage bag in which it was received.	During the annual maintenance, the front zipper should be lubricated using light machine oil or mineral oil.	Any tear or leak will render the suit unserviceable and it must be replaced.	Immersion suits should be worn while performing routine work on deck.
2077	The station bill shows each crew lifeboat station, their duties during abandonment, basic instructions, and _____.	instructions for lowering the survival capsule	the time each weekly drill will be held	all emergency signals	work schedule
2078	How is the external flotation bladder of an immersion suit inflated?	It inflates by sea water bleeding into the flotation bladder and reacting with a chemical	It is inflated by a small CO2 bottle that is automatically tripped when the front zipper is at the top of zipper track.	It is inflated by a small CO2 bottle that is manually tripped.	It is inflated by blowing through an inflation tube.
2079	The knife edges and gaskets of watertight doors should be _____.	painted to prevent weathering	clean and uncoated	coated with petroleum jelly	lightly coated with tallow
2080	Which of the following statements describes the correct procedure for closing a watertight door?	Loosely set up one dog on the opposite side from the hinges, snugly set up two dogs on the hinge side, then evenly set up all the remaining dogs.	Snugly set up two dogs on the opposite side from the hinges, then evenly set up all the remaining dogs.	Loosely set up one dog on the hinge side, snugly set up two dogs on the opposite side from the hinges, then evenly set up all the remaining dogs.	Loosely set up two dogs adjacent to the hinges, snugly set up one dog on the opposite side from the hinges, then evenly set up all the remaining dogs.
2081	Any abnormal condition or emergency occurring in the fire room must be immediately reported to the _____.	first assistant engineer	oiler on watch	engineer on watch	U.S. Coast Guard
2082	Each emergency generator on a mobile offshore drilling unit, when tested, must be run under a full	four hours	two hours	ten hours	one hour

	load for at least _____.				
2083	You are testing the external inflation bladder on an immersion suit and find it has a very slow leak. Which of the actions listed should be taken?	Replace the suit.	Replace the inflation bladder.	Contact the manufacturer for repair instruction.	Some leakage should be expected and a topping off tube is provided; no other action is necessary.
2084	You are testing the external inflation bladder on an immersion suit and find it has a very slow leak. Which of the actions listed should be taken?	Contact the manufacturer for repair instruction.	Replace the suit.	Replace the inflation bladder.	Some leakage should be expected and a topping off tube is provided; no other action is necessary.
2085	Where would you find a list of the lifesaving equipment onboard your supply boat?	U. S. Coast Guard Regulations	Certificate of Inspection	Ships articles	Station bill
2086	Personnel who are moving or handling material aboard ship should NOT follow which of the listed practices?	Closing, tagging, or securing valves that permit entrance of steam, water, or air into a fitting or other equipment.	Signaling that all personnel are clear before lifting or lowering material.	Examining material for sharp edges or protruding points before handling.	Throwing materials form high places to the deck.
2087	If you have to jump into the water when abandoning a MODU, your legs should be _____.	extended straight down and crossed at the ankles	spread apart as far as possible	held as tightly against your chest as possible	in a kneeling position
2088	Lifejackets should be stowed in _____.	the forepeaks	the pumproom	readily accessible spaces	locked watertight containers
2089	During a fire drill on a vessel, which of the following actions is required to be carried out?	An inspection and inventory of fire hoses is to be made.	Each fire pump is to be started.	The lifeboat is to be launched and operated.	An inventory of rescue and fire equipment is to be taken.
2090	While on watch aboard a 900 psi steam vessel, you suddenly hear a loud, piercing, high-pitch noise. Which of the following actions should you take?,Move away from the noise to find a broom	then cautiously advance	sweeping the handle ahead of you to locate the source.	Vacate everyone from the engine room immediately, as this the preliminary signal that the steam smothering system is about to be released.	Rapidly move towards the direction of the noise to investigate the probable source.

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2091	The Safety Management Certificate should be issued to a ship for a period of how many years?	2 years	5 years	1 year	4 years
2092	Which one is NOT correct if you are asked by to differentiate a leader and a manager?	A leader is focused on purposes but a manager is focused with structures and processes.	A leader does the right thing and a manager does each task the right way.	A leader has a short term view while a manager views work in long term duration	A leader is focused on purposes but a manager is focused with structures and processes.
2093	Which of the following behaviours best describes charismatic leadership style?	Possesses inspirational quality that makes followers gets attracted of him and regards him with reverence	Matches his leadership style to the situation at hand	Acts as he does because he expects that his behavior will yield positive results	Uses visioning as the core of his leadership
2094	Which of these would be the best thing to do if you know that one of the staff is experiencing burnout?	Advise the staff to go on vacation	Let the staff ventilate the feelings and ask how staff can be of help	Ignore observation it will be resolve without intervention	Remind to show loyalty to the company
2095	The assessment of a trainee s practical demonstration of skills should be conducted_____.	at any time of the day particularly outside normal operations	within the last six hours that the trainee will be on board the vessel	only when the trainee first arrives on board and preferably within the first few days	within the normal routine of vessel s operation
2096	Which type of conflict management technique is described as cooperating and that one side gives in to the other?	Avoiding	Accommodating	Competing	Compromising
2097	When maintenance is undertaken at sea the engine personnel shall take precaution to_____.	sudden roll of the ship	ballast the tanks	fill fuel service tank	empty the bilges
2098	In a tank or compartment that is not gas free the only portable electric equipment permitted is a lamp that is_____.	battery operated	self-contained	seal type	approved explosion proof
2099	When an operator is working on an engine lathe his sleeve must be rolled up_____.	at elbow level	at the wrist	above the elbow	below the elbow
2100	When you are required to work on hazardous enviroment where	approved by responsible officer	brand new	approved by the owner	non-sparking

	explosive gases may be present you should use tools that are_____.				
2101	On board a vessel he is an officer who gives responsibilities to his followers gradually so that in the future they can stand on their own. Which leadership styles is he practicing?	By example	Dependable	Behavioural	Bureaucrat
2102	As a young Senior officer you know that conflict occurs in the engine department which of the following statements regarding conflict is NOT true?	May create leaders	Can be destructive if the level is too high	May result in poor performance	Is not beneficial hence it should be prevented at all times
2103	Which of the following represents the greatest threat to engine room personnel?	carbon monoxide	carbon dioxide	carbon tetrachloride	hydrogen sulfide
2104	What is the skill or ability of a manager to be self-control and regulation of own behaviour?	Cautiousness	Persistence	Fantasy	Discipline
2105	What is the skill or ability of a manager that tenacity needed to overcome barrier when achieving goals?	Fantasy	Persistence	Fantasy	Cautiousness
2106	What is the skill or ability of a manager that creation of visions and imaginations about future?	Fantasy	Persistence	Cautiousness	Discipline
2107	When asserting the importance of promoting a positive organizational culture in their departments. Which of the following behaviors indicate that this is attained by the group?	Obedient and uncomplaining	Proactive and caring with one another	Powerful and oppositional	Competitive and perfectionist
2108	What is the skill or ability of a manager to use specific methods and techniques in doing the managerial work?	Communication	Interpersonal	Technical	Conceptual
2109	Which type of leadership theories consider people inherit certain qualities	Trait theories	Behavioural theories	Contingency theories	Situational theories

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	that make them better suited to leadership?				
2110	Which of the following management styles have been adopted when a manager focuses energy on both the quality of services rendered as well as the welfare of the staff?	Country club management	Organization man management	Team management	Authority-obedience management
2111	Before doing any work on electrical or electronic equipment which of the following precautions should be carried out?	Secure and tag the supply circuit breaker in the open position	De-energize the applicable feeder bus	Disconnect electrical supply wires	Switch-off power supply at the distibution panel
2112	Company managers know that performance appraisal consists of all the following activities EXCEPT_____.	Setting specific standards and activities for individual performance.	Determine areas of strength and weaknesses	Using agency standards as a guide	Focusing activity on the correction of identified behavior
2113	Before disconnecting a joint in a pipeline you should_____.	hang a bucket below the joint	determine the size of the gasket	be sure no pressure exists on the line	have a first aid kit on hand
2114	What action is a priority when there is an increasing unrest of the staff due to fatigue brought about by shortage of staff?	Initiate a group interaction	Evaluate the overall result of the unrest	Identify external and internal forces	Develop a plan and implement it
2115	The device used for preventing the passage of flames into enclosed spaces is called a_____.	flame relief valve	safety valve	flame stopper	flame arrester
2116	The most important characteristic of a fire extinguishing agent to be used on electrical fires is for the agent to be_____.	wet	easily removable	nonconducting	flame resistant
2117	If accidents are considered as avoidable you will be able to avoid them by observing which of the following practices?	All of these choices	Follow instructions	Be aware and avoid unsafe practices	Follow maker s recommendatio ns
2118	Which of the following must be eliminated to prevent accidents?	Punctuality	Alertness	Unsafe practices	Frequent inspections
2119	One of the hazards associated with electric arc welding is _____.	all of these choices	electric shocks	flying sparks	the effects of radiation from the arc
2120	Where is the safest place to do hot work in the engine room?	Purifier room	Electrical shop	Work shop	Boiler room

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2121	When using electric arc equipment whenever it is necessary for additional leads to extend the range of operation only correct grade of cable shall be fitted with approved . - I. Weather proof connectors II. Fully insulated leads III. Cable wires	I II and III	III only	II only	I only
2122	During welding and similar operation the welder must wear protective clothing such as but not limited to - I. Welding apron II. Safety shoes III Safety helmets	II and IIII	I and II	I and III	I II and III
2123	Goggles and welding masks are worn to protect the welder from _____.	sparks	strong wind	sun rays	heat
2124	Considered to be gas free when fuel tank is _____.	thoroughly ventilated for at least 24 hours	free of all dangerous concentrations of flammable or toxic gases	inerted with carbon dioxide for 24 hours	free of most flammable gas concentrations
2125	To prevent accident habit that must be ELIMINATED is _____.	orderliness	good work practices	unsafe actions	none of the above
2126	Abandon ship and loss at sea, EPIRB can be used to _____	seal leaks in rubber rafts	hold the life boats head into the sea	send radio homing signals to searching aircraft	generate orange smoke
2127	What precautions should be taken if hot work is to carry out near a smoke detector in engine room	No special precautions except for having a watch man and a fire extinguisher available.	Notify Master, Deck officer and engineer in charge.The loop for this special sensor to be switched off and take normal precautions for hot work.	Disconnect the smoke detector.	Notify deck officer in charge that a fire alarm may occur.
2128	a continuous blast of the whistle for a period of not less than 10 seconds, followed by continuous ringing of the general alarm bells for not less than 10 seconds, you	fire station	man overboard station	boat station	collision station

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	should go to your _____.				
2129	Liferaft after inflated, if hear a sound of gas escaping , you should _____.	check the sea anchor line for a tear if the seas are rough	check the painter line attachment for a tear caused by the initial opening	not panic as the relief valves allow excess pressure to escape	quickly hunt for the hole before the raft deflates
2130	Alleyway filled with smoke, were will the cleanest air be found, and how should you proceed out?	Towards the upper part, stand as tall as possible and walk out.	Sit and wait for the rescue party.	It will be the same in all parts, therefore I would just leave as quickly as possible.	Near to the deck, crawl out keeping your face as near to the deck as possible.
2131	Helmsman in heavy seas should steer the survival craft _____.	in a series of figure-eights	in the same direction as the seas	broadside to the seas	into the seas
2132	Which of the following situations on lifeboat a visual distress signals is acceptable for daylight use only?	Orange smoke signal	Red aerial pyrotechnic flare	Self-contained rocket propelled parachute red flare	Handheld red flare
2133	Fire hoses maintenance, hoses should_____.	none of the above	keep exterior linings damp by periodic wash downs	keep them partially filled with fresh water	keep them thoroughly drained after each use
2134	Involving multiple injuries, the rescuer must be able to manage the situation _____.	provide the necessary medication	prescribe treatment for the victim	rapidly evaluate the seriousness of obvious injuries	accurately diagnose the ailment or injury
2135	What would be the best method to prevent deterioration in moving machinery and on wire rope	To wash pains	To was pains and parts	To clean with water everyday	Greased are used
2136	Assigned lifeboat in order to find out, you should look at the _____.	certificate of inspection	muster list or station bill	ships articles	fire control plan
2137	testing of lifeboat davit limit switches on a regular basis is important to prevent _____.	the possibility of the davit wires parting when the lifeboat is being retrieved and stowed in its davit	damage to the winch motor	damage to the releasing gear	the lifeboat from being lowered at an unsafe speed
2138	Aboard a ship, personnel who are moving or handling material should NOT follow which of the listed practices?	Closing, tagging, or securing valves that permit entrance of steam, water, or air into a fitting or other	Signaling that all personnel are clear before lifting or lowering material.	Throwing materials from high places to the deck.	Examining material for sharp edges or protruding points before handling.

		equipment.			
2139	Signal for abandon ship is _____.	more than 6 short blasts and 1 long blast of the ships whistle and the same on the general alarm bells	a continuous ringing of the general alarm bells for at least 10 seconds	a continuous sounding of the ships whistle	A continuous ringing of the general alarm, and sounding of the ships whistle
2140	The deck scuppers should be plugged _____.	only if portable containment is not used	whenever the vessel is being fueled	only if fixed containment drains are open	only if fixed containment is not used
2141	When ballasting through the cargo piping system oil can prevent escaping into the sea, you should FIRST _____.	open sluice valves, then start the cargo pump	open block valves, then start the cargo pump	start the cargo pump, then open sea suction valves	open sea suction valves, then start the cargo pump
2142	When working on deck and in the engine room what kind of foot wear should be used	Sandals or plimsolls	Tennis shoes	Safety shoes or safety boots	Rubber boots
2143	With regards to the metacentric height, which of the following statements is true?	It is used to indicate the quality of initial stability.	It is located below the center of buoyancy.	It is measured vertically above the center of buoyancy.	Its determination is the objective of the inclining experiment.
2144	If air supply is on, survival craft inside air pressure will be _____?	less than outside air pressure	changing in relation to the speed of the craft	greater than outside air pressure	equal to outside air pressure
2145	When you are at sea in an inflatable liferaft. In high latitudes, the greatest danger is _____.	asphyxiation due to keeping the canopy closed	hypothermia caused by cold temperature	starvation	collapse of the raft due to cold temperatures
2146	What information should be essential to a rescuers when you broadcasting a distress message while at sea in a survival craft.	The nature of the distress.	Your radio call sign.	Your position by latitude and longitude.	The time of day.
2147	You are proceeding of the area of reported distress. When you arrived at the reported position, the vessel in distress is not sighted. What type of search should be conducted?	sector search	track crawl	expanding square	initial search
2148	You are proceeding to a distress site and expect large numbers of people in the water. Which	An inflatable liferaft secured alongside can be an effective	You should stop to windward of the survivors in the water and	If the survivors are in inflatable rafts you should approach from	Survivors in the water should never be permitted

	statement is TRUE?	boarding station for transfer of survivors from the boats.	only use the ships boats to recover the survivors.	windward to create a lee for the survivors.	alongside due to the possibility of injury from the vessel.
2149	You are proceeding to a distress site where the survivors are in liferafts. Which action will assist in making your vessel more visible to the survivors?	Steering a zigzag course with 5 to 10 minutes on each leg	Dumping debris over the side to make a trail to your vessel	Steering a sinuous course	Making smoke in daylight
2150	On deck replacing a section of heavy piping using a chain fall to lift the pipe. What precautions should be taken to prevent personal injury?	Place an old mattress under the hoist to prevent the load from hitting the deck.	Attach lines to the ends of the pipe and have your helpers steady the load.	Position several men under the pipe so they can catch it if it falls.	Have a first aid kit at the job site.
2151	On board a vessel you have an assigned emergency stations can be found on the ships _____.	permit to proceed	certificate of inspection	Muster List (Station Bill)	clearance papers
2152	The ship is sinking rapidly. A container containing an inflatable liferaft has bobbed to the surface upon functioning of the hydrostatic release. Which action should you take?	Take no action because the painter will cause the liferaft to inflate and open the container.	Swim away from the container so you will not be in danger as it goes down.	Cut the painter so it will not pull the liferaft container down.	Manually open the container and inflate the liferaft with the hand pump.
2153	A small vessel is broken down and rolling in heavy seas. You can reduce the possibility of capsizing by _____.	moving all personnel aft	constantly shifting the rudder	moving all personnel forward and low	rigging a sea anchor
2154	Survival craft is rolling in heavy seas. You can reduce the possibility of capsizing by _____.	shifting the rudder constantly	moving all personnel forward and low	rigging a sea anchor	moving all personnel aft
2155	Vessel tank is fully loaded, and you find that she is down slightly by the head. To adjust the trim, you may _____.	add ballast aft	load more cargo aft	shift cargo aft	All of the above
2156	Main fire line system, quick cleaning strainers are located at the _____.	pump suctions	pump discharge	hose nozzle	fire hydrants
2157	Water should be given only to a personnel who are _____, during in the first 30 hours after abandoning a vessel	thirsty	sick or injured	awake	wet

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2158	It is important to test lifeboat davit limit switches on a regular basis to prevent _____.	the lifeboat from being lowered at an unsafe speed	the possibility of the davit wires parting when the lifeboat is being retrieved and stowed in its davit	damage to the releasing gear	damage to the winch motor
2159	If you have to abandon ship, the EPIRB can be used to _____.	generate orange smoke	hold the lifeboats head up into the seas	seal leaks in rubber rafts	send radio homing signals to searching aircraft
2160	If you are forced to abandon ship in a lifeboat, you should _____.	head for the nearest land	head for the closest sea-lanes	remain in the immediate vicinity	vote on what to do, so all hands will have a part in the decision
2161	Where does the fuel oil service pump be switched off, If there is a fire inside the engine room?	Accessible place outside the engine room	At the emergency generator room	Switch at the CO2 room	From the oxy/ace room
2162	Unsafe to enter If there has been a fire in a closed unventilated compartment because of _____.	excess nitrogen	a lack of oxygen	unburned carbon particles	excess hydrogen
2163	In the use of firemans outfit onboard a vessel how many people must be trained?	two people	three people	one person	four people
2164	Fire hose nozzle kept from fouling due to solid materials, why?	Using a Cadmium Chloride coating.	Periodic shutdown and backflush of fire main.	Replacement of valve seats at each fire main station.	Use of inline system strainers.
2165	It is a good safety practice, before the seas get rough_____.	increase all engine space lighting	move quickly about the ship	shutdown auxiliary equipment	make a visual inspection of all engine spaces and secure loose gear
2166	With regards to the metacentric height, which of the following statements is true?	It is located below the center of buoyancy.	It is used to indicate the quality of initial stability.	It is measured vertically above the center of buoyancy.	Its determination is the objective of the inclining experiment.
2167	With the air supply on, the air pressure in the survival craft will be _____.	changing in relation to the speed of the craft	equal to outside air pressure	greater than outside air pressure	less than outside air pressure
2168	When you are at sea in an inflatable liferaft. In high latitudes, the greatest danger is _____.	starvation	asphyxiation due to keeping the canopy closed	collapse of the raft due to cold temperatures	hypothermia caused by cold temperature
2169	What information should be essential to a rescuers	Your position by latitude and	Your radio call sign.	The nature of the distress.	The time of day.

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	when you broadcasting a distress message while at sea in a survival craft.	longitude.			
2170	You are proceeding of the area of reported distress. When you arrived at the reported position, the vessel in distress is not sighted. What type of search should be conducted?	sector search	initial search	expanding square	track crawl
2171	You are proceeding to a distress site and expect large numbers of people in the water. Which statement is TRUE?	You should stop to windward of the survivors in the water and only use the ships boats to recover the survivors.	Survivors in the water should never be permitted alongside due to the possibility of injury from the vessel.	An inflatable liferaft secured alongside can be an effective boarding station for transfer of survivors from the boats.	If the survivors are in inflatable rafts you should approach from windward to create a lee for the survivors.
2172	You are proceeding to a distress site where the survivors are in liferafts. Which action will assist in making your vessel more visible to the survivors?	Making smoke in daylight	Steering a zigzag course with 5 to 10 minutes on each leg	Dumping debris over the side to make a trail to your vessel	Steering a sinuous course
2173	On deck replacing a section of heavy piping using a chain fall to lift the pipe. What precautions should be taken to prevent personal injury?	Have a first aid kit at the job site.	Position several men under the pipe so they can catch it if it falls.	Place an old mattress under the hoist to prevent the load from hitting the deck.	Attach lines to the ends of the pipe and have your helpers steady the load.
2174	On board a vessel you have an assigned emergency stations can be found on the ships _____.	permit to proceed	certificate of inspection	Muster List (Station Bill)	clearance papers
2175	The ship is sinking rapidly. A container containing an inflatable liferaft has bobbed to the surface upon functioning of the hydrostatic release. Which action should you take?	Take no action because the painter will cause the liferaft to inflate and open the container.	Swim away from the container so you will not be in danger as it goes down.	Cut the painter so it will not pull the liferaft container down.	Manually open the container and inflate the liferaft with the hand pump.
2176	A small vessel is broken down and rolling in heavy seas. You can reduce the possibility of capsizing by _____.	moving all personnel forward and low	moving all personnel aft	rigging a sea anchor	constantly shifting the rudder
2177	Survival craft is rolling in heavy seas. You can reduce the possibility of	rigging a sea anchor	moving all personnel aft	moving all personnel forward and low	shifting the rudder constantly

	capsizing by _____.				
2178	Vessel tank is fully loaded, and you find that she is down slightly by the head. To adjust the trim, you may _____.	load more cargo aft	add ballast aft	All of the above	shift cargo aft
2179	Main fire line system, suction strainers are located at the _____.	pump discharge	hose nozzle	pump suctions	fire hydrants
2180	Water should be given only to a personnel who are _____, during in the first 30 hours after abandoning a vessel	thirsty	awake	wet	sick or injured
2181	In the fire main system, quick cleaning strainers are located at the _____.	fire hydrants	pump discharge	hose nozzle	pump suctions
2182	With no alternative but to jump from a vessel, the correct posture should include _____.	body straight and arms tightly at the sides for feet first entry into the water	holding down the lifejacket against the chest with one arm crossing the other, covering the mouth and nose with a hand, legs straight and feet together	knees bent and held close to the body with both arms around the legs	both hands holding the lifejacket below the chin with knees bent and legs crossed
2183	A machinery rotating parts should be protected by _____	vents	bright lights	guards	reflective tape
2184	Abandon ship, signal is _____.	a continuous sounding of the ships whistle	A continuous ringing of the general alarm, and sounding of the ships whistle	a continuous ringing of the general alarm bells for at least 10 seconds	more than 6 short blasts and 1 long blast of the ships whistle and the same on the general alarm bells
2185	Connecting and grounding or bonding cable, the correct method is to _____.	connect ground cable, connect cargo hose, open switch, and then close switch	close switch, connect cargo hose, open switch, and connect ground cable	open switch, connect ground cable, close switch, and connect cargo hose	connect ground cable, open switch, and connect cargo hose
2186	General house-keeping rules should be followed. The responsibility for safety and security rests	Always use gloves when using grinding machines.	Do not use loose garments, belts, ties or scarfs near winches	Always use gloves when handling nylon ropes.	Always use protective working shoes when working

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	with everybody on board the vessel. . Which of the listed rules is the most important?		and moving machinery.		outdoors.
2187	To avoid explosion caused by the discharge of static electricity the vessel should _____.	be electrically grounded to shore piping	have its electrical equipment insulated from its structure	have crew members use flashlights rather than AC lamps in vapor filled areas	have crew members use flame safety lamps during entry to areas that may contain explosive fumes
2188	You are to remove the locking pin of CO2 fire extinguisher squeeze grip handle and _____.	invert the extinguisher	rotate the cutter disc valve wheel	raise the lower grip	depress the upper grip
2189	Portable foam fire extinguisher, to operate you should	Open the handwheel	Pull the pin and squeeze the trigger	Puncture the CO2 cartridge	Turn it upside down & bump the deck
2190	A low velocity fog applicator, to prepare for use, _____.	insert the applicator in the solid stream outlet of the all-purpose nozzle and pull the handle back to the solid stream position	replace the high velocity tip with the fog applicator and pull the handle to the middle position	replace the high velocity tip with the applicator and pull the handle back all the way back	insert the applicator in the solid stream outlet of the all-purpose nozzle and pull the handle back half way
2191	The pump room is not certified gas free and repairs are to be carried out, to prevent an explotion the only type of portable electric equipment allowed in the pump room would be an approved _____.	explosion proof self-contained battery powered lamp	portable hand grinder	1/2 HP electric hand drill	marine drop lamp and extension cords
2192	What is the theoritical lift of a pump handling fresh water at atmospheric pressure?	1.02 m	10.35 m	101.35 m	14.7 m
2193	What equipment is required when processing bilge slops for overboard discharge?	Assembling the lube oil purifier as a separator and aligning it to the bilge overboard.	A magnetic duplex strainer.	15 PPM Oil Content Monitor of Oily Water Separator	A 100 PPM oily water separator.
2194	Tubing is sized by_____.	cross-section area	nominal outside diameter	allowed working pressure	nominal inside diameter

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2195	The ability of lubricating oil to resist viscosity changes during temperature changes is indicated by the_____.	Seconds Saybolt Furol number	Seconds Saybolt Universal number	American Petroleum Institute number	viscosity index number
2196	An emergency bilge suction is required for_____.	machinery space bilges	ballast tanks	sludge tanks	cargo hold bilges
2197	If one of the bilge system manifold valves does not properly seat, the_____.	all of the above	bilge well connected to that valve, plus the second bilge well being pumped will be completely emptied	bilge well aft connected to that valve will siphon its contents to the forward bilge wells	bilge system will lose vacuum and prevents the other bilges from being pumped out
2198	When securing a centrifugal type distillate pump, which of the listed steps should be carried out first?	Secure the stuffing box sealing water line.	Trip the three way dump valve.	Secure the casing vapor vent line.	Close the pressure gage isolation valves.
2199	Before doing any work on a hydraulic system equipped with accumulators, you should_____.	drain the accumulators and purge with oxygen	completely charge the accumulators to prevent system energy loss	bleed off all stored energy from the accumulators	pump the hydraulic fluid into the accumulators to prevent fluid loss
2200	Which of the following statements represents the proper relative direction of flow through a globe valve?	Direction of flow should be from above the seat.	Direction of flow should be from below the seat.	Direction of flow through the valve depends upon the type of seat design used in the valve.	Direction of flow through the valve is unimportant.
2201	In a two stage flash evaporator, heated feedwater is vaporized in the_____.	first and second stage flash chambers	distiller feedwater heater	first and second stage vapor separators	feed inlet box
2202	The purpose of an air compressor unloading device is to_____. .	drain water from the air receiver	drain water from the cylinders	check pump alignment	delay the compression process until the motor is up to its speed
2203	After the installation of new impeller wear rings, by pressing them onto the pump impeller hub, it is advisable to_____. .	all of the above	check the shaft and impeller assembly on centers to see if the ring surfaces are true	dynamically balance the shaft and impeller	visually inspect the rings after about an hour of service

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2204	In a centrifugal pumps operating with a high suction lift, foot valves are primarily designed to_____. .	provide a means of supplying sealing fluid for the impeller shaft stuffing box	give the pump motor, or driver, positive protection when operating in a shutoff condition	enable the pump and its suction line to remain primed prior to starting the pump	afford the pumping system protection against water hammer and surging
2205	The construction of the main propulsion engine lube oil sump tank should _____ .	provide drain/return lines that are no greater than 24 inches from the pump suction	retain the lube oil as long as possible before it recirculates through the system	be provided with only a perfectly horizontal bottom	have no plating joints of 90
2206	The final heating of the feedwater in a flash type distilling plant is carried out by_____.	low pressure steam admitted to the feedwater heater	heat exchange in the first-stage feedbox	vaporization in the first- stage flash chamber	heat exchange in each stage distiller condenser
2207	Which of the following centrifugal pump components converts the liquid velocity to pressure?	Impeller	Electric motor	Eye	Volute
2208	Which of the following statements best describes an oil lubricated stern tube bearing installation?	It receives its oil supply from a branch line of the main lube oil system.	The system pressure must be lowered when maneuvering in port to prevent blowing the outer oil seal	No shaft liner is needed in the area of the babbitted bearing surface.	For precise regulation of the bearing temperature, the system is required to have its own oil cooler.
2209	Hydraulic pumps most commonly used in steering systems are of the _____ .	volute type	lobe type	screw type	axial piston type
2210	An oil fog lubrication system is recommended for_____.	low and moderate speed ball bearings	high speed continuous operation of roller bearings	heavily loaded and high- speed ball bearings	gear shaft bearings
2211	An O-ring seal in a hydraulic system will begin to leak when it has lost its interference fit due to____.	compression set or wear	low fluid pressure	high fluid flow	low fluid temperature
2212	One of the main functions of wear rings, as used in a centrifugal pumps is to ____ .	absorb all impeller shaft end thrust	prevent wear of the pump casing and impeller	prevent water leakage to the atmosphere	maintain radial alignment between the pump impeller and casing

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2213	If a centrifugal bilge pump were continually operated with the discharge valve closed the_____.	motor would overheat	motor overload would open	pump would overheat	relief valve would open
2214	The first step when beginning to set the slide valves on a duplex reciprocating pump is to _____ .	ensure the balance piston is on the downstroke	measure the present port openings to ensure reassembly will be the same	open the relief valve to prevent accidental starting	center the steam piston in the cylinders
2215	If the capacity of a centrifugal pump decreases gradually over a long period of time, you should replace the _____ .	lantern rings	wear rings	packing gland	mechanical seals
2216	In order to properly remove air from the casing of a centrifugal pump when starting, the pump should have a_____. .	vent valve attached to the casing at the top of the volute	positive head	negative suction head	mechanical seal
2217	A centrifugal pump requires priming_____.	to initially unload the pump by having its head pressure equal to discharge pressure	in order to overcome the potential energy of water in the discharge line	primarily to lubricate the shaft seals	due to the inability of this type of pump to lift water to cover the suction or eye of the impeller
2218	How often should cargo oil pump relief valves on tank vessels be tested ?	At least once each voyage.	At least once a year.	Prior to each cargo discharge operation.	At each biennial inspection.
2219	If you are operating a centrifugal water service pump with worn wear rings, the____ .	pump would vibrate excessively	pump would be very noisy	stuffing box would leak excessively	pump discharge capacity is reduced
2220	Which of the listed pumps is not a positive displacement pump?	Rotary	Gear	Centrifugal	Reciprocating
2221	Which of the listed conditions can lead to cavitation in a centrifugal pump?	Vapor pockets formed in the suction flow stream.	Rough casing volute surfaces.	Worn wearing rings.	Heavy fluid in the flow stream.
2222	When securing a distillate pump on a low pressure fresh water evaporator, which of the listed steps should be carried out first?	Close the pressure gage valves	Close the sealing line valves to the pump	Trip the three-way solenoid dump valve	Stop the pump

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2223	If the foundation bolts of a reciprocating air compressor are loose, which of the conditions below will occur?	The intercooler will leak	The drive belts will squeal	The unloaders will jam shut	The compressor will vibrate
2224	During the repair and overhaul of the pump relief valve used in a hydraulic system, the set point was reduced by 10 bars, which of the following statements describes the result of the set point being lowered?	The solenoid controlled, three-position, spring centered control valve response will be quicker.	The movement of any system actuator will now be slower.	The fluid viscosity will increase during operation.	The pump discharge pressure will remain at the same pressure prior to the relief valve being repaired.
2225	Demulsibility of a lube oil is defined as _____.	a measure of the water in a lube oil system	an emulsion of different grades of oil	the ability of oil to separate from water	the temperature at which oil flows rapidly
2226	The emergency bilge suction valve is typically used_____.	if the bilges become flooded and they can not be emptied by any other means	to inject cleaning additives when the bilges are extremely dirty	when the main condenser becomes fouled, in order to provide additional cooling water circulation	to connect the rose box to the independent bilge suction
2227	An important point of consideration when replacing a dry type intake filter on an air compressor is to____.	install only a filter consisting of a treated paper element	use the same wetting oil on the element as is used in the compressor lubrication system	select the proper size of filter so that air flow is not restricted	install a smaller size filter to allow for expansion of the element
2228	Accidental flooding of the engine room bilges through the bilge system is prevented by_____.	using a positive displacement reciprocating bilge pump	installing eductors in all bilge rose boxes	installing a swing check before each bilge valve	stop-check valves installed in the bilge suction manifolds
2229	A hydraulic system gear pump being fed from a reservoir frequently indicates signs of excessive pitting after two months of service. Which of the following would most likely contribute to this condition?	Abnormal pressurization is occurring in the reservoir	Operating oil temperature is determined to be below normal	A partial restriction in the return line has developed	A vacuum condition has developed in the reservoir

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2230	If you attempt to tighten a leaking hydraulic fitting with pressure on the system, you will _____.	be successful every time	dislodge any scale in the tubing, and it will damage the system	find that the pressure will prevent the components from being tightened	cause the system to vibrate
2231	If one of the bilge system manifold valve does not properly seat, the _____.	bilge system will lose vacuum and prevent the other bilges from being pumped out	bilge-well connected to that valve, plus the second bilge-well being pumped will be completely emptied	bilge-well aft connected to that valve will siphon its contents with the forward bilge-well	all of the above
2232	Lint from cleaning rags can be harmful to hydraulic systems because the lint _____.	solidifies and causes cracked lines	can cause rusting of internal parts	breaks down hydraulic fluid	can clog filters and promote component leakage
2233	The minimum delivery pressure required for diesel engine fuel oil injection depends primarily on the _____.	compression ratio of the engine	degree of cylinder air turbulence	firing pressure in the engine	duration of the combustion period
2234	Fuel oil penetration into the cylinder of a diesel engine is _____.	dependent on fuel injection cut-off	increase by finer atomization	nonexistent in the precombustion chamber system	reduced by finer atomization
2235	Which of the following precautions should be observed concerning the introduction of a fire resistant fluid into a hydraulic system?	Decreased wear rates of components is an advantage of its use.	Deterioration of paints, seals, metals, and electrical insulation may occur.	Only chemically active filters may be used.	Fluid viscosity always increases as a normal result of its use.
2236	A good quality oil used in main propulsion engine lubrication systems should be _____.	resistant to permanent emulsification	free from all chemical additives	quickly chemically oxidized	readily saponified with water
2237	Foot valves are primarily designed to _____.	give a pump motor or driver positive protection when operating in a shutoff condition	provide a means of supplying sealing fluid for the impeller shaft stuffing box	afford the pumping system protection against water hammer and surging	enable a pump and its suction line to remain primed prior to starting the pump

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2238	Fuel supplied by each unit injector on a two-stroke/cycle single acting diesel engine is directed into each cylinder at a very high pressure through the _____.	high pressure fuel line	spray tip of the injector	check valve	spill deflector
2239	Very small irregularities on the seat and disk of a globe valve may be manually repaired with the valve in place by the process known as _____.	spotting in	refacing	lapping in	honing
2240	As routine maintenance, the bilge manifold valves are periodically removed and examined. Prior to re-securing the valve bonnets, the valve _____. I. disks and seats should be checked and lapped if necessary II. Bonnet, flange gaskets should be renewed if they were cut or torn III. stem packing should be renewed if the packing has hardened, the glans have bottom out, or the glands can not be tightened	I & II	I only	II & III	I, II & III
2241	When assembling a run of liquid service piping, which of the following factors should be considered? I. How the type of fittings used will affect the flow II. What type of gasket material should be used III. What radius should be used for each bend in the run	I, II & III	I only	I & II	II & III
2242	The injection pressure of a hydraulic fuel injection nozzle can be increased by _____.	increasing the injector nozzle orifice size	increasing compression on the pressure spring	removing shims from under the nozzle spring	increasing fuel oil booster pump pressure

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2243	Zinc anodes are installed in a marine raw-water cooling system to _____.	eliminate corrosion	inhibit oxidation	control electrolysis	prevent scaling
2244	To correctly identifies the position of the journal when the shaft is _____.	increasing its speed to required operating speed	just beginning to rotate	operating at its normal operating speed	just at the moment prior to being stopped
2245	Which of the following actions should be taken FIRST if a bilge-well of a multiple suction bilge system is unable to be pumped out?	remove each of the suction manifold valves	remove only the suction manifold valve to the affected bilge well	open the bilge pump for inspection	attempt to pump out another bilge well to determine if the entire system is affected
2246	Before performing any maintenance on a hydraulic system storing energy in an accumulator, you should _____.	Bleed off all pressure within the system	Pressurize the system to test for leaks	Operate the machine until it reaches normal temperature	Disconnect the pump pressure control switch
2247	After installing a new hydraulic pump in a system, what special attention should be given to the hydraulic system?	relief valves in the system should be readjusted	the filters and strainers should be checked frequently	The system should be drained and renewed with a fluid of different operating charateristics	System return pressure should be readjusted
2248	A hydraulic system gear pump being fed from a reservoir frequently indicates signs of excessive pitting after two months of service. Which of the following would most likely contribute to this condition?	Operating oil temperature is determined to be below normal	Abnormal pressurization is occurring in the reservoir	A partial restriction in the return line has developed	A vacuum condition has developed in the reservoir
2249	If you attempt to tighten a leaking hydraulic fitting with pressure on the system, you will _____.	cause the system to vibrate	find that the pressure will prevent the components from being tightened	dislodge any scale in the tubing, and it will damage the system	be successful every time
2250	If one of the bilge system manifold valve does not properly seat, the _____.	all of the above	bilge-well aft connected to that valve will siphon its contents with the forward bilge-well	bilge-well connected to that valve, plus the second bilge-well being pumped will be completely emptied	bilge system will lose vacuum and prevent the other bilges from being pumped out

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2251	Lint from cleaning rags can be harmful to hydraulic systems because the lint _____.	can clog filters and promote component leakage	breaks down hydraulic fluid	can cause rusting of internal parts	solidifies and causes cracked lines
2252	The minimum delivery pressure required for diesel engine fuel oil injection depends primarily on the _____.	compression ratio of the engine	firing pressure in the engine	degree of cylinder air turbulence	duration of the combustion period
2253	Fuel oil penetration into the cylinder of a diesel engine is _____.	nonexistent in the precombustion chamber system	dependent on fuel injection cut-off	reduced by finer atomization	increase by finer atomization
2254	Which of the following precautions should be observed concerning the introduction of a fire resistant fluid into a hydraulic system?	Decreased wear rates of components is an advantage of its use.	Deterioration of paints, seals, metals, and electrical insulation may occur.	Fluid viscosity always increases as a normal result of its use.	Only chemically active filters may be used.
2255	A good quality oil used in main propulsion engine lubrication systems should be _____.	quickly chemically oxidized	readily saponified with water	free from all chemical additives	resistant to permanent emulsification
2256	Foot valves are primarily designed to _____.	enable a pump and its suction line to remain primed prior to starting the pump	give a pump motor or driver positive protection when operating in a shutoff condition	provide a means of supplying sealing fluid for the impeller shaft stuffing box	afford the pumping system protection against water hammer and surging
2257	Fuel supplied by each unit injector on a two-stroke/cycle single acting diesel engine is directed into each cylinder at a very high pressure through the _____.	check valve	spray tip of the injector	high pressure fuel line	spill deflector
2258	Very small irregularities on the seat and disk of a globe valve may be manually repaired with the valve in place by the process known as _____.	spotting in	honing	lapping in	refacing

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2259	As routine maintenance, the bilge manifold valves are periodically removed and examined. Prior to re-securing the valve bonnets, the valve _____. I. disks and seats should be checked and lapped if necessary II. Bonnet, flange gaskets should be renewed if they were cut or torn III. stem packing should be renewed if the packing has hardened, the glans have bottom out, or the glands can not be tightened	I only	II & III	I & II	I, II & III
2260	When assembling a run of liquid service piping, which of the following factors should be considered? I. How the type of fittings used will affect the flow II. What type of gasket material should be used III. What radius should be used for each bend in the run	I & II	I, II & III	II & III	I only
2261	The injection pressure of a hydraulic fuel injection nozzle can be increased by _____.	increasing compression on the pressure spring	increasing fuel oil booster pump pressure	increasing the injector nozzle orifice size	removing shims from under the nozzle spring
2262	Zinc anodes are installed in a marine raw-water cooling system to _____.	prevent scaling	inhibit oxidation	eliminate corrosion	control electrolysis
2263	To correctly identifies the position of the journal when the shaft is _____.	just at the moment prior to being stopped	operating at its normal operating speed	just beginning to rotate	increasing its speed to required operating speed
2264	Which of the following actions should be taken FIRST if a bilge-well of a multiple suction bilge system is unable to be pumped out?	remove only the suction manifold valve to the affected bilge well	remove each of the suction manifold valves	open the bilge pump for inspection	attempt to pump out another bilge well to determine if the entire system is affected

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2265	Before performing any maintenance on a hydraulic system storing energy in an accumulator, you should _____.	Disconnect the pump pressure control switch	Bleed off all pressure within the system	Pressurize the system to test for leaks	Operate the machine until it reaches normal temperature
2266	After installing a new hydraulic pump in a system, what special attention should be given to the hydraulic system?	the filters and strainers should be checked frequently	relief valves in the system should be readjusted	System return pressure should be readjusted	The system should be drained and renewed with a fluid of different operating charateristics
2267	The by-products of oxidation, as a result of water contamination of hydraulic oil, are generally _____.	removed by cellulose type filters	harmless and have no effect on system components	always neutralized by oil additives	gums, varnishes, and acids
2268	Valves used in the machinery space piping systems, and constructed with threaded valve systems, must be _____.	right-hand opening (clockwise)	right-hand closing (clockwise)	left-hand closing (counter clockwise)	direction of opening and closing is unimportant
2269	Main propulsion engine lube oil sumps should be constructed _____.	with drain/return lines terminating just above or at the designed normal level	only of nonferrous, noncorrosive metals	with a sloped bottom	so as to never be integral with the main engine foundation
2270	Tube scaling in heat exchangers causes the heat transfer rate to decrease because the _____.	surface area of the tube decreases	flow through the heat exchanger becomes more turbulent	cooling fluid outlet temperature decreases	thermal conductivity of the scale is very low
2271	While the oily-water seperator is operating in the processing mode, if a low vacuum, what is the probable cause?	The coalescer beads are severely fouled.	The bilge suction is completely flooded.	The flow control valve 14 is completely open.	There is minor air leakage into the separator.
2272	The amount of fuel injected into a diesel engine cylinder by a unit injector, is controlled by _____.	varying the physical length of the plunger stroke	varying the clearance between the injector cam and the injector rocker arm	the firing pressure in the cylinder	a metering helix inside the pump
2273	Gate valves should not be used for throttling as _____.	the pressure drop will be excessive	wire drawing of the disc will result	the installation of an equalizing line will be necessary	air binding will develop

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2274	Demulsibility of a lube oil is defined as _____.	the temperature at which oil flows rapidly	an emulsion of different grades of oil	a measure of the water in a lube oil system	the ability of oil to separate from water
2275	If the chemical analysis of a lube oil sample taken from the main propulsion machinery indicates an increased neutralization number the _____.	demulsibility has improved	acidity has increased	foaming is guaranteed to occur	viscosity has decreased
2276	Assuming oil and water flow rates remain the same, what would be the effect of scale formation occurring on the inside of the cooling water tubes of a lube oil heat exchanger?	water temperature outlet temperature will decrease and the lube oil temperature will increase	water temperature outlet temperature will decrease and the lube oil temperature will decrease	water temperature outlet temperature will increase and the lube oil temperature will decrease	water temperature outlet temperature will increase and the lube oil temperature will increase
2277	The harmful effect of sulfur present in the boiler fuel oil is that it _____.	frequently clogs fuel strainers	forms corrosive acids when mixed with water	causes excessive smoke and soot when firing at low rates	does not readily burn when mixed with oxygen
2278	What do next after adding grease to a ball bearing with a hand held grease gun?	Remove the grease fitting and leave open to allow excess grease to escape	Save the used grease for chemical analysis	Close the bearing housing drain and add a little extra grease to compensate for air pockets in the bearing	Run the machine with the bearing housing drain plug open for a short while
2279	The combustible element in fuel that could cause major air pollution is _____.	nitrogen	hydrogen	sulphur	carbon
2280	What is the significance of ash content in fuel oil to marine engineers?	It indicates the quantity of energy released by burning a unit amount of fuel	It indicates the amount of non-combustible elements present in the fuel	It reflects the overall efficiency of the fuel system	It is useful to determine the exact atomization temperature
2281	What happen when you heat the oil?	It makes the oil less viscous	It makes the oil extremely viscous	It makes the oil frictionless	It makes the oil difficult to transfer
2282	What instrument or process determines the BTU value of boiler fuel oil?	Open cup test	Calorimeter	Viscosimeter	Hydrometer
2283	Greases are generally produced by ____.	saponifying an aluminium base, to which tallow	reducing the temperature of an oil below its	reducing tallow 50 degrees Fahrenheit	saponifying a metal base, to which oil is then

		and oil mixed into solution under a controlled temperature	cloud point to create the gelatinous texture	below its pour point then mixing a base metal, such as barium, into solution	added and mixed under controlled temperature
2284	The viscosity of fuel oil is indicated by its_____.	weight	internal friction	S.A.E. number	demulsibility
2285	Which of the combustion parameters listed is used in a diesel engine but NOT related to the injection system?	Penetration	Atomization	Scavenging	Metering
2286	Air is normally bled from a diesel engine fuel system by_____.	loosening the compression nuts at the injectors	blowing down the air tanks	changing fuel filters	pumping down the day tanks
2287	Which of the listed pumps discharges directly to the fuel oil settling tanks of a diesel engine main propulsion plant?	Auxiliary bilge pump	Centrifuge transfer and discharge pumps	Transfer pump	Booster pump
2288	Air in the fuel lines to the fuel injection nozzles of a diesel engine will cause the engine to_____.	burn excessive amounts of lube oil	overheat without smoking	run away without load	operate with reduced power or stop
2289	Differential needle valves used in fuel injectors are directly closed by _____.	cam action	fuel oil pressure	spring force	firing pressure
2290	The amount of fuel delivered by a unit injector is controlled by the _____.	engine speed	main spring	camshaft	rack position
2291	Movement of the pump control rack in a fuel injection system using individual plunger-type pumps_____.	varies the quantity of fuel delivered	changes the position of the fuel inlet ports	changes the length of the pump stroke	varies the compression of the delivery valve spring
2292	The function of the window cast into the housing of an individual jerk pump is to_____.	set up the fuel rack calibration in cubic millimeters	check for sludge on the pump barrel	allow the pump to be timed to the engine	check that the fuel return passages are clear

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2293	A faulty injector in one cylinder of an operating diesel engine can be located by_____.	checking lube oil temperature	using a timing light	checking cam position	cutting out individual injectors and noting engine performance
2294	If one fuel oil strainer of a duplex unit becomes clogged while the vessel is steaming at sea the FIRST action should be to_____.	clean the dirty strainer as quickly as possible	change the oil flow over to the clean side	stop the fuel oil service pump	open the strainer bypass valve
2295	Fuel injectors used in heavy fuel oil systems are usually provided with cooling to reduce _____.	fuel viscosity for better atomization	fuel detonation in the cylinders	carbon accumulation on the nozzles	cold corrosion of the nozzles
2296	Which of the fuel systems listed combines the injection pump and the injection nozzle in one housing?	Unit injector	Common rail	Air injection	Hydraulic governing
2297	The purpose of the interlocked three-way valve is to_____.	act as an emergency fuel shut off regardless of the fuel being used	change fuel from heavy to light oil or vice-versa while insuring that oil is returned to the proper day tank	control the rate of fuel oil flow to the engines	recirculate fuel through the heater during warm-up
2298	A broken pintle in a fuel injector usually causes_____.	erosion of the valves	clogging of the orifices	corrosion of the spray nozzle	distortion of the spray pattern
2299	Fuel injection systems are designed to primarily meter fuel atomize fuel and_____.	aid in completing cylinder scavenging	inject fuel at the proper time	create turbulence in the combustion chamber	minimize fuel penetration into the cylinder
2300	Fuel injection pumps using the port and helix metering principle requires the use of a_____.	variable cam lift	variable stroke	lapped plunger and barrel	crosshatched design
2301	A change in the degree of fuel atomization in a diesel engine cylinder has the greatest effect on the_____.	combustion in that cylinder	cylinder air turbulence	fuel spray angle	fuel injection rate

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2302	Plugged spray holes in a diesel engine fuel injector will cause excessive smoking at idling speed in addition to _____.	preignition throughout the load range		detonation throughout the load range	damage to pistons or cylinder heads
2303	When high firing pressures and low exhaust temperatures occur simultaneously in a diesel engine this may be a result of_____.	decreased piston-to-cylinder head clearance	early timing of fuel injection	decreased piston-to-cylinder head clearance	low scavenge air temperature
2304	The minimum delivery pressure required for diesel engine fuel oil injection depends primarily on the_____.	duration of the combustion period	compression ratio of the engine	degree of cylinder air turbulence	firing pressure in the engine
2305	The primary function of a fuel delivery check valve assembly is to_____.	deliver proper fuel quantity to the injection nozzle	control fuel pressure delivered to the combustion chamber	provide rapid fuel injection cutoff	control fuel quantity entering the pump body
2306	While overhauling a jerk-type fuel pump it is necessary to replace the pump plunger. Which of the parts listed below must also be replaced?	Pump barrel	Delivery check valve	Tubing to the injector	Cam follower
2307	Regarding jerk-type fuel pumps as used on some auxiliary diesel engines the delivery cutoff point is controlled with a_____.	delivery valve spring	check valve in the guide	spill port for leakoff	helical groove on the plunger
2308	Fuel oil penetration into the cylinder of a diesel engine is_____.	increased by finer atomization	dependent on air turbulence	reduced by finer atomization	nonexistent in the precombustion chamber system
2309	The spray holes in diesel engine fuel valves should be cleaned using carbon solvent and_____.	a copper wire brush	a special cleaning wire	a shaved wooden dowel	diesel fuel
2310	The dripping of fuel from an injector nozzle after injection terminates often results in_____.	early combustion	decreased cylinder wall temperatures and increased exhaust gas temperatures	incomplete combustion and decreased fuel consumption	coking and blocking of the fuel nozzles

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2311	The fuel injection pump the position of the plunger would give maximum_____.	effective stroke	effective pressure	injection duration	fuel bypass
2312	The principal hazard to personnel when using a diesel engine fuel nozzle tester is_____.	explosion	electrical shock	toxic fumes	blood poisoning
2313	Injection pressure in a common rail fuel system is controlled by_____.	engine speed	varying the fuel pump piston stroke	a bypass valve	varying the injector needle valve clearance
2314	What control valve listed is NOT considered to be hydraulic system directional control valve?	Three position valve	Spring control valve	Two position valve	Unloading valve
2315	What component is used to thoroughly separate small particle contamination from hydraulic fluid?	Strainer	Filter	Accumulator	Separator
2316	Cylinder lubrication oil for low speed main propulsion diesel engine is admitted to each cylinder during _____.	the compression stroke	low load operation only	periods of standby	the power stroke
2317	Heating the oil makes the oil_____.	extremely viscous	frictionless	less viscous	easy to store
2318	A diesel engine fuel leak in high-pressure fuel pipe between the injection pump and fuel nozzle needs immediate repair because of the_____.	possibility of pollution	serious fire hazard	high cost of fuel	poor combustion will occur in that cylinder
2319	Which of the following physical or chemical property of fuel oil that greatly affects the good efficiency of the pump during the transfer of fuel oil from one tank to the oher?	density	flash point	viscosity	pour point
2320	The alignment of coupling faces of pump and electric motor can be checked by _____.	using an inside micrometer	inserting a thermocouple	rotating and adjusting to nearest parallelism	inserting a feeler gage

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2321	The possible cause why a lube oil pump fails to build up discharge pressure could be that the_____.	suction valve is closed	discharge valve is open	suction head too low	bypass valve is closed
2322	When vessel is underway a small amount of water is allowed to leak through the stem stuffing box in order to _____.	prevent seizing of the rubber strips in the bearing busting.	ensure positive coolant flow through the strut bearings.	flush out and mud which can accumulate from shallow water.	prevent overheating of the packing.
2323	A leak of intake valve of 2 - stage compressor at the 2nd stage will cause high _____.	compressor pressure	intercooler pressure	1st stage pressure	2nd stage pressure
2324	To avoid oil from discharge into the sea when ballasting _____.	start cargo p/p then open sea discharge valve	start the cargo p/p then open sea suction valve	start the cargo p/p then close sea suction valve	start cargo p/p then open sea strainer valve
2325	When maintenance is undertaken at sea the engine personnel shall take precaution to _____.	ballast the tanks	sudden roll of the ship	empty the bilges	fill fuel service tank
2326	The arrangement of the _____ is applicable to any ship in such way that any compartment can be discharged of water when the ship is on an even keel.	Ballast System	Sea Water System	Bilge System	Fire Main System
2327	A connection between bilge and ballast line must be made by installing a _____.	Non-Return Valve	Globel Valve	Gate Valve	Ball Valve
2328	Water ballast placed in a tank that has been crude oil washed but not water rinsed shall be regarded as _____.	dirty ballast	clean ballast	crude oil	segregated ballast
2329	The viscosity of fuel oil is indicated by its_____.	demulsibility	weight	internal friction	S.A.E. number
2330	What is the significance of ash content in fuel oil to marine engineers?	It reflects the overall efficiency of the fuel system	It indicates the amount of non-combustible elements present in the	It is useful to determine the exact atomization temperature	It indicates the quantity of energy released by burning a unit amount of

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			fuel		fuel
2331	The harmful effect of sulfur present in the boiler fuel oil is that it _____.	frequently clogs fuel strainers	does not readily burn when mixed with oxygen	forms corrosive acids when mixed with water	causes excessive smoke and soot when firing at low rates
2332	What instrument or process determines the BTU value of boiler fuel oil?	Calorimeter	Open cup test	Hydrometer	Viscosimeter
2333	Which of the following states the desirable property of boiler fuel oil?	High sulfur content for complete combustion	High calorific value per kilogram of fuel	Low residual acid after combustion	Low carbon content per kilogram of fuel
2334	The combustible element in fuel that could cause major air pollution is _____.	hydrogen	nitrogen	sulphur	carbon
2335	The significant element contained in fuels that determines the specific heat is _____.	sulphur	nitrogen	oxygen	hydrocarbon
2336	What happens when oil is heated?	Its viscosity will increase	Fuel will have higher specific heat	It will expand in volume	The specific gravity increases
2337	Which are the most harmful slag forming compounds found in fuel oils?	Calcium and silica	Iron and sulphur	Potassium and nickel	Vanadium and sodium
2338	The characteristic that determines the temperature to which fuel must be heated for proper atomization is _____.	pour point	viscosity	flash point	specific gravity
2339	Viscosity of fuel in the atomizer can be reduced by_____.	changing the size of the orifice	increasing fuel oil pressure	increasing the fuel oil heater steam supply	mixing heavier oil with the fuel
2340	The cause of carbon deposits in the fuel heater is_____.	low fuel temperature	high fuel temperature	low fuel viscosity	high fuel viscosity
2341	What will result in the fuel heaters if fuel oil is heated excessively high?	Fouling at the heaters	A loss of fuel suction	Overfiring the boiler	Leakage at the burners

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2342	Carbonization in the surface of the fuel oil heater will reduce the heating capacity because the_____ _____.	radiational heat is reduced	loss of heat transfer	relative velocities of the flow of liquid decrease causing corresponding	fluid film covers the surfaces reducing the heat transfer
2343	Strainer is commonly used in hydraulic system in order to _____.	protect the pump from fine soluble contaminants.	prevent solid particles from entering the pump.	protect the directional control valve.	prevent solid particles from entering the filter.
2344	A filter used in a multi-operation hydraulic system would most likely to be located _____.	in the actuator return line.	between the control valves and the actuators.	between the pump and the directional control valves.	at the pump section.
2345	What is used as a joining material for fresh and sea water pipes and also for water lubricated bearings?	Plastic	Hard paper	Rubber	Asbestos
2346	Uneven bolt tightening during installation of a fuel injection pump could result in _____.	binding of pump moving pans	poor fuel penetration into the cylinders	improper pump to engine timing	high torsion shock to fuel lines
2347	The flame screens installed on sewage system tank vents prevent explosions by _____.	preventing flammable vapors from entering the tank	allowing the escape of flammable vapors	absorbing any flammable vapors in the vicinity	dissipating the heat of a fire
2348	What is the portion of a hydraulic hose that determines its overall strength?	outer cover	inner tube	outer armor	braided inner layers
2349	The size of flexible hose used in hydraulic system is indicated by ____.	the thickness of the tube wall	the inside diameter of the tube	the numerical designation found on the skin of the hose	a color code on the armor
2350	Water ballast placed in a tank that has been crude oil washed but not water rinsed shall be regarded as _____.	segregated ballast	crude oil	clean ballast	dirty ballast
2351	Setting the relief valve opening pressure in a hydraulic system lower than the required operating pressure will result in _____.	Overheating of the system or lowers the operating efficiency of the system	Accelerated action of the system component	Over speeding of the hydraulic pump	Extended system life

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2352	The longer the ignition delay period resulting from improper use of low certain fuel the _____.	more complete the fuel combustion	more rapid the rise in combustion	higher the cylinder combustion temperature	less fuel will enter the cylinder
2353	Which of the following conditions is most likely to cause water hammer in the potable water system?	A low water level in the potable water storage tank.	The starting of the potable water pump.	Rapid closing of a spring closed basin faucet.	The hydro-pneumatic tank being half full of water
2354	In the majority of marine power plants the fuel oil heater installations are divided into several units because_____.	more heating is required for lower loads	auxiliary steam is better utilized in this system	oil leakage into the condensate system is less likely with this system	proper plant operation can be continued while repairs are made
2355	Heat exchanges used in distilling plants include air ejectors condenser feed water heater and a: _____.	Brine cooler	vapor separator cooler	Distillate cooler	distillate heater
2356	The expansion tank in a closed cooling water system is located at_____.	the highest point in the system	the lowest point in the system	or near the floor plate level	or near the tank top level
2357	What is another name for discharge pressure?	Fage pressure	Evaporator pressure	Fluid pressure	Head pressure
2358	What could be the result if the hydraulic system is allowed to overheat?	Slow circulation of the oil	Pump discharge pressure will increase	Low system pressure	A high oil level
2359	What do you call a pump whose action is accomplished by the rotating gears,screws, or tumblers inside a casing ?	Volute pump	Rotary pump	Centrifugal pump	Discharged side of the pump
2360	What type of pump mentioned below is used to pump lube oil?	Diaphragm	Evolute	Centrifugal	Gear or screw
2361	The shaft coupling for the gear pump is prevented from rotating on the shaft by which of the following items listed below?	Key	Set screw	Universal fittings	Break pad
2362	Which of the following is the possible cause why a lube oil pump fails to build up discharge pressure?	Discharge valve is open	Bypass valve is closed	Suction vacuum is high	Suction valve is closed

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2363	To maintain the design discharge pressure of a centrifugal pump, the clearance between the impeller and _____ should be maintained.	gland seal	packing gland	wearing ring	lantern ring
2364	The capacity of a rotary pump will decrease with an increase in the pump_____.	suction pressure	rotor clearance	discharge pressure	operating noise
2365	Energy losses occuring in hydraulic system are ultimately absorbed by the_____.	atmosphere as heat	hydraulic piping flexibility	reservoir expansion chamber	fluid as friction
2366	The purpose of wear rings in a centrifugal pump is to _____.	prevent an internal explosion when it is overheated	enable a visual inspection while it is running	absorbs wear between the impeller and the casing	ensure alignment of the pump coupling to the driver
2367	To thoroughly pump the bilge using a horizontal centrifugal pump, the_____.	suction side must guide the liquid to lantern rings	pump must always be primed	volute must impart a rotary motion of the water	stuffing should not allow water leakage
2368	The type of pump that is usually used to transfer engine room bilges is the_____.	Centrifugal	gear	reciprocating	rotary
2369	Which of the following may cause overheating of the hydraulic pump?	Excessive internal slippage in the pump	Insufficient load	Reservoir level being maintained two inches above normal	Relief valve pressure setting too high
2370	The crackling noise coming from the centrifugal pump housing is an indication of _____.	an oversized lantern ring	reduced pump rotation	insufficient packing	excessive suction lift
2371	Cavitation in a hydraulic pump operation and can be caused by_____.	incorrect fluid viscosity	a high oil level	changing pump discharge pressure	continued slow re-circulation of the oil
2372	The following is used to reduce cargo pump leakage to the pump room bilge of most tanker vessels?	clipper seals	mechanical seals	finger rings	shaft sleeves
2373	How you operate a centrifugal fire pump at reduced capacity?	open the priming line	adjust the relief value	throttle the suction line	throttle the discharge valve

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2374	What is the best description of a multi-stage centrifugal pump?	Has two or more impellers housed together in one casing	Discharge piping is the same size as the pump discharge nozzle	Has a single suction closed impeller	Has one stepped impeller mounted in a progressively stage casing
2375	Internal bypass line is provided on some hydraulic system suction strainers to help reduce the possibility of_____.	contamination of the oil	spongy actuator movement	pump cavitation	aeration of the oil
2376	The most common cause of engine room fires is:	Back boiler fire	Oil leakage coming in contact with hot exposed surfaces	smoking	Spontaneous combustion of oily rags
2377	Double bottoms for carrying water ballast and capable of being flooded or pumped out at will	Boom	Internal Tanks	Boiler Tanks	Ballast tanks
2378	Lowest critical frequency is due to pole and it may be present origin or nearer to origin, then it is which type of network?	LC	RC	CL	RL
2379	Lowest critical frequency is due to zero and it may be present origin or nearer to origin, then it is which type of network?	RL	LC	RC	CL
2380	A box which tell the effect of inputs on control sub system is known as	Logical Box	State Box	Decision Box	Data Box
2381	It is also known as an automatic control system?	Open Loop Control System	IROF Control System	Data Loop Control System	Closed Loop Control System
2382	Which of the following is the analogous quantity for mass element in force-voltage analogy?	Resistance	Inductance	Conductance	Capacitance
2383	In force-current analogy, electrical analogous quantity for displacement (x) is	Resistance	Inductance	Conductance	Flux
2384	Electrical analogous quantity for dash-pot in force-current analogy is	Conductance	Capacitance	Resistance	Inductance

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2385	Which of the following id the electrical analogous element for displacement in force-voltage analogy?	Flux	Charge	Capacitance	Conductance
2386	If two blocks having gains A and B respectively are in parallel connection, find the resultant gain using block diagram reduction technique?	A-B	A*B	A/B	A+B
2387	Which of the following is/are the example of actuator?	Hydraulic Motor	Pneumatic Motor	Electric Motor	TRTY Motor
2388	In signal flow graph output node is node having only	Siding Branches	Incoming Branches	Kris Kross Branches	Outgoing Branches
2389	The transfer function for tachometer E(S)/?(S) is	KS	K	K / S	K - S
2390	Transient state analysis deals with:	Steady State Value	Magnitude of Error	Nature of Response	Engine Stability
2391	The steady state error due to ramp input for a type two system is equal to	Non zero number	Infinity	Constant	Zero
2392	Differentiation of parabolic response is a ___ respone ?	parabolic	steady state	ramp	step
2393	Weighting function is in terms of_____	Laplace transforms of parabolic response	Laplace transforms of ramp response	Laplace transforms of step response	Laplace transforms of impulse response
2394	Lead compensator is used to improve___	Transient Respone	Steady State Response	Error Response	Final Value Response
2395	Adding a pole to a system transfer function in terms of compensator represents a ____ compensator	Lead	Lag Lead	Lead Lag	Lag
2396	For type 1 system with parabolic input, the steady state error is ___	finite constant	zero	infinite	zero
2397	Time taken for the response to raise from zero to 100 % for very first time is called ?	Settling Time	Rise Time	Peak Time	Delay Time

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2398	Time taken by the response to reach and stay within a specified error is called ?	Peak Time	Delay Time	Settling Time	Rise Time
2399	In control system integrator is represented by:	1 /s	1 / s2	s	s2
2400	For lead compensator pole lies	on LRHS	on LHS	on origin	on LHS before zero
2401	The amplitude spectrum of a Gaussion pulse is	Uniform	Gaussion	impulse function	A sin function
2402	If a body has identical properties all over, it is known as :	elastic	isotropic	homogeneous	hymotrope
2403	A function of one or more variable which conveys information one to nature of physical phenomenon is called	system	signal	noise	interference
2404	None of the poles of a linear control system lie in the right half of s plane. For a bounded input, the output of this system	could be unbounded	could be bounded	tends to zero	stabilize
2405	In the integral control of the single area system frequency error is reduced to zero. Then :	integrator o/p decreases but speed changer position moves up	integrator output and speed changer position attain a constant value	integrator o/p increases but speed changer position comes down	integrator o/p decreases and speed changer position comes down
2406	This system comprises of the main engine sump, suction and discharge filters, circulating pump, coolers and centrifuge.	Centrifuge System	Cargo pumping systems	Circulating cooler system	Lube oil systems
2407	Before use in the main engine the ____ must be processed by heating, filtration, purifying, and clarifying. The heating is to keep the oil from waxing and improve the usually high viscosity; filtration is carried out at various stages of the process to remove particles.	HFF	RDO	IRO	HFO

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2408	When a cold engine is started, it requires a ____ mixture	chemically equal	richer	light	leaner
2409	As the temperature is low, the ____valve speeds up the engine idle speed to fast idling	air	nozzle	throttle	IDRP
2410	The _____ cargo pumping system is designed for a flexible and safe cargo and tank cleaning operation on ships. It consists of one hydraulic motor driven cargo pump installed in each cargo tank, ballast pumps, tank cleaning pumps, portable pumps and other consumers, all connected via a hydraulic ring line system to a hydraulic power unit	flexible hydraulic	framo hydraulic	ballast hydraulic	power hydraulic
2411	Most hydraulic system control panels are supplied via two separate power feeders, main and back-up. In case of failure to main feeder, automatic change-over to back-up will take place. For increased availability and simplified trouble shooting, the control system is electrically divided into separate sub-systems. Each sub-system has its own ____ power supply. Failure in one system is not likely to interfere with other systems.	10VDC	34VDC	24VDC	30VDC

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2412	The feed pumps are started/stopped manually from control panel or from the electric starter cabinet. However, when initiating start of the first main power pack, ____ of the feed pumps will automatically be started (high capacity mode) before the power pack is started.	three	four	one	two
2413	The power packs are started/stopped manually from control panel or from the electric starter cabinet. The power packs can be started in any sequence. Maximum ___ starts should be made during an hour.	4	5	3	6
2414	The power packs are started/stopped manually from control panel or from the electric starter cabinet. The power packs can be started in any sequence. The starts are controlled by the ____, including starts from the electric starter cabinet.	PLC	Power pack circuit	IC Generator	Arduino
2415	The power packs are started/stopped manually from control panel or from the electric starter cabinet. The power packs can be started in any sequence. . Maximum 2 following starts can be made, then ___ minutes between each. The starts are controlled by the PLC, including starts from the electric starter cabinet.	5	20	15	10

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2416	System pressure is set by the potentiometer on the control panel, as a voltage input to the PLC. The PLC output is amplified by a proportional _____ card controlling the proportional pressure control valve for the system pressure. The set pressure is automatically set to zero until one of the power packs has been loaded.	valve driver	raft valve	valve PLC	valve chip
2417	The _____Control System pneumatic actuators can be mounted in the ballast tanks and adjusted with no need for electricity, thus offering a lower-cost control approach.	Strati Valve	Farex Valve	Ballast Valve	Marex Valve
2418	A control system working under unknown random actions is called:	adaptive control system	stochastic control system	computer control system	digital data system
2419	Regenerative feedback implies feedback with:	step input	positive sign	oscillations	negative sign
2420	Which of the following should be done to make an unstable system stable ?	The gain of the system should be increased	The gain of the system should be decreased	The number of poles to the loop transfer function should be increased	The number of zeros to the loop transfer function should be increased
2421	As a result of introduction of negative feedback which of the following will not decrease ?	Overall gain	Distortion	Bandwidth	Instability
2422	There are several types of centrifuges used to remove water and particles from the fuel and lube oil; the most popular being the disc type as made by DeLaval rotates at	9000 revs	7000 revs	8000 revs	6000 revs
2423	Which notation represents the feedback path in closed loop system representation?	r(t)	e(t)	b(t)	c(t)

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2424	Which terminology deals with the excitation or stimulus applied to the system from an external source for the generation of an output?	Input signal	Output signa	Error signal	Feedback Signal
2425	When required, the steering gear, whistle, and the means of communication between the pilothouse and the engine room on a passenger vessel shall be tested by an officer of the vessel within a period of not more than how many hours prior to departure?	6	8	10	12
2426	MARINA was created and geared towards the following objectives except_____.	To create sub-agencies for the safe transport of goods and passengers	To create more job opportunities	To increase production and productivity in the various islands and regions of the archipelago through the provision of linkage	To provide for economical, safe, adequate and efficient shipment of raw materials, products, commodities and people
2427	For the purpose of training and drills, if reasonable and practicable, rescue boats on an OSV must be launched with their assigned crew _____.	. once a year	twice a year	. once a week	once a month
2428	The standard outside diameter pipelines to enable pipes of reception facilities to be connected with the ships discharge pipelines for residues from machinery bilges should be_____.	225 mm	215 mm	250 mm	235 mm
2429	Watchkeepers should have a mandatory rest periods of _____ in any one week.	56 hours	70 hours	48 hours	80 hours
2430	On a vessel making a voyage more than 48 hours long, regulations require that _____.	fire pumps be tested by starting within 12 hours prior	the emergency generator and lighting system be tested by	a lifeboat drill be held within 12 hours prior to departure	the entire steering gear be tested within 12 hours prior to

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		to departure	starting and operating within 12 hours prior to departure		departure
2431	Before a vessel can pump oily water within a Special Area, it has to comply with the following conditions except_____.	be underway	it must be more than 12 miles from the nearest coast	that the filter system have an automatic cut-off when the wastes are found to exceed 15 ppm of oily residue	have an oily water separating system in operation
2432	Which should be done with the ashes from your vessel?s incinerator which has burned packages containing plastic?	Discharge to shore facility only	Discharge overboard provided you are not in a river or estuary	Discharge at sea provided you are more than 25 miles offshore	Discharge at sea provided you are at least 12 miles offshore
2433	You are preparing to contain an oil spill. You must first receive approval from the Federal On-Scene Coordinator (OSC) prior to _____.	employing a boom	. deploying skimmers	applying chemical agents	using suction equipment
2434	In bridge resource management, which of the following statements are example of "hazardous thoughts" I.) I can do it II.) It won't happen to me III.) Why takes chances IV.) it's not my job V.) Don't tell me what to do VI.) We're all in the same ship	I, II, IV, V	I,II,III	IV, V, VI	I, II, III, IV, V
2435	In bridge resource management, which of the following statements are example of "hazardous thoughts" I.) I can do it II.) It won't happen to me III.) Why takes chances IV.) it's not my job V.) Don't tell me what to do VI.) We're all in the same ship	I,II,III	IV, V, VI	I, II, III, IV, V	I, II, IV, V
2436	When a vessel violates the oil pollution laws, who may be held responsible?	Licensed officers only	Any individual connected with the vessel involved in the operation	Owners only	Master only
2437	When a vessel violates the oil pollution laws, who may be held responsible?	Any individual connected with the vessel involved in the	Licensed officers only	Owners only	Master only

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		operation			
2438	The person on a MODU who is responsible for maintaining the engineering spaces in a clean and sanitary condition is the _____.	senior mechanic, or mechanic on duty if no senior mechanic designated	senior electrician, or electrician on duty if no senior electrician designated	Master, or person in charge	Chief Engineer, or engineer in charge if no chief engineer is required
2439	This is the most effective management development technique.	Modeling	Training	Coaching	Irritation
2440	The routes, zones or areas of operations of domestic ship operators are prescribed by which government agency?	PCG	MARINA	DOTC	Office of the President of the Philippines
2441	In general, how often are sanitary inspections of passenger and crew quarters made aboard vessels?	Once a month	Once a day	Once a week	Once a trip
2442	Welding and burning are among the factors which give the highest risk of fire on board ships. Precaution has to be taken to avoid this risk. Which of the following safety rules may be regarded as the most important?	Only use electrodes from a well-known manufacturer.	The welder shall have been instructed in the use of the ship's welding plant.	Electric welding plants shall be controlled by a responsible engineer before use.	Only holders of welding certificates shall be allowed to carry out welding on board ships.
2443	Managerial performance is based upon accomplishment of _____.	responsibilities	objectives	duties	choices
2444	Which of the following would fit MOST on motivation?	Managerial strategies to inspire the working force	Efforts at keeping employees "cheered up" at all times	Factor that cause, channel and sustain people's behavior	Special inner desire to excel
2445	Recruitment, training and development of organization members is _____	human resource management	staffing	organizing	organizational development
2446	When oil is accidentally discharged into the water, what should you do after reporting the discharge?	Obtain your permit from the Corps of Engineers	Throw sand on the water to sink the oil.	Throw chemical agents on the water to disperse the oil.	Contain the oil and remove as much of it as possible from the water.
2447	When two fire hose teams are attacking a fire they should _____.	use fire hoses of different sizes	not wear protective clothing	use different fire hose pressures	not attack the fire from opposite sides

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2448	The requirements for special welding procedures to be used on a MODU must be contained in the .	Coast Guard file	Certificate of Inspection	construction portfolio	vessel plans
2449	What refers to establishing objectives and processes necessary to deliver results in accordance with customer requirements and the organization's policies?	Acting	Checking	Doing	Planning
2450	What are the factors that affect good working behaviors? I. Same nationality II. Same religion III. Same age	II & III	I & III	I & II	I, II & III
2451	Systems where Filipinos can be employed abroad as seafarer. I. Direct hire II. Manning agency III. Trade union	II & III	I, II, & III	I & II	I & III
2452	What does onboard leader needs to possess an important quality so he will be respected well by his subordinates? I. Honest and fair in all matters II. Treating all crew in equal basis III. Avoid cause of disappointment	I and II	II and III	I and III	I, II and III
2453	What refers to establishing objectives and processes necessary to deliver results in accordance with customer requirements and the organizations policies?	Planning	Doing	Checking	Acting
2454	What are the factors that affect good working behaviors? I. Same nationality II. Same religion III. Same age	I, II & III	II & III	I & III	I & II
2455	Systems where Filipinos can be employed abroad as seafarer. I. Direct hire II. Manning agency III. Trade union	II & III	I & II	I, II, & III	I & III
2456	What does onboard leader needs to possess an important quality so he	I and II	I and III	II and III	I, II and III

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	will be respected well by his subordinates? I. Honest and fair in all matters II. Treating all crew in equal basis III. Avoid cause of disappointment				
2457	Which of the following is the most ideal in maintaining behavioral working group?	Same gender	Same age bracket	Same perspective	Same nationality
2458	During severe storms when survival becomes a major concern it may become necessary to relieve high anchor tensions on the windward side of the unit by_____.	deballasting the rig	ballasting the rig	paying out cable on the leeward side	paying out cable on the windward side
2459	In terms of vessel manning a watch is the_____.	direct performance of cargo loading and discharge operations only	performance of maintenance work necessary for the vessel s safe operation on a daily basis	performance of lookout duties	direct performance of deck or engine operations in a scheduled and fixed rotation
2460	The proper way to correct a mistake in the logbook is to_____.	draw several lines through the entry rewrite and initial the correction	draw a line through the entry rewrite and initial the correction	erase the entry and rewrite	completely black out the entry rewrite and initial the correction
2461	During severe storms when survival becomes a major concern it may become necessary to relieve high anchor tensions on the windward side of the unit by_____.	paying out cable on the leeward side	ballasting the rig	paying out cable on the windward side	deballasting the rig
2462	In terms of vessel manning a watch is the_____.	performance of maintenance work necessary for the vessel s safe operation on a daily basis	direct performance of deck or engine operations in a scheduled and fixed rotation	direct performance of cargo loading and discharge operations only	performance of lookout duties
2463	The proper way to correct a mistake in the logbook is to_____.	draw several lines through the entry rewrite and initial the correction	completely black out the entry rewrite and initial the correction	draw a line through the entry rewrite and initial the correction	erase the entry and rewrite
2464	Oil leakage from fuel pipe line sprays on hot exhaust manifold, fire	apply carbon dioxide to the fire	batten down the engine room	start the fire pump	shut off the fuel supply

	started. You should first _____.				
2465	the most effective spray pattern of a high velocity fog nozzle is with water pressure of not less than _____	60 psi (413.6 kPa)	35 psi (241.3 kPa)	100 psi (689.4 kPa)	75 psi (517.0 kPa)
2466	Inside HFO purifier room accessed by door E a large fire has developed. To combat the fire you should _____.	close all openings and ventilation dampers to the involved space	advance the hose team into the room without any additional action	set up a hose team to cool the door, then open the door and extinguish the fire using a type B-II extinguisher	increase the ventilation to the involved space
2467	Outside the engine room a quick closing devices operable on upper deck fire control station provided and connected to all fuel tanks quick closing valves in engine room. Function test is necessary???	Checking every renewal of Safety Equipment Certificate (2 years) is sufficient.	No, if the quick closing devices are closed the engines will stop.	Yes, the quick closing devices shall be tested and maintained frequently to ensure proper function in case of fire in the engine room.	Checking once a year is sufficient.
2468	Weekly a fire drill conducted onboard, which of the following actions is required to be carried out?	Each fire pump is to be started.	An inventory of rescue and fire equipment is to be taken.	An inspection and inventory of fire hoses is to be made.	The lifeboat is to be launched and operated.
2469	Changing rescuers while carrying out artificial respiration should be done _____.	at ten minute intervals	only with the help of two other people	without losing the rhythm of respiration	by not stopping the respiration for more than five minutes
2470	During the towing of a survival craft, a lookout should be on station to _____.	check water level in the bilge	release the towline in an emergency	look for food and water	help the helmsman steer
2471	The loading rate of bunker tanks must be reduced durinng topping off of bunker tanks,and personally supervised by the _____.	chief engineer	terminal operator	person-in-charge	master
2472	If a helicopter is lifting personnel from a survival craft, the other individuals in the craft should _.	remain seated inside the craft to provide body weight for stability	remove their lifejackets to prepare for their transfer to the helicopter	stand on the outside of the craft to assist the person being lifted	none of the above
2473	If an inflatable liferaft inflates upside down, you can right it by _____.	pushing up on one side	standing on the CO2 bottle, holding the bottom straps, and throwing	doing nothing; it will right itself after the canopy supports inflate	getting at least three or four men to push down on the side containing

			your weight backwards		the CO2 cylinder
2474	If there are a number of survivors in the water after abandoning a VESSEL, they should _____.	send the strongest swimmer to shore for assistance	tie themselves to the unit to avoid drifting with the current	form a raft by lashing their lifejackets together	group to form a small circle of survivors to create a warmer pocket of water in the center of the circle
2475	If you have to jump into the water when abandoning an OSV, your legs should be _____.	spread apart as far as possible	held as tightly against your chest as possible	extended straight down and crossed at the ankles	in a kneeling position
2476	If you reach shore in a liferaft, the first thing to do is _____.	drag the raft ashore and lash it down for a shelter	find some wood for a fire	get the provisions out of the raft	set the raft back out to sea so someone may spot it
2477	In order to retrieve an inflatable liferaft and place it on deck, you should heave on the _____.	sea anchor	towing bridle	lifelines	righting strap
2478	After abandoning an OSV injured survivors must keep warm in the water, they should _____.	remove their lifejackets and hold on to the uninjured survivors	sip seawater at intervals of fifteen minutes	be placed in the middle of a small circle formed by the other survivors in the water	float on their backs with their arms extended for maximum exposure to the air
2479	To launch a liferaft by hand, you should _____.	cut the casing bands, throw the raft over the side and pull the operating cord	cut the casing bands, throw the liferaft over the side and it will then inflate	detach the operating cord, throw the raft over the side and it will then inflate	throw the liferaft over the side and pull the operating cord
2480	What you have to do when you recognise that fire break out onboard?	Report to bridge or duty officer, actuate the fire alarm, call the persons around the fire and join the fire squad	Report to bridge or duty officer, actuate the fire alarm, organise and commence fighting the fire	Commence fighting the fire, call the persons around the fire and join the fire squad	Go to the lifeboat start the motor then call the duty officer and commence fight the fire
2481	What is the FIRST course of action in fighting a fire in a cargo or fuel oil tank ? _____.	spray the tank boundaries with a fire hose to promote cooling	secure all openings to the tank	discharge an initial charge of CO2 with a hand portable extinguisher	direct a fire hose into the tank and energize the fire main
2482	The self-righting survival craft will return to an upright position provided that all personnel _____.	none of the above	Are seated with seatbets on and doors open	Escape from the craft	Are seated with seatbelts on and doors shut

2483	To help fight the fire on aft aboard your vessel, what you should do?	put the stern into the wind and increase speed	head the bow into the wind and decrease speed	put the wind off either beam	put the stern into the wind and decrease speed
2484	How to activate an air regeneration canister on a survival craft ? _____.	put it into an container of water	push on button	tear off the tabs on the canister	turn it upside down
2485	Davit-launched a liferaft to inflate, how to do it?	initially connect the compressed air nozzle to the inflation tude	connect the helium nozzle to the inflation tube	connect the hand pump to the inflation tube abd pump it up	pull the inflation lanyard
2486	After abandoning an OSV injured survivor smust keep warm in the water, they should _____.	be placed in the middle of a small circle formed by the other survivors in the water	float on their backs with their arms extended for maximum exposure to the air	remove their lifejackets and hold on to the uninjured survivors	sip seawater at intervals of fifteen minutes
2487	The self-righting survival craft will return to an upright position provided that all personnel _.	none of the above	Are seated with seatbets on and doors open	Are seated with seatbelts on and doors shut	Escape from the craft
2488	To help fight the fire on aft aboard your vessel, what you should?	put the wind off either beam	head the bow into the wind and decrease speed	put the stern into the wind and decrease speed	put the stern into the wind and increase speed
2489	How to activate an air regeneration canister on a survival craft? _____.	put it into an container of water	turn it upside down	push on button	tear off the tabs on the canister
2490	Davit-launched a life raft to inflate, how it is?	connect the helium nozzle to the inflation tube	connect the hand pump to the inflation tube abd pump it up	pull the inflation lanyard	initially connect the compressed air nozzle to the inflation tude
2491	Puncture leaks in the lower tubes, or bottom of an inflatable liferaft should first be stopped by using _____.	sealing clamps	repair tape	a tube patch	sail twine and vulcanizing kit
2492	Why quick cleaning strainers are installed in the fire main system at individual fire hydrants ?_____.	prevent rust and foreign matter from entering the system piping	protect the fire pumps from becoming clogged with marine growth	prevent rust and foreign matter from entering the hoses and nozzles	filter out some of the salt in an effort to reduce pipeline scaling
2493	How to launch a liferaft by hand ?	detach the operating cord, throw the raft over the side and it will inflate	throw the life raft over the side and pull the operating cord	cut the casing bands, throw the raft over the side and pull the operating cord	cut the casing bands, throw the life raft over the side and it will inflate

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2494	How to turn over a liferaft that is floating upside down, you should pull on the _____.	manropes	canopy	sea painter	righting lines
2495	When retrieving the survival craft, the winch operator should stop the winch and check _____.	that all personnel are seated in the craft	that the cable has not jumped any grooves on the drum	the hydraulic fluid level before lifting	which way the wind is blowing
2496	Who would perform the tests and inspections if scheduled service on a inflatable life raft is required ?	An approved servicing facility	The chief mate	Shipyard personnel	A certified lifeboatman
2497	Which of the following emergency signals are used to report for boat stations or boat drills?	Less than five short blasts and one long blast of the whistle, along with the same signal on the general alarm bells.	More than six short blasts and one long blast of the whistle, along with the same signal on the general alarm bells.	Steady rapid ringing of the ships bell for at least 10 seconds, along with the same signal on the general alarm bells.	Three short blasts of the whistle along with the same signal on the general alarm bells.
2498	In order to launch and inflate an inflatable liferaft which of the following must be carried out?	Pull on the hydrostatic release, push on the sea painter.	Push on the hydrostatic release, push on the sea painter.	Push on the hydrostatic release, pull on the sea painter.	Pull on the hydrostatic release, pull on the sea painter.
2499	Which of the following statements represents the correct action to take when three crew members discover a fire?	One man report the fire, one man fight the fire, and one man act as a safety observer.	All three men fight the fire and report it immediately after it is extinguished.	One man report the fire, and the other two men fight the fire.	One man report the fire, one man fight the fire, and one man evacuate and secure the area.
2500	Which of the following steps should normally be taken first by those who have boarded a lifeboat in an emergency situation?	Check pyrotechnic supplies	Determine position and closest point of land	Search for survivors	Ration food and water supplies
2501	While fighting a fire, in order to utilize two hoses from a single wye gate attached to a hydrant outlet, you need only turn the valve handle _____.	on each leg of the Y 90?	at the base of the Y counterclockwise 180?	at the base of the Y in either direction	on each leg of the Y 180?
2502	You are picking up a person who has fallen overboard. A rescue boat should be maneuvered to normally approach the victim with the	wind on your starboard side	wind on your port side	victim to leeward	victim to windward

	_____.				
2503	You are preparing to administer closed chest cardiac massage on a victim of electric shock. Which of the following actions is NOT a recommended procedure?	Placing one hand across victims breastbone so that the heel of the hand covers the lower part.	Rocking so that a controlled amount of body weight goes through your arms and hand to their breastbone.	Placing the victim on his or her back and exposing the chest.	Giving cardiac massage without artificial respiration.
2504	Preparation of muster lists and signing of same is the responsibility of the _____.	United States Coast Guard	Chief Officer of the vessel	Master of the vessel	owner of the vessel
2505	Lookouts should be posted aboard life rafts immediately after abandoning the ship to look for _____	survivors in the water	life saving appliances	debris floating	any floating lifejackets
2506	What first thing to do If you the reach shore in a liferaft ? _____.	find some wood for a fire	get the provisions out of the raft	set the raft back out to see to someone spot it	drag the raft ashore and lash it down for a shelter
2507	What to do If the water level is rising in the bilge of a survival craft, first you should _____.	abandon the survival craft	shift all personnel to the stern	check the bilge drain plug	check for cracks in the hull
2508	If the liferaft you are in should capsize, all personnel should leave the raft and _____.	right the raft using the righting straps	swim away from the raft	climb onto the bottom	inflate the righting bag
2509	Liferaft is floating close to the ship If conditions permit, which is the best way boarding the liferaft.	Jump onto the raft itself	Wearing a lifejacket, jump into the water close to the raft and then swim to it	Jump into the water close to the raft, without a lifejacket, as this will make it easier to swim and board the liferaft	Use a rope ladder close to the raft to climb down and board
2510	If an inflatable liferaft is overturned, it may be righted by _____.	filling the stabilizers on one side with water	pushing up from under one end	standing on the inflating cylinder and pulling on the straps on the underside of the raft	releasing the CO2 cylinder
2511	If an inflatable liferaft inflates upside down, you can right it by _____.	doing nothing; it will right itself after the canopy supports inflate	standing on the CO2 bottle, holding the bottom straps, and throwing your weight backwards	pushing up on one side	getting at least three or four men to push down on the side containing the CO2 cylinder

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2512	How does foam extinguish an oil fire?	By cooling the oil below the ignition temperature	By increasing the weight of the oil	By excluding the oxygen from the fire	By removing the fuel source from the fire
2513	Except in rare cases, it is impossible to extinguish a shipboard fire by _____.	. interrupting the chain reaction	removing the oxygen	removing the fuel	removing the heat
2514	If a firefighting situation calls for low-velocity fog you would _____.	. order the engine room to reduce pressure on the fire pump	attach a low-velocity fog applicator with the nozzle shut down	put the lever on an all-purpose fire nozzle all the way back	put the lever on an all-purpose fire nozzle all the way forward
2515	The total available supply of CO2 for use in a fixed extinguishing system of a cargo vessel shall be at least sufficient for_____.	Space requiring largest amount	All cargo-space	All the space of the vessel	Engine room and largest cargo space
2516	A fire is considered 'under control' when_____.	all hands are at their fire stations	the fire is contained and no longer spreading	the fixed systems are activated	all firefighting equipment is at the scene
2517	A fire is considered 'under control' when_____.	all hands are at their fire stations	the fixed systems are activated	all firefighting equipment is at the scene	the fire is contained and no longer spreading
2518	A definite advantage of using water as a fire extinguishing agent is its characteristic of _____.	rapid contraction as water is converted from a liquid to a vapor	alternate expansion and contraction as water in a liquid state becomes a vapor	rapid expansion as water absorbs heat and changes to steam	absorption of smoke and gases as water is converted from a liquid to a vapor
2519	When using a mechanical foam to fight a bilge fire, the stream of foam is most effective when directed _____.	directly into the bilge water	at the overhead	onto the deck	at a vertical surface
2520	At the required fire drill, all persons must report to their stations and demonstrate their ability to perform duties assigned to them _____.	In the Muster List (?Station Bill?)	At the previous safety meeting	By the person conducting the drill	By the Coast Guard regulations
2521	You are underway when a fire breaks out in the forward part of your vessel. If possible you should _____.	call for assistance	keep going at half speed	abandon ship to windward	put the vessel's stern into the wind
2522	You are underway when a fire breaks out in the forward part of your	abandon ship to windward	put the vessel's stern into the wind	keep going at half speed	call for assistance

	vessel. If possible you should _____.				
2523	A burning AC motor would be considered what class of fire?	Class "D"	Class "A"	Class "C"	Class "B"
2524	A burning mattress is considered as which of the following classes of fire?	Class "B"	Class "C"	Class "D"	Class "A"
2525	A galley grease fire would be classified as .	Class B	Class A	Class C	Class D
2526	Which of the following classes of fire would probably occur in the engine room bilges?	Class A	Class B	Class C	Class D
2527	A fire in a pile of dunnage would be classified as a_____.	class B	class C	class D	class A
2528	In the event of a fire, the doors to a stair tower must be closed to prevent the spread of fire by_____.	ventilation	radiation	convection	conduction
2529	The function of the bypass valve on the self-contained breathing apparatus is to _____.	release excess heat which would otherwise cause the bottle to explode	allow the wearer to manually give himself oxygen	allow exhaled gases to pass outside the bottle	control the pressure of the oxygen as it enters the body
2530	Foam extinguishes fire by_____.	smothering	cooling	chemical action	inerting the air
2531	Extinguishing oil fire is very effective when_____.	spraying with water	cutting off oxygen source	removing fuel	cooling below its ignition temperature
2532	A class "D" fire would involve the burning of_____.	electrical insulation	dunnage	magnesium	diesel oil
2533	The best way to combat an engine room bilge fire is through the use of a_____.	foam extinguisher and solid stream water	foam extinguisher and low velocity water fog	foam and soda acid extinguishers	dry chemical extinguisher and solid stream water
2534	Fuel vents are fitted with corrosion resistant screen to prevent_____.	flames entering the tank vent	escape of flammable vapors	corrosion in the tank vent	damage to the ball check
2535	Which fire extinguishing agent has the greatest capacity for absorbing heat?	Carbon dioxide	Foam	Water	Dry chemical
2536	When is the best time to vent the combustible products from the engine room after CO2 fire	One half-hour after the fire is extinguished.	After any personnel in fireman outfits reenter the	Immediately after the fire is extinguished.	After the metal surfaces have cooled down.

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	extinguishing system has released?		engine room.		
2537	Annual servicing of a hand portable CO2 fire extinguisher includes_____ .	weighing the cylinder and recharging if weight loss exceeds 10% of the weight of the charge	inspecting the pressure gauge to ensure the needle is within operating range	hydrostatic testing of the cylinder	discharging, cleaning inside, and recharging
2538	Except in rare cases, it is impossible to extinguish a shipboard fire by_____.	removing the heat	interrupting the chain reaction	removing the fuel	removing the oxygen
2539	A class "B" fire would most likely occur in the_____.	breathing compartment	electric fresh water transfer pump	main switchboard	engine room bilge
2540	On an inspection of your tankship you notice that there are no portable fire extinguishers in the pumproom. To comply with regulations, you _____.	may substitute sand for the required extinguishers	should arrange to have a B-II extinguisher placed in the lower pumproom	should arrange to have a B-II extinguisher placed in the vicinity of the exit	need not be concerned since no portable extinguishers are required in the pumproom
2541	How often shall crew members participate in fire drills?	once every week	once every month	once every year	once every 6 months
2542	All of the following are part of the fire triangle EXCEPT _____.	fuel	heat	electricity	oxygen
2543	What is required in addition to the heat, fuel, and oxygen of the fire triangle to have a fire?	Chain reaction	Pressure	Smoke	Electricity
2544	Fire alarm system thermostats are actuated by_____.	smoke sensors	an electric eye which actuates when smoke interferes with the beam	pressure loss due to air being heated	the difference in thermal expansion of two dissimilar metals
2545	The supply of carbon dioxide used in a fixed extinguishing system aboard a cargo vessel MUST be at least sufficient for _____.	all the spaces of a vessel	the engine room and largest cargo space	the space requiring the largest amount	all cargo spaces
2546	Valves on steam-smothering lines to cargo tanks shall be set with _____.	the master control valve shut and valves to individual cargo tanks shut	all valves open	the master control valve open and valves to individual cargo tanks shut	the master control valve shut and valves to individual cargo tanks open
2547	A fire can spread by "convection" as a result of	the transfer of heat across an	the transfer of heat across an	the transfer of heat across an	hot combustion gases flowing

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	a_____.	unobstructed space	unobstructed space	unobstructed space	through ventilation systems
2548	What is the function of the bypass valve on the self-contained breathing apparatus?	When pressure in the apparatus exceeds 7 psi above atmospheric pressure, the valve opens to release pressure.	In the event of a malfunction in the equipment, the valve can be operated manually to give the wearer air.	The valve reduces the high pressure in the bottle to about 3 psi above atmospheric pressure.	The valve opens in excessive heat to release the oxygen in the bottle and prevent the bottle from exploding.
2549	You are fighting a class "B" fire with a portable dry chemical extinguisher. The discharge should be directed _____.	at the seat of the fire, starting at the near edge	to bank off a bulkhead onto the fire	over the top of the fire	at the main body of the fire
2550	You are fighting a fire in the electrical switchboard in the engine room. You should secure the power, then _____.	use a low-velocity fog adapter with the fire hose	determine the cause of the fire	use a portable CO2 extinguisher	use a portable foam extinguisher
2551	When two fire hose teams are attacking a fire they should _____.	use fire hoses of different sizes	use different fire hose pressures	not attack the fire from opposite sides	not wear protective clothing
2552	The smoke detector (fire indicator) indicates fire in a cargo hold loaded by general cargo. What first action should be taken?	Inspect the scene before deciding the method to be used for fire-fighting	Start the fire pumps, open the hatches and start fighting the fire by fire hoses	Close the ventilation system and other openings to the hold in order to choke the fire	Use the ship's gas extinguishing central system to put out the fire
2553	Which extinguishing agent is most likely to allow reflash as a result of not cooling the fuel below its ignition temperature?	Foam	CO2	Water spray	Water stream
2554	Combustible gas indicator is operated by drawing an air sample into the instrument_____.	where it is mixed with nitrogen	where its specific gravity is measured	where it is ignited by a sparking device	over an electrically heated platinum filament
2555	By definition, spontaneous combustible is a result of_____.	conduction of heat through a wall of material to the substance	All of the above.	chemical reactions within a substance	an outside heat source heating a substance until it ignites
2556	When using mechanical foam to fight a bilge fire, the stream of foam is most effective when directed _____.	at the overhead	at a vertical surface	directly into the bilge water	onto the deck
2557	Chemical foam is most suitable for use on a fire	hot bulkheads	burning insulation	oil	electrical machinery

	involving _____.				
2558	One of the limitations of foam as a fire extinguishing agent is that foam _____.	is corrosive and a hazard to fire fighters	is heavier than oil and sinks below it surface	cannot be made with salt water	conducts electricity
2559	The piece of equipment shown in the illustration is used in conjunction with a fire hose to produce which of the listed fire extinguishing agents?	Low velocity fog	Mechanical foam	Chemical foam	High velocity fog
2560	Which of the following fire extinguishing agents is best suited for use on a large class "B" fire occurring on the open deck of a vessel?	Aqueous film forming foam	CO2	Dry chemical	Steam smothering system
2561	Foam extinguishes a fire by _____.	absorbing the burning material	smothering the burning material	chemical reaction with the burning material	destroying the burning materials
2562	The use of which type of fire extinguishing agent involves covering the burning surface by deflecting the agent from a bulkhead to avoid undue agitation?	Dry chemical	Carbon dioxide	Foam	Halon 1301
2563	The best way to combat an engine room bilge fire is through the use of a _____.	foam extinguisher and solid stream water	foam extinguisher and low velocity water fog	foam and soda acid extinguishers	dry chemical extinguisher and solid stream water
2564	By definition, spontaneous combustible is a result of_____.	chemical reactions within a substance	an outside heat source heating a substance until it ignites	conduction of heat through a wall of material to the substance	All of the above.
2565	When using mechanical foam to fight a bilge fire, the stream of foam is most effective when directed _____.	at the overhead	onto the deck	directly into the bilge water	at a vertical surface
2566	Chemical foam is most suitable for use on a fire involving _____.	burning insulation	hot bulkheads	oil	electrical machinery
2567	One of the limitations of foam as a fire extinguishing agent is that foam _____.	cannot be made with salt water	is heavier than oil and sinks below it surface	conducts electricity	is corrosive and a hazard to fire fighters
2568	Which of the following fire extinguishing agents is best suited for use on a	CO2	Aqueous film forming foam	Steam smothering system	Dry chemical

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	large class B fire occurring on the open deck of a vessel?				
2569	Foam extinguishes a fire by _____.	chemical reaction with the burning material	absorbing the burning material	smothering the burning material	destroying the burning materials
2570	The use of which type of fire extinguishing agent involves covering the burning surface by deflecting the agent from a bulkhead to avoid undue agitation?	Foam	Dry chemical	Carbon dioxide	Halon 1301
2571	The best way to combat an engine room bilge fire is through the use of a _____.	foam and soda acid extinguishers	foam extinguisher and solid stream water	foam extinguisher and low velocity water fog	dry chemical extinguisher and solid stream water
2572	An extinguishing agent which effectively cools, dilutes combustible vapors and provides a heat and smoke screen is _____.	Halon 1301	carbon dioxide	water fog	dry chemical
2573	Through which of the listed process is sufficient heat produced to cause spontaneous ignition?	Latent heat of condensation	Heat of oxidation	Latent heat of sublimation	Heat of expansion
2574	When approaching a fire from winward, you should shield firefighters from the fire by using _____.	low-velocity fog	high-velocity fog	a straight stream of water	foam spray
2575	Which statement is FALSE regarding Halon as a fire extinguishing agent?	It is noncorrosive.	It leaves no residue.	It is more effective than CO2.	It is always non-toxic.
2576	Which of the following statements concerning chemical foam is TRUE?	It is useful in fighting chemicals fires only.	It is recommended for use on fires in main propulsion electric motors.	It is formed as a result of the reaction between dry powder and water.	Foam bubbles are formed as a result of mechanical mixing with air.
2577	A fire extinguishing product produced by first mixing a foam concentrate with water to produce a foam solution, then mixing the foam solution with air is termed _____.	chemical foam	Halon 1301	light water	mechanical foam
2578	When an electrical fire has been extinguished with a dry chemical agent, there	electrical contacts or relays being	machinery suffering thermal shock	fire being rekindled by spontaneous	chemical crystals suffocating the

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	is always a possibility of the _____.	rendered inoperative	damage	combustion	fire fighter
2579	Each drilling unit equipped with helicopter fuel storage tanks must have the tanks installed as far as practicable from the _____.	engine room	main deck	drill floor	landing area and sources of vapor ignition
2580	In which of the circumstances listed would a carbon dioxide fire extinguishing agent be most effective?	At a range of 15 feet	Within a closed space	On a magnesium fire	As a cooling agent
2581	Spontaneous combustion is most likely to occur in _____.	partially loaded fuel tanks	wet swabs and cleaning gear	oil soaked rags	overload electrical circuits
2582	Spontaneous combustion is most likely to occur in _____.	rags soaked in linseed oil	overload electrical circuits	dirty swabs and cleaning gear	partially loaded fuel tanks
2583	Firefighting foam is only effective when the foam _____.	is kept saturated with low velocity water fog	mixes with the burning fuel oil	penetrates to the bottom of the fire	completely covers the top of the burning liquid
2584	The advantage of using a dry chemical fire extinguishing agent is _____.	its excellent cooling ability	all of the above	permanent extinguishment reguardless of the reignition sources	its good stability and nontoxicity
2585	Dry chemical extinguishing agents extinguish a fire by _____.	cooling the fuel below ignition temperature	smothering and removing the oxygen from the fuel	breaking up the molecular chain reaction	removing the fuel by absorbing the heated vapors
2586	What danger to personnel exists when a carbon dioxide fire extinguisher is discharged in a small enclosed space?	Suffocation	Second degree burns	Electric shock	Burst eardrums
2587	Mechanically foam used for firefighting is produced by mechanically mixing and agitating _____.	soda acid and water	foam chemical with air and water	dry chemical and water	bicarbonate soda with air and water
2588	If flammable liquids are being pumped with a centrifugal pump, you should_____.	throttle the discharge valve to control capacity	gag relief valves to prevent recirculating and heating of the liquid	stop the pump immediately if it becomes vapor bound	throttle the discharge valve to assure positive pumping
2589	Dry chemical extinguishing agents are effective when used _____.	on materials that contain their own oxygen	with any other dry chemical extinguishing agents	strictly in a cooling capacity	with any foam extinguishing agents

2590	In a compartment where there is fire it necessary to cool the bulkheads and deck surroundings in order to_____.	prevent oxygen from reaching the flames	cool the metal below its ignition temperature	form a dense coating of smothering steam	prevent the fire spreading by heat conduction
2591	Which of the following is the propellant in a dry chemical fire extinguisher?	Foam	Carbon dioxide	A chemical reaction	Compressed air
2592	If a CO2 fire extinguisher is discharged in the engine room which of the following would be the danger to engine personnel?	Suffocation	Frostbite	Electric shock	Burst eardrums
2593	If there is fire in a ships service generator immediately you should_____.	cool the generator with the ventilators	turn on the fixed CO2 extinguisher	use a dry chemical fire extinguisher	secure the generator to extinguish the fire
2594	Oil fire on the weather deck could be effectively extinguished by using _____.	foam	soda acid	carbon dioxide	dry chemical
2595	In using a dry chemical agent which of the following choices should it be directed?	Above the flames	In the smoke	Flame center	Base of the flames
2596	If a CO2 fire extinguisher is discharged in a small enclosed space the danger to personnel exposed to it will be_____.	electric shock	burst eardrums	frostbite	suffocation
2597	Which of the following procedures reduces the possibility of an interior ventilation duct fires from rapidly spreading?	Having a fire hose charged at each duct opening	Keeping the duct interior clean	Having a portable CO2 ready at each duct opening	Keeping the duct exterior clean
2598	To prevent oily rags from spontaneously igniting they should be_____.	kept in nonmetal containers	discarded in a safe container as soon as possible	cleaned thoroughly for reuse	kept in the paint locker
2599	In which of the areas listed is a fire resulting from spontaneous combustion most likely to occur?	Battery storage locker	Fuel oil tank	Engine room bilges	Paint locker
2600	According to International Regulations portable and semi-portable fire extinguishers are classified by a letter and numeric designator. The letter designation	whether this type of extinguisher is to be used on deck or in machinery spaces	the size of the extinguisher	the type of extinguishing agent	the type of fire the unit could be expected to extinguish

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	indicates_____.				
2601	Fires resulting from escaping liquified flammable gases are generally extinguished by_____.	stopping the flow of gas	cooling below the ignition point	cutting off the oxygen supply	cooling upper the ignition point
2602	When fighting a liquified natural gas fire you should_____.	use only carbon dioxide	use only dry chemical	secure the source of gas then extinguish the fire	extinguish the fire then secure the source of gas
2603	In a compartment where there is fire it necessary to cool the bulkheads and deck surroundings in order to_____.	cool the metal below its ignition temperature	prevent oxygen from reaching the flames	prevent the fire spreading by heat conduction	form a dense coating of smothering steam
2604	Which of the following is the propellant in a dry chemical fire extinguisher?	Foam	Carbon dioxide	A chemical reaction	Compressed air
2605	If a CO2 fire extinguisher is discharged in the engine room which of the following would be the danger to engine personnel?	Suffocation	Frostbite	Electric shock	Burst eardrums
2606	If there is fire in a ships service generator immediately you should_____.	secure the generator to extinguish the fire	use a dry chemical fire extinguisher	cool the generator with the ventilators	turn on the fixed CO2 extinguisher
2607	Oil fire on the weather deck could be effectively extinguished by using _____.	foam	carbon dioxide	dry chemical	soda acid
2608	In using a dry chemical agent which of the following choices should it be directed?	In the smoke	Above the flames	Base of the flames	Flame center
2609	If a CO2 fire extinguisher is discharged in a small enclosed space the danger to personnel exposed to it will be_____.	electric shock	suffocation	frostbite	burst eardrums
2610	Which of the following procedures reduces the possibility of an interior ventilation duct fires from rapidly spreading?	Keeping the duct interior clean	Having a portable CO2 ready at each duct opening	Having a fire hose charged at each duct opening	Keeping the duct exterior clean
2611	To prevent oily rags from spontaneously igniting they should be_____.	cleaned thoroughly for reuse	kept in the paint locker	kept in nonmetal containers	discarded in a safe container as soon as possible
2612	In which of the areas	Fuel oil tank	Paint locker	Engine room	Battery storage

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	listed is a fire resulting from spontaneous combustion most likely to occur?			bilges	locker
2613	According to International Regulations portable and semi-portable fire extinguishers are classified by a letter and numeric designator. The letter designation indicates_____.	whether this type of extinguisher is to be used on deck or in machinery spaces	the type of extinguishing agent	the size of the extinguisher	the type of fire the unit could be expected to extinguish
2614	Fires resulting from escaping liquified flammable gases are generally extinguished by_____.	stopping the flow of gas	cooling below the ignition point	cutting off the oxygen supply	cooling upper the ignition point
2615	When fighting a liquified natural gas fire you should_____.	use only dry chemical	secure the source of gas then extinguish the fire	use only carbon dioxide	extinguish the fire then secure the source of gas
2616	A class C fire could be safely combated by using a/an _____.	high velocity water fog	foam	low velocity water fog	carbon dioxide
2617	Why is it necessary to shut-off forced ventillation in case of fire in engine room?	Protect fire fighting personnel from smoke	Allow the exhaust fans to remove smoke	Prevent oxygen in propagating the fire	Extinguish the fire by carbon monoxide smothering
2618	How does a CO2 fire extinguisher puts out fire ?	Smothering	Heat conduction	Chemical reaction	Cooling
2619	An effective low velocity water fog is the one that is good in _____.	controlling the movement of burning oil	removing combustible vapors from the air	shielding fire fighters from the fire	removing toxic fumes from the air
2620	The most effective way of using a portable foam fire extinguishers is by _____.	spraying directly on the base of the fire	sweeping the fire before using the foam	spraying directly on the surface of the fire	flowing the foam down a vertical surface
2621	After extinguishing a paint locker fire using the fixed CO2 system, the next immediate action is for the space to be _____.	checked for the proper oxygen level	left closed with ventilation off until all boundaries are cool	opened and burned material removed	opened and doused with water to prevent reflash
2622	An example of class A fire is a/an _____.	oil fire in the engine room bilges	oil fire involving a grade A petroleum product	electrical fire in the engine room	mattress fire in a stateroom
2623	A safety outlet is provided on the CO2 discharge piping to prevent	overpressurization of the CO2 discharge piping	overpressurization of the space being flooded	rupture of cylinder due to temperature	flooding of a space where personnel are

	_____.			increase	present
2624	A safety ring pin is usually inserted in the handle of a CO2 fire extinguisher to prevent _____.	the handle from contacting the cylinder	contamination of the valve parts	accidental discharge from the extinguisher	the cylinder valve from coming loose
2625	A small fire is reported in the forward cargo hold on a vessel equipped with a combination smoke detection/carbon dioxide fixed fire extinguishing system. After ensuring the space is unoccupied and properly sealed off, you should NEXT _____.	close all three-way valve levers that are in the detecting position with the exception of the valve(s) to the involved space	open the three-way valve whose number (on the handle) corresponds with the line index chart number for the space on fire	lock the smoke detector indicator on the monitoring line, which automatically activates the CO2 extinguishing system	operate the control heads mounted on the main pilot cylinders
2626	An accumulation of hydrogen sulfide gas on a vessel can be dangerous to personnel, it is important to know that this gas is _____.	mildy toxic	lighter than air	Lubrication of moving parts	heavier than air
2627	An extinguishing agent which effectively cools, dilutes combustible vapors and provides a heat and smoke screen is _____.	dry chemical	Halon 1301	water fog	carbon dioxide
2628	Any liquid which gives off flammable vapors at or below 80F, as determined by flash point from an open cup tester, describes a _____.	combustible liquid	flammable liquid	nonflammable liquid	noncombustible liquid
2629	As a firefighting medium, CO2 can be dangerous under certain conditions as it can cause _____.	freeze burns and blistering	hallucinations	carbon monoxide poisoning	undulation
2630	As a general rule of thumb, with no adverse wind conditions, approximately how far could a straight stream of water reach from a fire hose having a nozzle pressure of 100 psi?	50 feet	100 feet	200 feet	150 feet
2631	As a general rule, where would you expect to find a portable fire extinguisher in any space?	Near the middle of the space	Under a porthole or window	Near to the entrance to the space	There is no such standard practice.

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2632	Why is it important for fuel oil tanks not to be topped off when loading cold oil?	The fueling valve may become stuck closed and cause the fuel oil to spill before the valve can be opened.	The change in its specific volume when heated may cause an overflow.	Increased viscosity of the product needs higher loading pressure, which increases the chance of a spill.	Air pockets may cause the fuel to bubble out of the ullage hole.
2633	Why is it important for double bottom fuel oil tanks not to be topped off when loading fuel at cold temperatures?	Fueling valve may become stuck closed and cause the fuel oil to spill before the valve can be opened.	Increased viscosity of the product needs higher loading pressure, which increases the chances of a spill.	Air pockets may cause the fuel to bubble out of the ullage hole.	A temperature rise of the fuel will cause an overflow from the tank vent.
2634	You are on watch at sea at night and a fire breaks out in #3 hold. What should be done immediately?	Shut down the cargo hold ventilation.	Proceed to the space and determine the extent of the fire.	Flood the space with C02 from the fixed fire fighting system.	Cool the deck to contain the fire.
2635	You are on night time duty as navigating officer on a ship under way, when a fire in the crews accommodation is reported. What is the first action you would take?	Send the seaman on watch down to inspect and report the situation	Run to the scene as fast as possible and start fighting the fire by all available means	Sound the fire alarm signal	Call the Captain
2636	You are fighting a class B fire with a portable dry chemical extinguisher. The discharge should be directed _____.	at the main body of the fire	at the seat of the fire, starting near the edge	over the top of the fire	to bank off a bulkhead onto the fire
2637	Why should there be checklists or work permits for hazardous operations?	To locate crew members in case of emergencie	Because it is required by USCG (US Coast Guard)	To make sure the job is done under controlled conditions	So we know who to blame when something goes wrong
2638	Why is it necessary to cool the bulkheads, decks, and overheads surrounding an involved compartment fire?	Prevent the fire from spreading by heat conduction	Cool the metal below its ignition temperature	Form a dense coating of smothering steam	Prevent oxygen from reaching the flames
2639	Why is it essential to introduce CO2 from a fixed fire extinguishing system, into a large engine room, as quickly as possible?	The fire may warp the CO2 piping.	Carbon dioxide takes a long time to disperse to all portions of a space.	To keep the fire from spreading through the bulkheads.	Updraft from the fire tends to carry the CO2 away.
2640	While you are fighting a fire in a smoke-filled compartment one of your	begin artificial respiration	remove him from the compartment	treat for shock	control the bleeding

	shipmates falls sustaining a severe laceration and ceases breathing. Your FIRST response should be to _____.				
2641	While fighting a fire, in order to utilize two hoses from a single way gate attached to a hydrant outlet, you need only turn the valve handle _____.	at the base of the Y in either direction	on each leg of the Y 180	on each leg of the Y 90	at the base of the Y counterclockwise 180
2642	Which type of fire extinguisher is most prone to the freezing when exposed to low temperatures?	Foam	Halon 1211	Carbon dioxide	Dry chemical
2643	Which toxic gas is a product of incomplete combustion, and is often present which a fire burns in a closed compartment?	Nitric oxide	Carbon monoxide	Carbon dioxide	Hydrogen sulfide
2644	Which one of the listed fire-extinguishing medium is to be preferred to fight a fire in an electric installation (for example the main switchboard)?	Sprinkler.	Foam.	Water fog.	Powder.
2645	Which one of the following statements is true concerning the gas free status of a compartment?	The gas free status applies as long as the air temperature inside the compartment remains at or below standard room temperature.	The gas free status only applies to the conditions of the compartment at the time of the inspection.	The gas free status only applies for the duration of the work to be completed inside the compartment.	The gas free status only applies for a 24 hour period following the inspection.
2646	Which of the toxic gases listed is a product of incomplete combustion, and is often present when a fire burns in a closed compartment?	Carbon monoxide	Carbon dioxide	Nitric oxide	Hydrogen sulfide
2647	Which of the tools listed is designed for connecting and disconnecting fire hose couplings?	Channel locks	Spanner wrench	Vise grips	Pipe wrench
2648	Which of the statements listed is accurate concerning fires involving carbon tetrachloride?	It will burn rapidly once ignited.	You cannot use water to fight the fire because it will react with	Phosgene gas may be formed if it comes in contact with hot	It will explode if exposed to a flame.

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			the carbon tetrachloride.	metal.	
2649	Which of the signals listed is required to be displayed during the day while loading fuel?	A yellow flag	A red and yellow flag	A red flag	A red light
2650	Which of the safety information can found in the fire control plan?	Location of fixed extinguisher	Location of fire escape	Location of mobile extinguisher	Location of fire pumps
2651	Which of the precautions listed should be observed when taking on diesel fuel?	Prohibit smoking in the area.	Secure all lighting to the main deck.	Provide a portable fan to blow away fumes.	Display a black triangle during daylight hours.
2652	Which of the practices listed should be avoided since it represents a fire hazard?	Smoking near the burner front	Smoking in the machine shop	Stowing oily rags in a paint locker	Stowing portable acetylene bottles in the vertical position
2653	Which of the poisonous gases listed is the most likely to be found in a closed compartment involved in a fire?	Hydrogen	Carbon monoxide	Nitrogen	Carbon dioxide
2654	Which of the petroleum products listed has a flash point below 150F (65.5C)?	Asphalt	Lubricating oils	Road oils	Light fuel oils
2655	Which of the petroleum products listed has the lowest flash point?	Refrigeration oil	Diesel oil	Hydraulic oil	Lubricating oil
2656	Which of the listed types of fires should be extinguished with a straight stream of water?	Galley range	Bilge	Mattress	Switchboard
2657	Which of the listed pumping arrangements will be hazardous when two similar centrifugal pumps are used to discharge a cargo of flammable liquid?	Each pump operating at a different pressure and discharging into a common line.	Both pumps operating at the same speed and discharging into a common line.	Both pumps operating at the same speed and taking suction from a common line.	Each pump operating at a different speed and taking suction from a common line.
2658	Which of the listed materials would be considered as a burning class C fire?	Fuel oil	Wood	Celluloid	Electrical insulation
2659	Which of the listed functions is the purpose of a gas scrubber in an inert gas generation system?	Maintains the oxygen content at 5% by volume.	Cools the inert gas.	Maintains the water seal on the gas main.	Drains off static electricity in the inert gas.
2660	Which of the listed fixed fire extinguishing systems is most effective for use in	Sprinkler	Chemical foam	CO2	Dry chemical

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	the cargo holds?				
2661	Which of the listed firefighting systems is best suited for fighting a fire in an oil rig ballast control room?	Carbon dioxide system	Dry chemical system	Automatic sprinkler system	Steam smothering system
2662	Which of the listed firefighting agents produces a buoyant blanket to separate the burning vapors from air?	Steam	Water fog	CO2	Low-expansion foam
2663	Which of the listed firefighting agents and associated applications provide the largest shielding effect for the fire fighter?	Straight stream of water	Light water and foam mixture	Low velocity water fog	Carbon dioxide interface
2664	Which of the listed factors should be considered most important when combating an engine room fire with a fixed Halon 1301 system in a motor vessel?	The engine will absorb the Halon into its cooling system.	The engine will stall regardless of how little Halon has been taken in through the air intake.	The high engine combustion temperatures liquefy the Halon.	The engine will injest a substantial quantity of the available Halon through its intake and exhaust it out the stack if the engine is not automatically shut down.
2665	Which of the listed characteristics applies to a semi-portable CO2 system?	It has a portable hose and nozzle.	Each cylinder must weigh less than 50 pounds.	The cylinders are mounted horizontally.	It has distribution piping installed permanently.
2666	Where grades A, B, C, and D liquid cargoes are involved, power-driven or manually-operated spark producing devices shall not be used in the cargo pump room unless _____.	all cargo tanks are empty	the compartment itself is gas free	the vessel is gas free	all cargo tanks have been inerted
2667	You have just extinguished an oil fire on the floor plates of the engine room with a 15 pound CO2 extinguisher. Which of the listed dangers should you now be preparing to handle?	Sudden stoppage of the main engine.	Chemical reaction of the CO2 and oil forming carbonic acid.	Reflashing of the fire.	Complete lack of oxygen in the engine room.
2668	You notice a large amount of smoke coming from an open laundry room	activate the fixed CO2 system	close the door to the room	begin breaking out the nearest fire hose	locate and don an available SCBA

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	doorway, accompanied by the odor of burning cotton fabric. After activating the fire alarm, your next course of action should be to _____.				
2669	When hydrogen sulfide has been encountered on a VESSEL, or is anticipated, monitoring devices must sound an alarm (differing from the lower concentration alarm) or otherwise warn employees when the concentration of the gas reaches or exceeds how many part	20	100	50	200
2670	Welding and use of open flames on board tankers in operation are subject to regulation laid down by the Norwegian Maritime Directorate (Norwegian Ship Control Legislation - NSCL). During preparations for welding or hot works, the following item shall always	Inert gas composition.	Working performance and capacity of ventilating system.	Time since cleaning was carried out.	Gas measurings performed in tanks where work is to be carried out.
2671	A fire involving aluminum powder would be a class _____.	D fire	A fire	B fire	C fire
2672	Fire prevention during welding or burning aboard any vessel should include _____.	providing an extinguisher which is ready for immediate use	posting a fire watch in the immediate area	requiring the fire watch to remain on post for an adequate cool down period after the completion of welding or burning	All of the choices
2673	Hazardous conditions exist which may result in spontaneous combustion when _____.	all of the answers	dry metal turnings accumulate	oil soaked rags are stowed in the machine shop	powdered aluminum is stowed dry
2674	A fire in a pile of canvas would be classified as a _____.	class B	class C	class D	class A
2675	A fire in an electrical generator is considered to be _____.	Class B	Class C	Class A	Class D
2676	A foam-type portable fire	generators	the bridge	combustible	oil drums

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	extinguisher is most useful in fighting a fire in _____.		controls	metals	
2677	A galley grease fire on the stove may be extinguished using_____.	the range hood extinguishing system	fire dampers	water	foam
2678	All of the following are part of the fire triangle EXCEPT	heat	electricity	oxygen	fuel
2679	Convection spreads a fire as a result of	transmitting the heat of a fire through the ships metal	burning liquids flowing into another space	heated gasses flowing through ventilation systems	the transfer of heat across unobstructed space
2680	A fire involving trash and paper waste would be classified as a _____.	class C	class B	class A	class D
2681	A fire in a pile of dunnage would be classified as a _____.	class B	class A	class C	class D
2682	A fire in a pile of linen is considered to be a class _____.	C fire	B fire	D fire	A fire
2683	A corrosion resistant fine mesh wire screen is commonly fitted to the end of tank vent piping to prevent _____.	entry of rodents into the tank	passage of flames into the tank	water from entering the tank	debris stopping up the vent pipe
2684	A define advantages of using water as a fire extinguishing agent is its characters?	Rapid contraction as water is absorbs heat and charge to steam	Absorption of smoke and gases as water is converted from liquid	Rapid expansion as water absorbs heat and changes to steam	Alternate expansion and contraction as water in liquid state bear
2685	A combustible gas indicator is used to determine _____.	if there is sufficient oxygen to support life	the amount of CO2 present in flue gas	the toxicity of flammable gases or vapors	the presence of flammable gases or vapors in the air
2686	A definite advantage in the use of water as a fire extinguishing agent is its ability to _____.	vaporize and rapidly expand as water absorbs heat	alternate expansion and contraction as water in liquid state becomes vapor	absorb smoke and gases as water is converted from liquid to vapor	rapidly contract as water is converted from a liquid to a vapor
2687	A disadvantage of using CO2 for firefighting is that _____.	the cylinders are regulated pressure vessels	they are not effective on class C fires	the CO2 does not significantly cool the fire	they are not effective on class B fires
2688	A drip tray containing oil is on fire. The only fire fighting equipment available is water hose with spray jet/spray	Water should not be used on any type of oil fire.	The water can be applied in a fine spray starting from the front in a	Water should be applied in a jet to the back of the fire.	Water should be applied to the oil in a single jet only.

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	nozzle. How, if at all, should you attempt to put out this fire using water?		sweeping motion.		
2689	A squeeze-grip type carbon dioxide portable fire extinguisher has been partially discharged. It should be _____.	replaced in its proper location regardless of weight	replaced in its proper location if weight loss is no more than 15%	labeled empty and recharged as soon as possible	replaced in its proper location if weight loss is no more than 25%
2690	After a fire has been extinguished in a closed space, personnel may safely enter the space when _____.	all smoke and toxic fumes are removed and an adequate oxygen supply is present	overhaul has been completed to remove any possible source of re-ignition	smoke density has been decreased sufficiently to see the bulkhead opposite the compartments entrance	a lifeline and explosion proof flash light are used
2691	After extinguishing a paint locker fire using the fixed CO2 system, the next action is to have the space _____.	checked for oxygen content	opened and burned material removed	doused with water to prevent reflash	left closed with vents off until all boundaries are cool
2692	Although lube oils used in the main lubricating service systems should have a relatively high flash point to avoid ignition, they can create smoke and fire hazards when they _____.	are reduced in temperature to just above the pour point	are exposed to a vacuum	come in contact with extremely hot surfaces	become extremely agitated or aerated
2693	Ammonia is lighter than air and if a leak should occur its concentration will be _____.	lower near the deck of an enclosed space	lower near the top of an enclosed space	dependent upon available free hydrogen ions	of minimum importance during venting procedures
2694	An accumulation of hydrogen sulfide gas on a vessel can be dangerous to personnel, it is important to know that this gas is _____.	none of the above	heavier than air	mildy toxic	Lubrication of moving parts
2695	Any liquid which gives off flammable vapors at or below 80F, as determined by flash point from an open cup tester, describes a _____.	nonflammable liquid	noncombustible liquid	combustible liquid	flammable liquid
2696	Ethylene oxide has a lower explosive limit of 2.0% and an upper explosive limit of 100% by volume in air. This means _____.	a 2.0% concentration of ethylene oxide in air would give a reading of 2.0% on a	there is no possible ethylene oxide concentration in air which is too lean to burn	there is no possible ethylene oxide concentration in air which is too rich to burn	an ethylene oxide spill always results in an explosion

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		combustible gas indicator			
2697	Extra chemicals maintained aboard the vessel for producing chemical foam, should be stored _____.	in open bins	in a cool dry place	in a freezer	at a temperature not less than 80?F
2698	Fighting an oil rig fire in a watertight compartment with hoses could reduce the stability of the rig by _____.	reducing the KG to minimum allowable	reducing the level of drill water from the storage tanks	progressive downflooding	causing a list due to the water in the compartment
2699	Fighting an oil rig fire in the ballast pumproom with hoses would adversely affect the stability of the rig most by _____.	a list caused by water filling the compartment	A reduced KG caused by water filling the compartment	increasing the permeability of the pumproom	reduction of drill water from the storage tanks
2700	Fire dampers prevent the fire spreading through the process of _____.	direct contact	radiation	convection	conduction
2701	Firefighting foam is only effective when the foam _____.	mixes with the burning fuel oil	completely covers the top of the burning liquid	penetrates to the bottom of the fire	is kept saturated with low velocity water fog
2702	First response you should do while you are fighting a fire in a smoke filled compartment and one of your shipmates falls sustaining a severe laceration and ceases breathing is to _____.	treat for shock	extiguish the fire	remove him from the compartment	begin artificial respiration
2703	Following an engine room bilge fire which is believed to be extinguished after using a fixed CO2 fire extinguishing system, the investigating team should reenter the closed space _____.	via the lowest access door and equipped with SCBAs no sooner than 30 minutes after the fire is believed extinguished	no sooner than 15 minutes after the fire is believed extinguished	via the lowest access door	via the highest access door and equipped with SCBAs, one hour after the fire is believed extinguished
2704	For use as protection from gas leaking from a refrigeration unit, each vessel must be equipped with a _____.	flame safety lamp	self-contained breathing apparatus	gas mask	portable ventilation system
2705	Fuel oil from a leaking fuel pipe has been collected in a drip tray under the boiler furnace.The oil is	Powder	CO2	Water	Any of the mentioned alternatives

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	suddenly ignited by a backflash from the boiler burner.The boiler room is manned and the person present has the choice of various extinguishers, what is it?				
2706	Fuel oil tank vents are fitted with a corrosion resistant wire mesh screen to _____.	prevent accidental overflow	prevent dirt from entering the tank	dissipate fumes leaving the vent	prevent flames from entering the tank
2707	Halogenated fire extinguishing agents such as Halon 1301 extinguish fires by _____.	cooling	foaming action	producing excess CO2	breaking the chain reaction
2708	Having a CO2 alarm during normal working hours, what immediate action should be taken?	Awaiting further order.	Get out of the engine room as soon as possible.	Ignore the alarm.	Get into the control room.
2709	How can the build up of static electricity be prevented so that a static spark does not ignite flammable vapors?	Static neutralizers can be used to reduce ionization in the air.	All electrical circuits near and around the fueling operations should be opened.	A dehumidifier used in spaces containing flammable liquids will significantly reduce the possibility of static charges being generated.	Each machine and hose involved in the operation should be grounded.
2710	How does an inert gas system on a tanker function to prevent explosions in cargo tanks?	Inert gas dilutes the flammable vapor and air concentrations to keep them below the lower explosive limit.	De-energizes the charged mist effect.	Maintains a positive pressure on the vent header to cool the flammable vapors.	Inert gas filters out the flammable vapors from the cargo tank spaces.
2711	How may a cargo tank atmosphere be tested for explosive gases?	Use the open flame test on a small sample that has been taken from the tank.	Enter the tank with a teledyne oxygen analyzer.	Send a gas sample ashore for laboratory analysis.	Use an explosimeter.
2712	How should a Halon fire extinguisher be used to extinguish an electrical fire?	Use a quick sweeping motion towards the base of the fire.	Apply by bouncing agent off nearby bulkheads.	Always direct discharge at the source of the fire.	It shouldnt be used on an electrical fire.
2713	Hydrogen sulfide in explosive concentrations has been detected on the drill floor. The abandon	all survival capsules and liferafts	only the leeward survival capsules and liferafts	only the windward liferafts	only the windward survival capsules

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	rig signal has been sounded. To evacuate the rig, the crew should use _____.				
2714	If a boiler has been laid up dry for an extended period, it will be unsafe to enter the steam and water drum immediately after it has been opened, as there may be _____.	insufficient oxygen to support life	a heavy concentration of sewer gas	excessive carbon dioxide in the drum	toxic gases from organic decomposition
2715	If a CO2 fire extinguisher is not readily available, which of the listed fire extinguishing agents would be best suited to combat a small electrical fire in a switchboard?	Dry chemical	Steam	Low velocity fog	Halon
2716	If a mixture containing air and a concentration of flammable vapor, is capable of ignition when exposed to a spark or other source of ignition, it is said to be _____.	above the upper explosive limit	in the flammable range	at the autoignition point	at the rich point limit
2717	If circumstances permit, how should low expansion foam be applied to oil burning in the bulkhead of the engine room?	The foam should be applied to the centre of the fire.	The foam should be aimed at the bulkhead behind the fire and allowed to spread out slowly over the fire.	The foam should be aimed at about 45 degrees upwards so that it can drop onto the fire	The applicator should be used in a sweeping motion to spread the foam over the surface.
2718	If hydrogen sulfide exposure is anticipated, fixed monitoring devices aboard a VESSEL should have a low level concentration alarm to alert personnel when concentrations of this gas first reach a maximum of _____.	20 ppm	30 ppm	40 ppm	10 ppm
2719	If the empty weight of a B-II, portable, CO2, fire extinguisher bottle is 34 pounds (15.4 kg), the cylinder must be recharged if the gross weight decreases to _____.	50 lbs (22.4 kg)	47 lbs (21.3 kg)	48 lbs (21.8 kg)	49 lbs (22.2 kg)
2720	One of the common	Ammonia	Carbon dioxide	Carbon	Hydrogen

	hazards on board a vessel is represented by the accumulation of harmful gases in tanks, holds, etc. Which of the following gases is the most dangerous to personnel safety in confined atmospheres, as it is absorbed by the blood 300 times			monoxide	
2721	A compound gage is used for measuring pressures both above and below _____.	absolute pressure	latent pressure	atmospheric pressure	flow pressure
2722	Which of the nondestructive testing methods listed is most often used to accurately detect external defects in welded metals?	Magnetic particle	All of the options	Ultrasonics	Visible dye penetrant
2723	All portable electric tools should have a ground connection to prevent _____.	burning out the motor from an overload	electric shock if the tool is shorted	grounding the plastic case through a short	overloading the motor from a short
2724	The operation of machining a uniformly roughened or checked surface on round stock in a lathe is called _____.	knurling	checkering	crosshatching	swaging
2725	The dead center of a lathe can be properly used only after the end of the work piece has been _____.	tapered	center drilled	counter bored	convexed
2726	Work that cannot readily be mounted between lathe centers is usually held in a _____.	crotch center	lathe dog	chuck	spindle
2727	To safely change spindle speeds on a lathe, you must first _____.	disengage the spindle clutch	engage the feed change lever	stop the lathe rotation	disengage the feed reverse lever
2728	In machine shop practice, a center gauge is used for checking the angle of_____ .	60	screw thread pitch	screw threads	drill points
2729	When a lathe is used for thread cutting, the number of threads per inch produced is determined by the speed	lead screw and feed rod	lead screw and head stock spindle	drive motor and spindle	spindle and feed rod

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	relationship between the _____.				
2730	The most accurate method of measuring the setting of an inside caliper is to use a/an _____.	thread micrometer	engineer's scale	dial indicator	outside micrometer
2731	A continuous watertight bulkhead on a MODU may also be a/an_____.	structural bulkhead	exterior bulkhead	centerline bulkhead	joiner bulkhead
2732	To commence cutting threads with a metal lathe, you should engage the _____.	thread-chasing dial	feed-change lever	back gear lever	split or half-nut
2733	A record of the types and strengths of steels used on a MODU is called _____.	general plans	construction portfolio	Certificate of Inspection	builder's documentation
2734	The test of metals which measures the resistanceof the metal to impact is called_____.	brinell test	hardness test	tensile testing	charpy test
2735	A follower rest should be used with a lathe to machine _____.	threads on long slender shafts	large diameter stock between centers	work mounted on the lathe carriage	round stock to a finished dimension
2736	A tool used for measuring or laying out angles is called a_____.	micrometer	caliper rule	protractor	compass rule
2737	Joints in pipelines must be properly aligned before they are connected because _____.	condensate accumulates rapidly when flanges are not properly aligned	misalignment permits excessive expansion	the pipe will be completely blocked by even the slightest amount of misalignment	excessive strain on the joints will result if they are misaligned
2738	Ferrous metals are metals containing _____.	no iron	a large percentage of iron	a large percentage of aluminum	a large percentage of copper
2739	Which of the devices is commonly used in measuring the clearances between the main engine bearings and the crankshaft?	Copper shims	Persian blue	Plasti-gauge	Wooden gaging pegs
2740	Which of the following describes the purpose of a striker or doubler plate?	Provides landing surface for the sounding bob of a tank sounding	Provides a surface for the application of force, or the	Absorbs machinery vibration	Prevents valve stem over travel.
2741	When steel, cast iron, or other metals with surface scale are being turned, the first roughing cut should be taken _____.	rapidly in a continuous chip	slowly to prevent tool chatter	deep enough to get under the scale	lightly to avoid dulling the tool

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2742	Which of the metals listed below can be cut with the highest operating lathe speed?	Cast iron	Soft brass	Mild steel	Aluminum
2743	Which of the listed metals can usually be drilled without lubrication?	Monel	Brass	Tungsten	Steel
2744	Regarding MODU construction, bulkheads in the quarters are generally	non-structural	structural	watertight	continuous
2745	A compound Bourdon tube type pressure gauge is capable of measuring _____.	wet bulb and dry bulb temperatures	pressure and vacuum	humidity and temperature	temperature and pressure
2746	Before power to a lathe is turned on, it is a good shop practice to first hand feed the carriage to ensure _____.	the lathe is level	the carriage is lubricated	the workpiece is secure in the lathe	all locking devices have been released
2747	An allowance may be made for expansion and contraction in piping with the use of expansion joints or_____.	union bulkhead fittings	bends or loops in the line	retractable flanges	unions
2748	What type of gasket is used on high pressure steam flange joints?	metallic	wire inserted asbestos	rubber	wire-inserted rubber
2749	When using a chisel, you should _____.	wear gloves	be certain it is a nonsparking type	hold the tool lightly	wear safety glasses
2750	The proper use of a flat chisel is for cutting _____.	slots or keyways	half-round grooves	flat stock	inside corners
2751	The temper is likely to be drawn out from a chisel edge when you _____.	soak it in hot oil for lengthy periods	grind it for long periods of time with excessive pressure	grind the cutting angle too small	hold it next to a wet grinding wheel
2752	What precautions should be followed when using a chisel having a mushroom head?	Remove the ragged edges by grinding.	Do not strike the mushroomed portion.	Use only light hammer blows with the chisel.	Knock off the ragged edges with a hammer.
2753	Which of the chisels listed should be used for cutting oil grooves?	Square nose	Diamond point	Round nose	Flat cold
2754	Rapid wear on the extreme outer corners to the cutting edges of a drill bit is the result of the drill having _____.	not enough margin width	too much clearance angle	insufficient feed pressure	not enough cutting speed
2755	A drill that wobbles while the drill press is in operation may _____. I. be	I & II	II & III	I only	I, II & III

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	bent II. have a severly worn shank III. have been placed in the chuck off center				
2756	If the speed of a drill is too great, the drill will _____.	rapidly dull	cut faster	cut slower	not cut
2757	Rapid wear on the extreme outer corners to the cutting edges of a drill bit is the result of the drill having _____.	not enough cutting speed	too much cutting speed	too much clearance angle	not enough margin width
2758	Before boring a blind tapered hole, a good shop practice to follow is to _____.	use a taper reamer	bore a straight hole	drill to the large diameter of the taper	drill to the small diameter of the taper
2759	If a drill press is used to completely bore through a metal plate, feed pressure on the drill bit should be eased as the bit breaks through the bottom of the hole to prevent _____.	overspeeding the spindle	the drill bit from jamming and spinning the workpiece	overheating the drill	drilling undersized holes
2760	Failing to decrease the feed pressure on a drill as its point begins to break through the bottom of the workpiece will cause to drill to _____.	jam in the workpiece and tend to whirl it around	break cleanly through the bottom of the workpiece	cut an elongated hole in the bottom of the workpiece	form a tapered hole in the bottom of the workpiece
2761	When drilling blind holes with a standard drill press, the proper method of stopping the progress of the drill boring through the work is by _____.	gaging chuck motion	moving the working table	using a depth stop	adjusting the spindle return spring
2762	One of the steps required to increase the drilling speed of a drill press is to _____.	move the drive belt to a smaller diameter motor pulley	change to a larger diameter spindle	change the terminal connections of the drive motor	move the drive belt to a smaller diameter spindle pulley
2763	Which of the following types of files will produce a fine finish when draw filing?	Double cut	Second cut	Mill cut	Bastard
2764	Mill files are always _____.	single cut	double cut	Swiss patterned	second cut
2765	Pinning is often caused by _____.	cleaning the file	chalking the file	dropping the file	bearing too hard on the file
2766	The tang of a file is the part that _____.	does the cutting	fits into the handle	has crosscut teeth	is opposite the handle
2767	Using a file without a handle may result in _____.	overheating of the file	your work becoming rounded	injury to your hand	pinning

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2768	Heavy pressure on the ends of a file will cause the work surface to become _____.	rounded	tapered	smooth	rough
2769	A new file should be broken in carefully by filing a piece of _____.	stainless steel stock using light pressure	monel stock using heavy pressure	bronze stock using light pressure	brass stock using heavy pressure
2770	When using a chisel, you should _____.	wear gloves	wear safety glasses	be certain it is a nonsparking type	hold the tool lightly
2771	The proper use of a flat chisel is for cutting _____.	slots or keyways	inside corners	half-round grooves	flat stock
2772	The temper is likely to be drawn out from a chisel edge when you _____.	grind it for long periods of time with excessive pressure	hold it next to a wet grinding wheel	soak it in hot oil for lengthy periods	grind the cutting angle too small
2773	What precautions should be followed when using a chisel having a mushroom head?	Use only light hammer blows with the chisel.	Remove the ragged edges by grinding.	Do not strike the mushroomed portion.	Knock off the ragged edges with a hammer.
2774	Which of the chisels listed should be used for cutting oil grooves?	Square nose	Diamond point	Flat cold	Round nose
2775	Rapid wear on the extreme outer corners to the cutting edges of a drill bit is the result of the drill having _____.	not enough cutting speed	too much clearance angle	not enough margin width	insufficient feed pressure
2776	A drill that wobbles while the drill press is in operation may _____. I. be bent II. have a severly worn shank III. have been placed in the chuck off center	I & II	I, II & III	II & III	I only
2777	If the speed of a drill is too great, the drill will _____.	cut slower	cut faster	not cut	rapidly dull
2778	Rapid wear on the extreme outer corners to the cutting edges of a drill bit is the result of the drill having _____.	not enough margin width	too much cutting speed	not enough cutting speed	too much clearance angle
2779	Before boring a blind tapered hole, a good shop practice to follow is to _____.	drill to the large diameter of the taper	drill to the small diameter of the taper	use a taper reamer	bore a straight hole
2780	If a drill press is used to completely bore through a metal plate, feed pressure on the drill bit should be eased as the bit breaks	the drill bit from jamming and spinning the workpiece	drilling undersized holes	overspeeding the spindle	overheating the drill

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	through the bottom of the hole to prevent _____.				
2781	Failing to decrease the feed pressure on a drill as its point begins to break through the bottom of the workpiece will cause to drill to _____.	break cleanly through the bottom of the workpiece	jam in the workpiece and tend to whirl it around	form a tapered hole in the bottom of the workpiece	cut an elongated hole in the bottom of the workpiece
2782	When drilling blind holes with a standard drill press, the proper method of stopping the progress of the drill boring through the work is by _____.	gaging chuck motion	moving the working table	adjusting the spindle return spring	using a depth stop
2783	One of the steps required to increase the drilling speed of a drill press is to _____.	change to a larger diameter spindle	move the drive belt to a smaller diameter spindle pulley	change the terminal connections of the drive motor	move the drive belt to a smaller diameter motor pulley
2784	Which of the following types of files will produce a fine finish when draw filing?	Mill cut	Bastard	Double cut	Second cut
2785	Mill files are always _____.	double cut	single cut	second cut	Swiss patterned
2786	Pinning is often caused by _____.	dropping the file	cleaning the file	chalking the file	bearing too hard on the file
2787	The tang of a file is the part that _____.	has crosscut teeth	fits into the handle	does the cutting	is opposite the handle
2788	Using a file without a handle may result in _____.	injury to your hand	your work becoming rounded	overheating of the file	pinning
2789	Heavy pressure on the ends of a file will cause the work surface to become _____.	smooth	rough	tapered	rounded
2790	A new file should be broken in carefully by filing a piece of _____.	brass stock using heavy pressure	monel stock using heavy pressure	bronze stock using light pressure	stainless steel stock using light pressure
2791	The terms rough, coarse, bastard, second cut, smooth and dead smooth refer to the _____.	parts of the file	distance between the parallel cuts on the file	shape of the file	size of the file
2792	Which of the files listed will have coarsely spaced teeth?	Dead smooth cut	Bastard cut	Second cut	Smooth cut
2793	The terms rough, coarse, bastard, second cut, smooth and dead smooth refer to the _____.	both A and C are correct	distance between the parallel cuts of a file	size of the file	coarseness of file teeth
2794	A file coated with oil and stowed away will _____.	cause dust and metal particles	cause the file to slide across the	both B and C are correct	cause the file to overheat

		to collect in the teeth	work and prevent fast, clean cutting		
2795	Pushing the file endways (or with axis), under pressure, against the work, is called _____.	stroke filing	draw filing	standard form filing	cross filing
2796	A Reed and Prince screwdriver should be used only on a Reed and Prince screw, and a Phillips screwdriver should only be used on a Phillips screw in order to avoid damaging the _____. I. tool II. screwhead	neither I or II	I only	both I and II	II only
2797	Which of the screwdrivers listed is fastest and most convenient when tightening many screws?	Ratchet	Square shank	Offset	Standard
2798	When cutting with a handheld hacksaw, you should apply downward pressure on the hacksaw frame _____.	only on the backward stroke	on the forward stroke and backward stroke	only on the forward stroke	only when cutting non ferrous metals
2799	A hacksaw blade with 14 teeth per inch should be used to cut _____.	angle iron and heavy pipe	cast iron and soft steel	thin tubing or sheet metal	drill rod and tool steels
2800	A hand hacksaw blade is normally installed in the saw frame with the teeth pointing away from the saw handle, because _____.	the blade will always break if installed otherwise	the blade will overheat if installed otherwise	cutting fluid must flow down the teeth	cutting pressure is most easily put on the forward stroke
2801	A hacksaw blade will start a cut more easily if you _____.	file a nick where the cut is to be started	apply maximum pressure at the start of the cut	coat the saw blade with soap before starting the cut	turn the saw blade at right angles to the saw frame
2802	When coming to the end of a cut using a hand hacksaw, you should _____.	change to a finer cut blade	increase cutting speed and pressure	reduce cutting speed and pressure	stop applying the cutting fluid
2803	The term referring to the amount or degree the teeth of a hacksaw blade are pushed out or canted from the blade center is known as _____.	choke	set	blade cut	pitch
2804	The type of tooth set on a hacksaw blade where every third tooth remains straight, while the other	Double alternate	Rake	Wave	Alternate

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	two are alternately set is known as _____.				
2805	Sewing faster than a rate of 40 to 50 strokes per minute while using a hand held hacksaw will generally _____.	cause the blade to cut faster	not change how the blade cuts	sharpen the blade	dull the blade
2806	When cutting sheet metal too thin to be held in your hand while using a hand held hacksaw, the sheet metal should be placed between two _____.	blocks of wood	blocks of steel	pieces of sand paper	pieces of cloth
2807	Which of the saws listed would be more suitable for cutting metal in tight quarters or flush to a surface where a hand held hacksaw frame could not be used?	Coping saw	Stab saw	Hole saw	Back saw
2808	Which of the saw blades listed, when mounted in a hand held hacksaw frame, will cut on both the forward and reverse strokes?	Hardened	None of the above	Rod	Flexible
2809	To finish tapping a blind hole, it is best to use a _____.	finishing tap	taper tap	plug tap	bottoming tap
2810	A taper tap is correctly used for _____.	starting threads in a hole	producing tapered threads in a hole	deepening the extent of existing threads in a hole	finishing the threading operation in a blind hole
2811	Round split dies are usually adjustable to _____.	allow threading up to a shoulder	control the tightness of the thread fit	to help start the die squarely on the round stock	allow threading on oversized stock
2812	If you are cutting external threads by hand and you start the die at an angle, the threads will _____.	straighten out after the third revolution	be rough, weak and easily broken	be cut crooked on the work	be out of round on the work
2813	The diameter of a hole drilled for tapping threads into a piece of stock should be _____.	the same size as the tap diameter	larger than the tap diameter	the same size as the bolt diameter	smaller than the tap diameter
2814	The tool used for cutting external pipe threads is called a pipe _____.	stock and die	cutter	threader	ratchet cutter
2815	.A thread die will be easier to start if the end of the shaft to be threaded is slightly _____.	reamed	center drilled	chamfered	peened

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2816	Round split dies are usually adjustable to _____.	to help start the die squarely on the round stock	allow threading up to a shoulder	allow threading on oversized stock	control the tightness of the thread fit
2817	The type of tooth set on a hacksaw blade where every third tooth remains straight, while the other two are alternately set is known as _____.	Wave	Rake	Double alternate	Alternate
2818	A hacksaw blade with 14 teeth per inch should be used to cut _____.	angle iron and heavy pipe	thin tubing or sheet metal	cast iron and soft steel	drill rod and tool steels
2819	A hacksaw blade will start a cut more easily if you _____.	file a nick where the cut is to be started	apply maximum pressure at the start of the cut	coat the saw blade with soap before starting the cut	turn the saw blade at right angles to the saw frame
2820	Which of the following types of files will produce a fine finish when draw filing?	Double cut	Bastard	Mill cut	Second cut
2821	If you are cutting external threads by hand and you start the die at an angle, the threads will _____.	be rough, weak and easily broken	be cut crooked on the work	be out of round on the work	straighten out after the third revolution
2822	When cutting sheet metal too thin to be held in your hand while using a hand held hacksaw, the sheet metal should be placed between two ____.	pieces of cloth	blocks of steel	blocks of wood	pieces of sand paper
2823	Failing to decrease the feed pressure on a drill as its point begins to break through the bottom of the workpiece will cause to drill to _____.	jam in the workpiece and tend to whirl it around	break cleanly through the bottom of the workpiece	cut an elongated hole in the bottom of the workpiece	form a tapered hole in the bottom of the workpiece
2824	A file coated with oil and stowed away will _____.	cause the file to slide across the work and prevent fast, clean cutting	cause the file to overheat	both B and C are correct	cause dust and metal particles to collect in the teeth
2825	Which of the saws listed would be more suitable for cutting metal in tight quarters or flush to a surface where a hand held hacksaw frame could not be used?	Hole saw	Back saw	Coping saw	Stab saw
2826	If the speed of a drill is too great, the drill will _____.	cut slower	cut faster	rapidly dull	not cut
2827	The tool used for cutting external pipe threads is	stock and die	cutter	threader	ratchet cutter

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	called a pipe _____.				
2828	Which of the chisels listed should be used for cutting oil grooves?	Diamond point	Flat cold	Round nose	Square nose
2829	The terms rough, coarse, bastard, second cut, smooth and dead smooth refer to the _____.	size of the file	coarseness of file teeth	distance between the parallel cuts of a file	both A and C are correct
2830	What precautions should be followed when using a chisel having a mushroom head?	Knock off the ragged edges with a hammer.	Remove the ragged edges by grinding.	Use only light hammer blows with the chisel.	Do not strike the mushroomed portion.
2831	The tang of a file is the part that _____.	fits into the handle	does the cutting	has crosscut teeth	is opposite the handle
2832	Mill files are always _____.	second cut	single cut	Swiss patterned	double cut
2833	If a drill press is used to completely bore through a metal plate, feed pressure on the drill bit should be eased as the bit breaks through the bottom of the hole to prevent _____.	overheating the drill	drilling undersized holes	overspeeding the spindle	the drill bit from jamming and spinning the workpiece
2834	Pinning is often caused by _____.	chalking the file	bearing too hard on the file	cleaning the file	dropping the file
2835	Which of the saw blades listed, when mounted in a hand held hacksaw frame, will cut on both the forward and reverse strokes?	Rod	Hardened	Flexible	None of the above
2836	The temper is likely to be drawn out from a chisel edge when you _____.	hold it next to a wet grinding wheel	soak it in hot oil for lengthy periods	grind it for long periods of time with excessive pressure	grind the cutting angle too small
2837	A drill that wobbles while the drill press is in operation may _____. I. be bent II. have a severly worn shank III. have been placed in the chuck off center	I & II	I, II & III	I only	II & III
2838	A Reed and Prince screwdriver should be used only on a Reed and Prince screw, and a Phillips screwdriver should only be used on a Phillips screw in order to avoid damaging the _____. I. tool II. screwhead	II only	neither I or II	both I and II	I only

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2839	The proper use of a flat chisel is for cutting _____.	flat stock	inside corners	slots or keyways	half-round grooves
2840	Rapid wear on the extreme outer corners to the cutting edges of a drill bit is the result of the drill having _____.	not enough margin width	insufficient feed pressure	too much clearance angle	not enough cutting speed
2841	The diameter of a hole drilled for tapping threads into a piece of stock should be _____.	smaller than the tap diameter	the same size as the tap diameter	the same size as the bolt diameter	larger than the tap diameter
2842	A new file should be broken in carefully by filing a piece of _____.	monel stock using heavy pressure	stainless steel stock using light pressure	brass stock using heavy pressure	bronze stock using light pressure
2843	One of the steps required to increase the drilling speed of a drill press is to _____.	change the terminal connections of the drive motor	change to a larger diameter spindle	move the drive belt to a smaller diameter spindle pulley	move the drive belt to a smaller diameter motor pulley
2844	When drilling blind holes with a standard drill press, the proper method of stopping the progress of the drill boring through the work is by _____.	adjusting the spindle return spring	gaging chuck motion	moving the working table	using a depth stop
2845	When cutting with a handheld hacksaw, you should apply downward pressure on the hacksaw frame _____.	only on the forward stroke	on the forward stroke and backward stroke	only on the backward stroke	only when cutting non ferrous metals
2846	The terms rough, coarse, bastard, second cut, smooth and dead smooth refer to the _____.	parts of the file	shape of the file	size of the file	distance between the parallel cuts on the file
2847	.A thread die will be easier to start if the end of the shaft to be threaded is slightly _____.	peened	center drilled	chamfered	reamed
2848	The term referring to the amount or degree the teeth of a hacksaw blade are pushed out or canted from the blade center is known as _____.	blade cut	set	pitch	choke
2849	A taper tap is correctly used for _____.	starting threads in a hole	producing tapered threads in a hole	deepening the extent of existing threads in a hole	finishing the threading operation in a blind hole
2850	Which of the files listed will have coarsely spaced teeth?	Dead smooth cut	Second cut	Smooth cut	Bastard cut
2851	Sewing faster than a rate	cause the blade	not change how	dull the blade	sharpen the

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	of 40 to 50 strokes per minute while using a hand held hacksaw will generally _____.	to cut faster	the blade cuts		blade
2852	Which of the screwdrivers listed is fastest and most convenient when tightening many screws?	Standard	Ratchet	Offset	Square shank
2853	When coming to the end of a cut using a hand hacksaw, you should _____.	reduce cutting speed and pressure	stop applying the cutting fluid	change to a finer cut blade	increase cutting speed and pressure
2854	Pushing the file endways (or with axis), under pressure, against the work, is called _____.	draw filing	standard form filing	stroke filing	cross filing
2855	To finish tapping a blind hole, it is best to use a _____.	taper tap	plug tap	bottoming tap	finishing tap
2856	Heavy pressure on the ends of a file will cause the work surface to become _____.	tapered	rounded	rough	smooth
2857	A hand hacksaw blade is normally installed in the saw frame with the teeth pointing away from the saw handle, because _____.	cutting pressure is most easily put on the forward stroke	the blade will always break if installed otherwise	cutting fluid must flow down the teeth	the blade will overheat if installed otherwise
2858	Rapid wear on the extreme outer corners to the cutting edges of a drill bit is the result of the drill having _____.	too much cutting speed	too much clearance angle	not enough margin width	not enough cutting speed
2859	Before boring a blind tapered hole, a good shop practice to follow is to _____.	use a taper reamer	bore a straight hole	drill to the small diameter of the taper	drill to the large diameter of the taper
2860	When using a chisel, you should _____.	hold the tool lightly	wear safety glasses	be certain it is a nonsparking type	wear gloves
2861	Using a file without a handle may result in _____.	injury to your hand	your work becoming rounded	overheating of the file	pinning
2862	For mild steel and general work, the correct angle of a drill point is _____ degrees.	118	29	45	90
2863	In gas welding system, a hose with blue color indicates it contain	nitrogen	water	oxygen	acetylene

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	_____.				
2864	Some heavy duty screwdrivers are made with a square shank to _____.	allow it to be used as pry bar	prevent the shank from bending	allow turning with wrench	permit striking with a hammer
2865	Pipe threads are made with the use of _____.	Coat the saw blade with oil before starting the cut	Place the saw blade facing the saw frame	Apply maximum pressure at the start of the cut	File a nick where the cut is to be started
2866	In Lathe machine, what is the best thing to do to machine hard and irregular form of metal object to its designed shape?	Centering	Boring	Tempering	Refacing
2867	What do you call an operation where one end of the product diameter is smaller than the other end?	Refacing	Boring	Drilling	Tapering
2868	A side from welding, the best material to use in bonding pipes carrying low temoerature liquids or fluids is _____.	High speed drill	Reamer	Inside cutting tool	Boring tool
2869	Which of the following items below is the hardest tools tip that can endure the highest speed and have the smallest wear when used in the operation of a center lathe or electric driven shaper onboard?	Diamond	Cast alloy	High speed steel	Ceramics
2870	For a safe, smooth and effective operation of a modern lathe machine onboard, which of the listed tools below should be attached in the tool post?	Center punch	Tool bit	Lathe dog	Drill bit
2871	The type of force that tends to move toward the center is _____.	rotary force	centrifugal force	centripetal force	accelerated force
2872	Which among the cutting tool materials retains the lowest wear resistance when the tool bit is used in machining hard metal materials through the	Cemented carbide	High speed steel	Cast alloy	Ceramics

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	modern center lathe machine onboard?				
2873	What shape or form of the metal material can the electric shaper onboard be used safely and effectively?	Flat	Circle	Triangular	Round
2874	Cutting tools in a shaper can also be used in a _____.	lathe	planer	grinder	circular saw
2875	Which of the following is widely used to supply power to pneumatically-operated hand tools?	Oxygen	Compressed gas	Nitrogen	Air
2876	If the speed of the drill is too great, the drill will _____.	cut slower	cut faster	rapidly dull	not cut
2877	A thread chaser is a hand tool that should only be used for _____.	restoring damage threads	enlarging existing threads	cutting original threads	straightening tapered threads
2878	Which of the following items listed below is a force that tends to make the weight move out in a straight or fly off a target?	Gravitational force	Force impact	Centripetal force	Centrifugal force
2879	Which of the following involves the shaping of metals usually into a rod or tube cross section, by forcing a block of material through appropriate shape disc?	Forging	Sintering	Extruding	Casting
2880	Which of the parts of the center lathe listed below is needed to turn a right head thread into a left head thread?	Indexing dial	Universal chuck	Tool post	Feed screw
2881	How do you make it easier for a hand hacksaw to cut a work piece?	It will dig into the work piece and tend to whirl around	It will not break cleanly through the bottom of the work piece	It will cut an elongated hole in the bottom of the work piece	It will form a tapered hole in the bottom of the work oiece
2882	The proper method of stopping the progress of the drill boring through the work in a standard drill press is by _____.	nick mark the chuck motion	using a depth stop	marking the drill bit	adjusting the spindle return spring
2883	What is the kind of metal material to be given the highest revolution using the center lathe onboard with a high-speed tool bit	Bronze	Mild steel	Cast iron	Aluminum

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	without coolant for a safe and effective machining?				
2884	One of the steps required to increase the drilling speed of the drill press is to _____.	move the drive belt to a smaller diameter motor pulley	move the drive belt to a smaller diameter spindle pulley	change the terminal connections of the drive motor	change to a larger diameter spindle
2885	Shapers cutting tool and its tool slide is controlled by the _____.	vertical feed handle	number of strokes	rocker arm movement	horizontal feed handle
2886	In a simple machine gearing, which of the following is called the follower gear and driving gear?	Helical	Reduction	Pinion	Idler
2887	Which of the following permits the freedom of the pinion to take up its correct alignment with the gear wheel?	Pinion shaft	Rotor shaft	Flexible coupling	Fixed coupling
2888	In order to tighten the bolts of a diesel engine crankpin bearing to the exact tension specified by the engine manufacturer, you should use a/an _____.	monkey wrench	adjustable wrench	pipe wrench	torque wrench
2889	Which type of motion does a cutting tool of a shaping machine encounters in cutting a work secured in a vise?	Back and forth	Rotary	Circulate	Up and down
2890	Which of the following devices listed below should be used to reshape a grinding wheel?	Oil stone	Round nose tool	Wheel dressing tool	Sharp nose tool
2891	Which of the files listed will have coarsely spaced teeth?	Dead smooth cut	Smooth cut	Second cut	Bastard cut
2892	Which of the following items below defines the amount of the tool advanced per revolution on a lathe machine?	Depth	Speed	Gear	Feed
2893	For a safe and effective threading operation on a lathe machine, the desired number of threads can be perfectly attained by using the_____.	series of gears	speed of chuck	adjustment of belts	angle tool bit
2894	A taper shank drill is removed from the drill press spindle with a	taper punch	leather mallet	vice grip	drill drift

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	_____.				
2895	Which angle are you looking for when center gage is used?	Thread pitch	Drill center	60 deg cutting tool	Center punch
2896	Why is the acetylene working pressure being kept below 15 psig when making gas welding or burning?	To prevent a possible torch backfire	To prevent acetone fire	To prevent torch flameout	To prevent explosion
2897	To properly drill an oil hole in a bushing in a lathe machine, you would mount the crotch center in the _____.	tailstock	universal chuck	3-jaw chuck	tool post
2898	How is the proper storage of oxygen and acetylene cylinders should be considered?	Horizontal with the cylinder caps off	Upright with the cylinder caps screwed on	Horizontal with the cylinder caps screwed on	Upright with the cylinder caps off
2899	For mild steel and general work the correct angle of a drill point is _____ degrees.	118	29	45	90
2900	Safety precautions for the operator of the milling machine should be aware. If proper precautions are taken dangers can be avoided and_____.	safe and worry free operation can be assured	safe and profitable operation can be assured	low maintenance cost can be assured	fast operation can be done
2901	Which of the wrenches listed practically eliminates the possibility of its slipping off while tightening a nut or bolt?	Crescent wrench	Monkey wrench	Box end wrench	Open end wrench
2902	In Lathe machine the gear between the driver and the follower gears in a simple train is known as a/ an intermediate gear or _____.	pinion	idler	helical	reduction
2903	The drill size is marked on the_____.	Shank	Point	Margin	Flute
2904	Most modern lathes for feed and thread lead are provided with_____.	cutting tool	quick change gear	reduction gears	pulley
2905	Before using an all-purpose electric measuring instrument (multimeter) utilizing internal batteries to supply power for resistance measurements	remove all the batteries	calibrate using a known external resistance	remove one of the batteries	select the proper resistance range

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	you should FIRST____.				
2906	Knowing the construction and the operating action of the milling machine will lessen the chance of the machine from being_____.	damaged seriously	cleaned frequently	damaged frequently	used frequently
2907	To obtain a 1/2 inch per foot taper on an 18 inch workpiece the tailstock of the lathe must be set over _____	7/8 inch	3/4 inch	1/2 inch	3/8 inch
2908	The maximum speed (surface feet per minute) for a rough machining of a carbon steel material if a high-speed cutter is used in the operation of the modern milling machine onboard is _____.	100 rpm	110 rpm	80 rpm	90 rpm
2909	In the event of power failure during cargo loading operations the movement of an electric powered cargo winch will be stopped by_____.	the weight of the load on the boom	a manual override switch	a spring set brake	a hand operated band brake
2910	When tightening the nozzle nut of fuel injector which of the following tools is used?	Torque wrench	A spanner and an extension	pipewrench	close wrench
2911	An inert gas used as shielded gas in MIG and TIG welding is_____.	cadmium	argon	acetylene	copper
2912	When renewing sections of pipe in a hydraulic system the nominal pipe size of the piping always indicates the ____	actual outside diameter	wall thickness	size for threaded connections	actual inside diameter
2913	Before measuring an unknown resistance with an ohmeter you should_____.	adjust the meter s pointer to mid-scale	short the test leads and calibrate the meter reading to zero	change the meter s batteries	center the meter s pointer at infinity
2914	The taper produced by a lathe taper attachment is determined by setting the _____	tailstock off center	compound rest angle	guide (swivel) bar	automatic cross feed
2915	Which part of the universal and plain type milling machine listed	Swiveled table	Backlash eliminator	Speed dial	Over arm positioning

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	below can be found on both types?				
2916	To avoid deformation when cutting thin sheet metal while using a handheld hacksaw it should be placed between two_____.	pieces of cloth	pieces of sand paper	blocks of wood	blocks of steel
2917	Which of the following metal material has the lowest cutting speed for an effective rough cutting operation if a high-speed cutter is to be used in the modern milling machine onboard?	Milleable iron	Brass	Bronze	Carbon steel
2918	Increasing the feed pressure on a drill as the drill point begins to break through the bottom of the work piece will cause the drill to _____.	cut an elongated hole in the bottom of the work piece	break cleanly through the bottom of the work piece	dig into the work piece and tend to whirl around	form a tapered hole in the bottom of the work piece
2919	Which of the following is the property of a material that enables it to resist strain when stress is applied?	Elasticity	Hardness	Strength	Brittleness
2920	Which of the following commercially available gas fuel when mixed with the proper ratio of oxygen produces a metallurgically neutral flame?	Butane	Carbon dioxide	Nitrogen	Acetylene
2921	Which of the metal materials uses the highest cutting speed for an effective rough cutting in a modern milling machine?	Brass	Carbon steel	Milleable iron	Bronze
2922	If all the metals listed below are two inches in diameter which of those listed can be cut with the highest operating lathe speed?	soft brass	aluminum	cast iron	machine steel
2923	It is the cheapest of the cast metals and can be easily cast into any sizes and forms.	cast uranium	cast Iron	cast steel	cast titanium
2924	What refers to the production of shaped parts from metal powder?	Casting	Extruding	Forging	Sintering

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2925	Which among the materials listed below is used in the manufacture of cutting tools that retains hardness at the highest temperature?	Cemented carbide	Ceramics	High speed steel	Cast alloy
2926	The operation of machining a uniformly roughened or checked surface on round stock in a lathe is called_____.	crosshatching	swaging	knurling	checker
2927	A roughened checkered surfaced is machined by a lathe on round stock using a_____.	checkering tool	threading tool	chamfering tool	knurling tool
2928	A lathe dog fitted with a headless set screw is known as a_____	standard lathe dog	common lathe dog	clamp lathe dog	safety lathe dog
2929	After using a pipe cutter to cut a piece of pipe the inside edge of the pipe should be ____.	deburred with a pipe reamer	cleaned with a pipe cleaner	made square with a taper tool	threaded for a standard pipe fitting
2930	When drilling hole in a piece of work chuked in a lathe you should mount the drill chuck in the_____.	headstock	cross feed	tailstock	compound rest
2931	Which of the listed non-ferrous metal is not included on the group?	Manganese	Steel	Brass	Copper
2932	Brass is an alloy of_____.	copper and aluminum	copper and manganese	copper and tin	copper and zinc
2933	What alloy is used as propeller material?	Manganese and Bronze	Copper and Zinc	Titanium and Bronze	Copper and Tin
2934	What kind of piping materials are used to produce piping in standard extra strong and double extra strong weights?	Plastic	Reinforce cast iron	Copper pipe	Iron
2935	Before making up a flanged joint you should _____.	have a second spare gasket on hand	be certain that the flanges line up squarely	cut grooves in the flange face with a chisel	heat the pipeline to expand the bolt holes
2936	What do you call that instrument use to take misalignment of the crankshaft?	Lead Wire Method	Feeler Gauge	Deflection Gauge	Clock or Dial Gauge
2937	Oil mist detector is an instrument used to detect an oil mist formation in	overheating of oil	dirty oil	low oil level	low oil pressure

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	the engine crankcase caused by _____.				
2938	Which of the following sensing device in a pressure gauge using the Bourdon Principle?	Corrugated cylinder	Metal tube	Diaphragm	Differential pressure cell
2939	Which of these spanners listed below is preferable to use?	Box	Adjustable	Ring	Open Jaw
2940	Which of the following measured with a pyrometer?	Salinity	Engine RPM	Temperature	Pressure
2941	Hoses are easily damaged and require special care for long but what are they reinforced with?	wire	cotton	nylon	canvas
2942	In electric arc welding what purpose does the electrode caoting serve?	it provided a gas shield	controls the metallurgical properties	tolerates poor welding	reduces porosity
2943	Which of the following presents the greatest danger when sharpening a chisel on a grinding machine?	wrong grade of wheel	using too much force	worn wheel	excessive clearance between rest plate grinding wheel
2944	When using a centre lathe why should you short sleeves or close fitting sleeves be worn?	to prevent sleeves being caught on the tool post	to prevent sleeves being caught up on work piece or chuck	to avoid displacing loose equipment on the lathe saddle	to avoid sleeves being snagged on gear change levers
2945	Why must a close fitting buttoned up overall be wprn using a lathe?	to avoid catching on the tool post	to avoid medallions getting caught on the work piece	to prevent metallic chips flying inside the overall	all of these choices
2946	The jacket cooling temperature of the engine is 55.4 C the equivalent to F is _____.	131.72	133.5	130.5	129.75
2947	The change in length per unit length per degree change in temperature is _____.	power theorem	exponent universal	coefficient of linear expansion	joules system
2948	Which of the following is the boiling point of water at sea level?	100 C	105 C	95	212 C
2949	Which of the following material below does a zinc anode protects?	Cast iron	Bronze	Cooper	Cast steel
2950	For a safe and effective threading operation on a	speed of chuck	series of gears	angle tool bit	adjustment of belts

	lathe machine the desired number of threads can be perfectly attained by using the_____.				
2951	Cutting tools in a shaper can also be used in a _____.	lathe	circular saw	planer	grinder
2952	Which type of the file will produce a fine finish when draw filing?	30 in. Hg	10 in. Hg	25 in. Hg	15 in. Hg
2953	Coating the tip of a soldering iron with solder is called tinning; what is the effect of this process?	Second-cut file	Bastard	Single-cut	Double-cut
2954	Which factor tends to increase scale formation on the salt-water side of the heat exchanger?	Protects the tip from scratches.	Prevents the tip from overheating.	Prevents tip oxidation when heated	Add extra weight of the tip.
2955	A man aboard a vessel is raising and lowering his outstretched arms sideways which would mean _____.	a distress signal	hello	you can pass	stay away
2956	Before making up a flanged joint you should _____.	have a second spare gasket on hand	heat the pipeline to expand the bolt holes	be certain that the flanges line up squarely	cut grooves in the flange face with a chisel
2957	What is known as a welding done with a shielded or unshielded carbon or metal electrode?	Gas welding	Forging	Electrode soldering	Arc Welding
2958	How do you call a welding process with the work in the positive pole and the electrode in the negative pole ?	Inert-arc welding circuit	Reverse polarity welding circuit	Straight polarity welding circuit	Shielded-arc welding circuit
2959	Soldering flux aids the soldering process by _____.	softening the metals	hardening the metals	fusing the metals	removing oxides
2960	What do you call a welding process using an electric arc developed between a flux covered electrode and the metal being welded?	Shielded metal arc welding	Flux cored arc welding	Resistance spot welding	Submerged arc welding
2961	While carrying out electric arc welding there is always the danger of _____.	fire	all of these choices	electric shock	developing burns to the retina of the eye
2962	Gasket material/s used in	III only	I only	I and III	II only

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	Freon system is/are _____. I - Asbestos II - Rubber III - Metallic				
2963	Which type of the file will produce a fine finish when draw filing?	25 in. Hg	30 in. Hg	15 in. Hg	10 in. Hg
2964	When draw filing the best file to use in order to create a fine finish is the _____.	inserting a feeler gage to different points of the coupling	using an inside micrometer	inserting a thermocouple	visually adjusting alignment
2965	To anneal a copper it is done by heating into a cherry red color and nthen_____.	double-cut	second-cut file	single-cut	bastard
2966	When welding mild steel with a shielded metal-arc electrode but you are getting only shallow penetration you should _____.	It will become harder	None of the choices	There will be no effect	It will become softer
2967	Soft solders have relatively low melting points. These consist mainly of _____ base alloys.	speed up your electrode travel	use a higher current	use a lower current	stop welding
2968	What would be the main criteria in soldering two metal surfaces?	tin	silver	brass	copper
2969	What type of fits is necessary in the assembly of mating parts with the use of hydraulic press?	Melting point must be lower than that of the metals being joined	Melting point must be such higher than that of the metas being joined	Coating of fux should be carried out to raise the meting point	None of these choices
2970	What precaution should you do in using the hydraulic press to prevent damage of parts?	Transitional fits	Forced fits	Shrink fits	Interference fits
2971	Why should you avoid increased pressure on a drill as the drill point begins to break through the bottom of the work piece?	Do not heat the external part to be mated	Determine the exerted pressure by watching the pressure gauge	Check the weight of the mating parts	Use a gauge to check the temperature
2972	How do you make it easier for a hand hacksaw to cut a work piece?	It will cut an elongated hole in the bottom of the work piece	It will not break cleanly through the bottom of the work piece	It will dig into the work piece and tend to whirl around	It will form a tapered hole in the bottom of the work oiece
2973	Pipe threads are made with the use of _____.	File a nick where the cut is to be started	Apply maximum pressure at the start of the cut	Coat the saw blade with oil before starting the cut	Place the saw blade facing the saw frame

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2974	A side from welding the best material to use in bonding pipes carrying low temoerature liquids or fluids is _____.	Boring tool	Reamer	High speed drill	Inside cutting tool
2975	Which of the following tools must be used with a small hole gage to get an accurate reading in order to determine the diameter of a small hole?	graphite grease	soldering gun	epoxy resin	cold compress
2976	A micrometer torque wrench has a correct torque value when reached _____.	None is correct	Micrometer	A center gage	Wire gage
2977	The size of the drill is marked on the _____.	an audible click is heared and the handle releases	the scale is read on the handle	the dial is read on the handle	a dial lights on the handle
2978	What kind of fault may occur when carrying out ARC WELDING if both filler and the material have INSUFICIENT MELTING.?	margin	shank	point	flute
2979	During cutting in milling when the chips begin to produce long and continuous it is best that the feed is _____.	Bead edge faults	Pores / Porosity	Fusion faults	Under cut
2980	An offset screwdriver is a type of screw driver that is best used for _____.	increase	removed	stopped	decrease
2981	The aligning punch tools are used to _____.	Away from you to correct alignment	Toward you to correct alignment	Closer to the headstock to reduce offset	Away from the headstock to decrease misalignment
2982	It is easier to start for a thread die if the end of the piece of material to be work/threaded is slightly _____.	Make a starting mark for a drill	Completely loosen a jammed bolt	Line up corresponding holes in adjacent parts	Mark centers and lines in layout work
2983	On a blend hole the tapping threads should be finished by using a _____.	peened	chamfered	center drilled	reamed
2984	Which of the following devices should be used to reshape a grinding wheel?	short tap	plug tap	bottoming tap	taper tap
2985	What kind of tool should used to remove a ball bearing from the shaft of a	A wheel dressing tool	An oil stone	A round nose tool	A sharp nose tool

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	motor?				
2986	How many degrees angle have a Reed and Prince Screw driver that has a sharp pointed end with flukes?	slugging wrench	gear puller	come along	drift pin
2987	A heavy duty screwdrivers are made with a square shank to____.	Variable speed screwdriver with a jacobs chuck	Constant rpm screwdriver with a jacobs chuck	Torque limiting screwdriver	Torque limiting screwdriver
2988	Which type of small fine tooth files listed with various cross-sections and with integral handles which is used for die making and general tool room work?	permit striking with a hammer	allow it to used as a pry bar	prevent the shank from bending	allow turning with a wrench
2989	A center gage is used for checking the angle of _____.	Needle files	Rotary files	Taper reamers	Set screws
2990	Which of the following listed the composes sets of hand taps?	drill drift	chisel drift	bull puller	pin drift
2991	A tool used for cutting external pipe threads is called _____.	Taper plug and finish	Short medium and long	Taper plug and bottom	Starting through and finishing
2992	What is the correct angle of a drill point for a mild steel and general work?	Cutter	Stock and die	Threader	Hacksaw and blade
2993	What is the correct hacksaw blade should be used in cutting angular iron and heavy pipe?	118 degrees	120 degrees	90 degrees	29 degrees
2994	What is the meaning of the term marking out?	Locating lines, circles, arcs, points for drilling holes.	Locating lines, circles, arcs, points for drilling holes.	Scratching of lines on the surface of a workpiece.	Indenting of lines on the workpiece.
2995	The tool used for enlarging a hole after drilling operation is called _____.	Boring tool	Counter bore	Countersinking tool	Reamer
2996	Which of the following wrenches is best used for fast and quick tightening or loosening of bolt and nuts with different sizes?	pipe wrench	Combination wrench	Box or close wrench	adjustable wrench
2997	The operation of smoothing and squaring the surface of a round hole which serve as a seat for a nut or the head of a	counterboring operation	spotfacing operation	countersinking operation	tapping operation

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	cap screw is called _____.				
2998	Which of the following statements will best describe a spindle?	The housing in which the different tool holding devices inserted.	The control setting of the feed.	The foundation for column and table.	The downward and upward movement of the spindle.
2999	Which of the follwoing pitches of hacksaw blade is designed for general use in hand frame/hacksawing cutting process?	24 tooth per inch	32 tooth per inch	19 tooth per inch	18 tooth per inch
3000	Which of the following statements will best describe the termpillar/column as a part of a drilling machine?	It houses the pulley that controls the speed of the spindle.	It is the part that provides a solid support for the drill head and worktable.	It is the part that holds the drill chuck or socket.	It is used to change the setting position of the workpiece.
3001	Which of the following machine tools is used for finishing flat or partly curved surfaces of metal pieces and used in the production of flat surfaces on pieces too large or too heavy?	Lathe Machine	Filing Tool	Shaper Machine	Planer Machine
3002	A caliper used to measure depth, inside, and outside diameter of an object at the same time is called _____.	vernier caliper	dial indicator	inside caliper	micrometer caliper
3003	What is the primary advantage of power hand tools as compared with the manually operated hand tools?	Power hand tools reduce manual effort and speeds up operation.	Most power hand tools are portable and can be carried from one place to another.	Power hand tools are handy and easier to operate.	Power hand tools are powerful due to its built-in motor.
3004	What filing method is used for parallel to the longer edge of the workpiece surface and is normally used for finishing process?	Diagonal	Across	Longitudinal	Transverse
3005	A power hand tool which will give rapid succession of sudden torques designed to assemble and disassemble different types of threaded fasteners is called _____.	spanner	impact wrench	combination wrench	torque limiting wrench
3006	Threading dies are used for cutting _____.	external threads	big holes	fine threads	internal threads
3007	A device widely used in holding work while bolted	vise	clamp	v-block	tee bolt

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	on the worktable of the drill press machine is called _____.				
3008	Which statement best describes the purpose of a scriber?	A sharp piercing tool for drawing wide lines on any workpiece.	A sharp pointed tool used to make clean narrow lines on metal workpieces.	Any writing implement for making lines on a workpiece.	Any sharp pointed object that can mark out lines on a metal workpiece.
3009	Datum means _____.	any given point in a workpiece to start lay out lines	a starting point for cutting or removing of metals in a workpiece	a reference position from which all dimensions are taken and all measurements are made	any point of reference in a workpiece for starting a marking out line
3010	What kind of pipe is used to carry liquid containing acids which is flexible and can withstand vibrations and expansion?	Brass pipe	Copper pipe	Stainless pipe	Lead pipe
3011	You were tasked to mark out circles and arcs on a metal burrs inside the newly cut pipe?	Divider	Scriber	Compass	Trammel
3012	Which pipe is used for handling corrosive liquid and will handle high pressures and can be used underground?	Steel pipe	Copper pipe	Wrought iron pipe	Plastic or PVC pipe
3013	Which stabilizing system provides a righting or anti-rolling force as a result of the delayed flow or fluid in suitably position transverse containers ?	Tank stabilizer	External stabilizer	Fin stabilizer	Internal stabilizer
3014	Parts of gas welding flame that is visible only when there is an equal mixture of acetylene and oxygen.	Heat envelop	Acetylene feather	Cone	Inner cone
3015	Carburizing flame is used for _____.	heating, cutting and for most welding work.	welding aluminum alloys and for soft solder.	welding cast iron, brass, bronze and zinc alloys and for bracing.	welding stainless steel.
3016	When the flame is directed to the spot that needs to be heated and hardened it is said to be _____.	Weld size	Arc length	Arc penetration	Length of weld
3017	A group of welding process done by heating	Resistance welding	Oxygen - hydrogen	Spot welding	Gas welding

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	the metal with a gas flame or flames with or without filler is called _____.		welding		
3018	Which of the following is charteterized by an initial bang followed by whistling or screeching sound from the continued combustion?	Normal flame	Backfire	Flashback	Sustained backfire
3019	What kind of line is use to denote visible line?	continuous thin line	long chain	short chain	continuous thick line
3020	Line use to indicate symmetry about an axis and location of centers is called _____.	Phantom line	Center line	Leader line	Extension line
3021	A line used mainly in sketching made of light line drawn with very little pressure on the pencil is called _____.	Visible object line	hidden object line	Construction line	Centre line
3022	This rololed ingot has a rectangular cross sectional area with a min. width of 10 in.(250 mm)and a min thickness of 1.15 in. (38.1 mm). what is ts callses>	bloom	slab	stab	billet
3023	What is used to join lengths of pipe, change direction of piping run, connect pipe branches and connect pipes of different diameter?	Pipe connectors	Pipe threading tools	Pipe fittings	Pipe adaptors
3024	What is the undercut portion of the twist drill body between the flute and margin it purpose is to reduce friction between the drill and the hole during drilling operation?	Body clearance	Twist drill argin	Chisel edge	Web
3025	You were tasked to mark out circles and arcs on a surface of your metal work piece. What marking tool are you going to use?	Trammel	Scriber	Compass	Divider
3026	In turning the bolt or nut, when should you push and pull on a wrench?	Always pull	Always push	Push to loosen, pull to tighten	Pull to loosen, push to tighten
3027	A gauge that measures small distances or thicknesses between its two faces, one of which	micrometer caliper	Vernier caliper	dial indicator	dial gauge

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	can be moved away from or toward the other by turning a screw with a fine thread is pertain is called _____.				
3028	drilling machine is generally light, high-speed and has only one hand feed mechanism, which enables the operator to feel how the drill is cutting and to control the down feed pressure accordingly?	sensitive drill press	upright drill press	radial arm press	portable drill press
3029	A tool actuated by an additional power source and mechanism other than the solely manual labor used with hand tools is called ____.	hand power tools	power tools	pneumatic tools	machine tools
3030	What is the recommended working pressure for acetylene and oxygen regulator respectively for normal welding, brazing and heating?	Acetylene - 1.7 kg/cm2, Oxygen - 0.8 kg/cm2	Acetylene - 0.8 kg/cm2, Oxygen - 8.0 kg/cm2	Acetylene - 0.3 kg/cm2, Oxygen - 0.3 kg/cm2	Acetylene - 0.2 kg/cm2, Oxygen - 1.7 kg/cm2
3031	Which of the following statements is TRUE about an dielectric?	a non-conductor of electricity	a conductor of electricity	constant pressure sensor	two electrically conductive surfaces
3032	Which of the following is a pressure sensor that has a metal diaphragm positioned across a metal conductive plate with the two separated by a dielectric?	a dielectric pressure sensor	a strain gage pressure sensor	a bourdon pressure sensor	a capacitance pressure sensor
3033	This alphabet of line is used to indicate extent of dimensions.	Phantom line	Visible line	Extension line	Leader line
3034	Which of the following laying out tools commonly used in checking the perpendicularity of an object?	Square	Steel rule	Steel protractor	Vernier caliper
3035	Which of the tube types listed can be considered to serve as downcomers at low firing rates, and as generating tubes at high firing rates on some boilers?	Water wall tubes	Header tubes	Blowdown tubes	Water screen tube
3036	How do you control freshwater heating	Regulate by-pass valve	Regulate outlet valve	Regulate vent valve	Regulate inlet valve

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	temperature in the evaporator side of a Fresh Water Generator?				
3037	The boiler tubes that increase the temperature of steam without increasing its pressure is called _____.	superheater	generating tubes	wall tubes	screen tubes
3038	What is the most serious exterior surface problem of watertube boiler that is detrimental for its efficient operation?	scale formation	corrosion	casing leak	carbon build up
3039	A selective localized attack characterized by the formation of rounded deep cavities on metal surfaces is known as _____.	pitting	scalling	dullying	dealloying
3040	Which of the followingso retard the transfer of heat that longer time will be required to raise steam on the boiler?	Untreated boiler water	Scale coatings	Dissolved solids	Carry over solids
3041	What is the purpose of easing off the main stop valve during initial firing of boiler from cold state?	To avoid uneven metal expansion	To relieve pressure in the boiler	To avoid thermal stress	To avoid metal stress
3042	When firing a boiler in local manual control, an increase in boiler load must be accompanied by a/an _____.	increase in the fuel oil flow before an increase in the forced draft pressure	increase in the forced draft air pressure before an increase in the fuel oil flow	decrease in the forced draft air pressure before an increase in the fuel oil flow	decrease in the forced draft air pressure before a decrease in the fuel oil flow
3043	Which is circulating inside water tube boilers that are arranged as walls?	Water	Steam	Fuel oil	Water wall
3044	Which of the tube types listed can be considered to serve as downcomers at low firing rates, and as generating tubes at high firing rates on some boilers?	Super heater tubes	Water wall tubes	Header tubes	Water screen tube
3045	In order to achieve an even expansion of parts when starting a boiler from cold condition, how do you fire the boiler?	Manually	Continously	Gradually	Abruptly
3046	Which of the following alarms will cause an automatic shut down of	low water level alarm	low pressure alarm	high oil temperature	low low water level alarm

	boiler for safety?				
3047	Which reduces boiler efficiency and also may lead to tube failure due to overheating?	soot	boiler scale	feed pH	ammonia
3048	An air blower driven by an electric motor used to supply pressurized air into the combustion chamber is called _____.	Soot blower	Air vent	Surface blow valve	Draft fan
3049	The rows of tube installed along the walls, floor and roof of the furnace are called _____.	water walls	downcomers	water headers	screen tubes
3050	What is the required minimum number of safety valves fitted in a boiler?	6	4	2	1
3051	At what temperature does water boil at 1 Atm?	100 deg C	50-60 deg C	48 deg F	100 deg F
3052	First, second, and third degree burns are classified according to the:	Area of the body burned	Source of heat causing the burn	Size of the burned area	Layers of skin affected
3053	The ABC-rules are an important part of the First Aiders know how. What does the First Aid ABC-rules stands for?	Anything But Continuation	Adults Behind Children	A Better Control	Airway Breathing Circulation
3054	When should training in personal survival techniques be given?	After one period at sea.	Before being employed.	After joining the ship.	During the first week on board.
3055	What does the abbreviation ABC mean in first aid?	Air, Breathing, Circulation.	Air, Burning, Critic.	Abandon, Balance, Circulation.	Air, Breath, Concentration.
3056	What first aid is appropriate for skin contact with tank residue from a cargo of leaded gasoline?	any conversation with the patient	instructing bystanders	touching the patient before washing your hands	unnecessary haste and appearance of uncertainty
3057	First aid treatment for small cuts and open wounds is to _____.	apply a hot towel to purge the wound, then medicate and cover it	stop the bleeding, clean, medicate, and cover the wound	apply an ice pack to the wound and cover it when the bleeding stops	lay the patient down and cover the wound when the bleeding stops
3058	Treatment of burns and scalds depends on the severity of the injury. What is the correct thing to do for minor burns and scalds?	Apply lotions, ointments or fat to the injury.	Break blisters, remove any loose skin or foreign objects from the injured area.	Remove all sticky clothing from the casualty.	Place the injured part under slowly running cold water for at least 10

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					minutes, but preferably until the pain is gone. If no water is available, use any cold, harmless liquid.
3059	The most effective first aid treatment for chemical burns is to immediately _____.	flood the affected area with water	apply ointment to burned area	wrap the burn with sterile dressing	apply an ice pack to the burned area
3060	A high-velocity fog stream can be used in fire fighting situations to drive heat and smoke ahead of the fire fighters in a passageway. This technique should only be used when:	At least two fog streams can be used	There is an outlet for the smoke and heat	The fire is totally contained by the ship?s structure	Using a 2
3061	A device used to immobilize fractures and help prevent bone displacement is:	Bandage	Stretcher	Tourniquet	Splint
3062	If water is rising in the bilge of a survival craft, your should first:	Abandon the survival craft	Check the cracks in the hull	Check the bilge drain plug	Shift all personnel to the stern
3063	Every inflatable life raft , inflatable lifejacket and hydrostatic release units shall be serviced_____	every 24 months.	every 12 months.	every 18 months.	every 36 months.
3064	As with heat burns the damage of frostbite /hypothermia may be either superficial or deep, and the affected tissues may be destroyed. What kind of first aid should be given a person with frostbite ?	Hand or body heat the affected parts skin-to-skin (e.g. frozen hand in persons opposite armpit...)	Give the casualty a cigarette.	Heat the affected area with hot-water bottles.	Rub the affected area.
3065	As with heat burns the damage of frostbite /hypothermia may be either superficial or deep, and the affected tissues may be destroyed. What kind of first aid should be given a person with frostbite ?	Give the casualty a cigarette.	Rub the affected area.	Hand or body heat the affected parts skin-to-skin (e.g. frozen hand in persons opposite armpit...)	Heat the affected area with hot-water bottles.
3066	The MOST important element in administering CPR is:	Administering of oxygen	Starting the treatment quickly	Having the proper equipment for	Treating for traumatic shock

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				the process	
3067	As with heat burns the damage of frostbite /hypothermia may be either superficial or deep, and the affected tissues may be destroyed. What kind of first aid should be given a person with frostbite ?	Heat the affected area with hot-water bottles.	Rub the affected area.	Give the casualty a cigarette.	Hand or body heat the affected parts skin-to-skin (e.g. frozen hand in persons opposite armpit...)
3068	Which position is the best to stop bleeding from the nose?	Laying on the back, holding a wet, cold towel on the top of the nose.	Laying on the back, leaning the head as much back as possible.	Sitting on a chair, leaning forward, with two fingers pressing the nose together.	Holding the nose above steamed water.
3069	First aid to poisoning bitten by spider. I. clean wound by alcohol I I. lie down victim keep quiet	I ,II & III	I & III	I & II	II & III
3070	What is the primary purpose for applying a splint in first aid?	all of these	It controls bleeding	It immobilizes fractured bone	None of the stated options
3071	While underway, fire break out in the forward part of the vessel. Whenever practicable, what will be the first thing you will do if your are on watch?	Keep going on half spead	Call for assistance	Put the vessel's stern into the wind	Abandonship to windward
3072	First aid treatment for small cuts and open wounds is to_____ .	apply a hot towel to purge the wound, then medicate and cover it	stop the bleeding, clean, medicate, and cover the wound	apply an ice pack to the wound and cover it when the bleeding stops	lay the patient down and cover the wound when the bleeding stops
3073	A shipmate suffers a heart attack and stops breathing. You must:	Check his pulse and start CPR	Let him lie on his side	Administer oxygen immediately	Make the victim as comfortable as he could be
3074	Which one of the listed routine test and inspections of life-saving appliances is not required by the regulations?	Inspection of life-saving appliances, including lifeboat equipment shall be carried out monthly to ensure they are complete and in good order	lifeboat engines to be run for at least 3 minutes every week	Survival crafts and rescue boats with launching appliances shall be visually inspected weekly to ensure they are ready for use	general emergency alarm to be tested daily

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3075	First aid means _____.	setting of broken bones	dosage of medications	emergency treatment at the scene of the injury	medical treatment of accident
3076	A lifejacket should be provided with_____ .	a whistle	a whistle and a light	a light	On ships built after February 1992 all lifejackets should be fitted with a light
3077	In reviving a person who has been overcomed by gas fumes, which of the following would you AVOID doing?	Applying artificial respiration and massage	Prompt removal of the patient from the suffocating atmosphere	Keeping him warm and comfortable	Giving stimulants
3078	If it is necessary to remove a victim from a life threatening situation, the person giving first aid must_____ .	avoid subjecting the victim to any unnecessary disturbance during movement	pull the victim by the feet	not move the victim to a another location until all injuries have been assessed	place the victim on a stretcher before attempting removal
3079	A person slowly feel more sleepy and thirsty. The skin become very dry and there is a sweet taste of the breath. The glucose reaction shows positive. What kind of medicine will the person need as soon as possible?	Sugar lump, sugar drink or something sweet	Insulin	A glass of cold milk	Nothing at all
3080	The primary objective of First Aid is:	To give life	To help a patient	To prevent further injury	To alleviate pain
3081	When giving first aid you should avoid _____.	Instruction by standers	Unnecessary haste and appearance of uncertainty	Any conversation with the patient	Touching the patient before washing your hands
3082	A seaman has a small, gaping laceration of the arm that is not bleeding excessively. What can be done as an alternative to suturing to close the wound?	Apply butterfly strips, then a sterile dressing.	Apply a compression bandage.	Wrap a tight bandage around the wound.	Use temporary stitches of sail twine.
3083	In the event of fire in the crew's quarter, one of your first act is to:	Ventilate the quarters	Attempt to put out the fire by portable fire-extinguisher	Close all ventillation to the quarters	Prepare to abandonship
3084	A drip tray containing oil is on fire. The only fire fighting equipment available is water hose with spray jet/spray	Water should not be used on any type of oil fire.	The water can be applied in a fine spray starting from the front in a	Water should be applied to the oil in a single jet only.	Water should be applied in a jet to the back of the fire.

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	nozzle. How, if at all, should you attempt to put out this fire using water?		sweeping motion.		
3085	First aid treatment for battery acid or alkali burns, especially in the eyes, includes_____ .	all of the above may be acceptable treatments depending on the severity of the burn	wiping the affected area with a clean dry cloth and resting quietly for several hours	flushing with large amounts of fresh water and seeking medical attention ashore or by radio	drying the acid or alkali with a rag followed by applying a light cream
3086	A tourniquet should be used to control bleeding ONLY _____.	with puncture wounds	when all other means have failed	to prevent bleeding from minor wounds	when the victim is unconscious
3087	You are alone and administering CPR to an unconscious adult victim showing no signs of life. How many chest compressions and breath inflations should you administer?	30 compressions and 2 inflations, 5 cycles in 2 minutes	5 compressions and 1 inflation, once per minute	15 compressions and 2 inflations, once per minute	15 compressions and 4 inflations, 2 cycles per minute
3088	A crew member suffering from hypothermia should be given _____.	a small dose of alcohol	a large meal	treatment for shock	a brisk rub down
3089	The greatest danger in cold temperatures, when at sea in an inflatable liferaft is _____.	asphyxiation due to keeping the canopy closed	starvation	collapsing of the raft due to the cold temperature	hypothermia caused by the cold temperature
3090	You are alone and administering CPR to an unconscious adult victim showing no signs of life. How many chest compressions and breath inflations should you administer?	15 compressions and 4 inflations, 2 cycles per minute	15 compressions and 2 inflations, once per minute	5 compressions and 1 inflation, once per minute	30 compressions and 2 inflations, 5 cycles in 2 minutes
3091	A crew member suffering from hypothermia should be given _____.	treatment for shock	a small dose of alcohol	a large meal	a brisk rub down
3092	The greatest danger in cold temperatures, when at sea in an inflatable liferaft is _____.	starvation	hypothermia caused by the cold temperature	collapsing of the raft due to the cold temperature	asphyxiation due to keeping the canopy closed
3093	If your skin comes in contact with liquid ammonia refrigerant, you should immediately _____.	remove all necessary clothing	contact physicians health care	flush the affected area with water	apply an antibacterial ointment
3094	Which of the listed types of bone fractures would be considered as the most serious?	Hairline	Crack	Closed	Compound

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3095	Artificial respiration may be necessary in cases of _____. I. drowning II. electrocutio III. poisoning	I only	I, II & III	II & III	I & II
3096	A patient has an electrical burn, after checking breathing and pulse, _____.	apply ointment to the burn area and wrap with clean cloth	remove any dirt or charred skin from the area of the burn	look for a second burn, which may have been caused by the current exiting the body	locate the nearest water source and flood the burn with water for five minutes
3097	One of the primary steps in assisting someone who has been overcome by ammonia vapors is to _____.	give the patient plenty of fresh air	loosen all clothing	provide the victim with smelling salts	rinse the affected area with water
3098	A crew member has a small, gaping laceration of the arm that is not bleeding excessively. What can be done as an alternative to suturing to close the wound?	Use temporary stiches of sail twin.	Apply butterfly strips, then a sterile dressing.	Massage the area to maintain circulation.	Wrap a tight bandage around the wound.
3099	A patient suffering from heat exhaustion should first be _____.	keep standing and encouraged to walk slowly and continuously	placed in a sitting position with the head lowered to the knees	given a glass of water and told to return to work after 15 minutes of a rest	escorted to a cool space
3100	When administering artificial respiration, it is of the utmost importance to _____.	use the mouth-to-mouth method	use rhythmic pressure method	clear airways	know all approved methods
3101	After a person has been revived by artificial respiration, they should ne _____.	walked around until he is back to normal	kept lying down and warm	allowed to do as he wishes	given several shots of whisky
3102	Your vessel has 3 lifeboats on each side. The aftermost boat on the port side is designated as boat number _____.	3 PORT	3	6	5
3103	You must ensure that lifesaving equipment is_____.	on the topmost deck of the vessel at all times	inaccessible to passengers	locked up	readily accessible for use
3104	While at your lifeboat station you hear a signal consisting of two short blasts of the whistle. This signal indicates _____.	commence lowering boats	secure from boat stations	stop lowering boats	abandon ship
3105	When whistle signals are used for launching	lower all boats	raise all boats	drill is over secure all boats	use the float-free method

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	lifeboats one short blast means _____.				only
3106	The boat command that means complete the stroke and level the oars horizontally with the blades trimmed fore and aft is _____.	Up oars	Oars	Hold water	Way enough
3107	Each person on a MODU carrying immersion suits must wear the immersion suit in a boat drill or participate in a drill which includes donning the suit and being instructed in its use at least once every _____.	2 months	6 months	3 months	1 month
3108	Your vessel has 3 lifeboats on each side. The middle boat on the starboard side is designated as boat number _____.	2	4	3	2 STARBOARD
3109	A fully loaded motor-propelled lifeboat must be capable of attaining a speed of at least _____.	3 knots in smooth water	6 knots in rough water	6 knots in smooth water	3 knots in rough water
3110	A MODU must have a self-contained breathing apparatus to be used as protection from gas leaking from a refrigeration unit. To meet this requirement you may use _____.	an oxygen breathing apparatus provided that the device has been inspected within three years	the same self-contained breathing apparatus required with the fireman s outfit	a gas mask certified by the Mine Safety and Health Administration	a portable ventilation system that will provide a complete change of air every three minutes
3111	When launching a lifeboat frapping lines should be rigged _____.	at the embarkation deck	after the boat is in the water	before the gripes are released	before the boat is moved from the davits
3112	Inflatable liferafts are provided with a/an_____.	canned milk	oil lantern	towing connection	portable radio
3113	Seawater may be used for drinking_____.	if gathered during or immediately after a hard rain	under no conditions	at a maximum rate of two ounces per day	after mixing with an equal quantity of fresh water
3114	The grab rail of a metal lifeboat is normally located_____.	at the bow and at the stern	near the top of the gunwale	along each side of the keel	along the turn of the bilge
3115	Drinking salt water will_____.	dehydrate you	be safe if mixed with fresh water	protect against heat camps	prevent seasickness
3116	A safety feature provided on all inflatable liferafts is_____.	built in seats	internal releasing hooks	water stabilizing pockets	overhead safety straps

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3117	Which approved lifesaving device is required for each person on board a motor vessel carrying passengers?	Ring life buoy	Buoyant cushion	Buoyant vest	Life jacket
3118	The lights on the outside of the canopy on an inflatable liferaft operate_____.	by a light sensor	by a switch at each light	by turning the globe clockwise	automatically when the raft is inflated
3119	Each crewmember has an assigned firefighting station. This assignment is shown on the_____.	fire fighting plan	muster list	Certificate of Inspection	shipping articles
3120	Each person on the rig has a designated area to proceed to in the event of a fire. This assignment is shown clearly on which of the following documents?	Muster List (Station Bill)	Certificate of Inspection	fire fighting plan	shipping articles
3121	You are at sea in an inflatable liferaft. In high latitudes the greatest danger is_____.	collapse of the raft due to cold temperatures	starvation	asphyxiation due to keeping the canopy closed	hypothermia caused by cold temperature
3122	The purpose of a water spray system on a covered lifeboat is to_____.	keep the lifeboat warm in a cold climate by applying heated water spray from the engine to the boat	keep the lifeboat from reaching combustion temperature while operating in a fire	cool the lifeboat engine	put out a fire inside the lifeboat
3123	Which type of davit is not considered to be a mechanical davit?	Crescent	Sheath-screw boom	Quadrantal	Radial
3124	Under normal conditions a liferaft is released from its cradle by_____.	cutting the restraining strap	unscrewing the turnbuckle on the back of the cradle	pushing the plunger on the center of the hydrostatic release	lifting one end of the raft
3125	The light on a life jacket must be replaced_____.	when it is no longer serviceable	each year after installation	when the power source is replaced	every six months
3126	Water pockets on the underside of an inflatable liferaft are for_____.	maneuverability	stability	easy drainage	catching rain water
3127	The vessel s Emergency Position Indicating Radio beacon (EPIRB) must be tested_____.	every 2 months	weekly	monthly	every 3 months
3128	Lifeboat winches on mobile offshore drilling units are required to be	Only after conducting a boat drill	Every year	Every 6 months	Every 3 months

	inspected and an entry made in the logbook. How often should this entry be made?				
3129	A new liferaft has been installed on your vessel. The operating cord should be_____.	checked to see that it s unattached	coiled neatly on the raft container	attached to the raft stowage cradle or to a secure object nearby with a weak link	faked on deck and lead through a chock
3130	How deep should the sternum be depressed when applying chest compressions on an adult victim during CPR?	1-1/2 to 2 inches	1 to 1-1/2 inches	1/2 to 1 inch	1/2 inch or less
3131	Which statement describes a compound fracture?	a fracture where more than one bone is broken	a fracture where the bone may be visible	a fracture where the same bone is broken in more than one place	a fracture where there is never any internal bleeding
3132	Which statement is CORRECT with respect to inserting an airway tube?	A size 2 airway tube is the correct size for an adult.	Only a trained person should attempt to insert an airway tube.	The airway tube will not damage the victim s throat.	Inserting the airway tube will prevent vomiting.
3133	What is the preferred method of controlling external bleeding?	pressure on a pressure point	direct pressure on the wound	elevating the wounded area	a tourniquet above the wound
3134	How are first second and third degree burns classified?	according to the source of heat causing the burn	according to the area of the body burned	according to the layers of skin affected	according to the size of the burned area
3135	What should you do if a crew member is unconscious and the face is flushed?	Lay the crew member down with the head and shoulders slightly raised	Administer a liquid stimulant	Lay the crew member down with the head lower than the feet	Attempt to stand the crew member upright to restore consciousness
3136	If a person is unconscious from electric shock the first action is to remove him from the electrical source. What is the secondary action?	Massage vigorously to restore circulation	Check for serious burns on the body	Determine if he is breathing	Administer ammonia smelling salts
3137	How should you treat a person suffering from heat exhaustion?	Cover him with a light cloth	Administer artificial respiration	Put him in a tub of ice water	Give him sips of cool water
3138	For small first-degree burns what is the quickest method to relieve pain?	Apply petroleum jelly	Apply a bandage to exclude air	Immerse the burn in cold water	Administer aspirin
3139	Chemical burns are caused by the skin coming in contact with what	Alkalies but not acids	Acids or alkalies	Acids but not alkalies	Diesel oil

	substance(s)?				
3140	In any major injury first aid includes the treatment for the injury and what secondary condition?	For traumatic shock	Application of CPR	Removal of any foreign objects	Administration of oxygen
3141	A person has suffered a laceration of the arm. Severe bleeding has been controlled by using a sterile dressing and direct pressure. What should you do next?	Apply a tourniquet to prevent the bleeding from restarting.	Administer fluids to assist the body in replacing the lost blood.	Apply a pressure bandage over the dressing.	Remove any small foreign matter and apply antiseptic.
3142	What is the appropriate first aid treatment for small cuts and open wounds?	Apply a hot towel to purge the wound then medicate and cover it	Stop the bleeding clean medicate and cover the wound	Lay the patient down and cover the wound when the bleeding stops	Apply an ice pack to the wound and cover it when the bleeding stops
3143	A victim has suffered a second-degree burn to a small area of the lower arm. What is the proper treatment for this injury?	Immerse the arm in cold water for 1 to 2 hours open any blister and apply burn ointment	Apply burn ointment remove any foreign material and insure that nothing is in contact with the burn	Open any blisters with a sterile needle apply burn ointment and bandage	Immerse the arm in cold water for 1 to 2 hours apply burn ointment and bandage
3144	What is of importance when a patient has an electrical burn?	Look for a second burn which may have been caused by the current passing through the body	Apply ointment to the burn area and wrap with clean cloth	Remove any dirt or charred skin from the area of the burn	Locate the nearest water source and flood the burn with water for five minutes
3145	If a rescuer finds an electrical burn victim in the vicinity of live electrical equipment or wiring what would be the first action to take?	Remove the patient from the vicinity of the live electrical equipment or wiring	Flush water over any burned area of the patient	Apply ointment to the burned areas on the patient	Get assistance to shut down electrical power in the area
3146	While carrying out artificial respiration how should rescuers be changed out?	By not stopping the respiration for more than 5 minutes	Without losing the rhythm of respiration	Only with the help of two other people	At ten-minute intervals
3147	How should you FIRST treat a simple fracture?	Alternately applying hot and cold compresses	Applying a tourniquet	Attempting to set the fracture	Preventing further movement of the bone
3148	What is/are the treatment/s of heat exhaustion consist of?	Moving to a shaded area and laying down	Bathing with rubbing alcohol	Placing the patient in a tub of cold water	Drinking a cup of coffee
3149	What is the principle	Placing the	Bathing with	Cooling	Drinking ice

	treatment of sunstroke?	patient in a tub of icy cold water	rubbing alcohol	removing to shaded area and lying down	water
3150	What should a person do after being revived by artificial respiration?	Give several shots of whiskey	Allow him to do whatever he wishes	Walk around until he is back to normal	Keep lying down and warm
3151	Where can a rescuer most easily check to determine whether or not an adult victim has a pulse?	Radial artery in the wrist	Femoral artery in the groin	Carotid artery in the neck	Brachial artery in the arm
3152	What should you do when treating a person for third-degree burns?	Cover the burns with thick sterile dressings	Break blisters and remove dead tissue	Make the person stand up and walk to increase circulation	Submerge the burn area in cold water
3153	How does bleeding from a vein appear?	Bright red and slow	Bright red and spurting	Dark red and has a steady flow	Dark red and spurting
3154	After pinching a victim s nostrils how can a rescuer best provide an airtight seal during mouth to mouth ventilation?	By holding the jaw down firmly	By applying his mouth tightly over the victim s mouth	By cupping a hand around the patient s mouth	By keeping the head elevated
3155	When it is necessary to remove a victim from a life threatening situation what must the person giving first aid do?	Pull the victim by the feet	Avoid subjecting the victim to any unnecessary disturbance	Carry the victim to a location where injuries can be assessed	Place the victim on a stretcher before attempting removal
3156	What are the symptoms of heat stroke?	Black and cold skin	Cold and dry skin low body temperature	Cold and moist skin high body temperature	Hot and dry skin high body temperature
3157	What should you do if a crew member is having an epileptic convulsion?	Completely restrain the victim	Give the victim one 30 mg. tablet of phenobarbital	Give the victim artificial respiration	Keep the victim from injuring him or herself
3158	In all but the most severe cases how should bleeding from a wound be controlled?	Applying direct pressure to the wound	Applying a tourniquet	Submerging the wound in lukewarm water	Cooling the wound with ice
3159	How deep should the sternum be depressed when applying chest compressions on an adult victim during CPR?	1/2 inch or less	1/2 to 1 inch	1 to 1-1/2 inches	1-1/2 to 2 inches
3160	Which statement describes a compound fracture?	a fracture where the same bone is broken in more than one place	a fracture where the bone may be visible	a fracture where more than one bone is broken	a fracture where there is never any internal bleeding
3161	Which statement is CORRECT with respect to	The airway tube will not damage	A size 2 airway tube is the	Only a trained person should	Inserting the airway tube will

	inserting an airway tube?	the victim s throat.	correct size for an adult.	attempt to insert an airway tube.	prevent vomiting.
3162	What is the preferred method of controlling external bleeding?	direct pressure on the wound	a tourniquet above the wound	elevating the wounded area	pressure on a pressure point
3163	How are first second and third degree burns classified?	according to the size of the burned area	according to the area of the body burned	according to the source of heat causing the burn	according to the layers of skin affected
3164	What should you do if a crew member is unconscious and the face is flushed?	Lay the crew member down with the head lower than the feet	Administer a liquid stimulant	Attempt to stand the crew member upright to restore consciousness	Lay the crew member down with the head and shoulders slightly raised
3165	If a person is unconscious from electric shock the first action is to remove him from the electrical source. What is the secondary action?	Administer ammonia smelling salts	Check for serious burns on the body	Determine if he is breathing	Massage vigorously to restore circulation
3166	How should you treat a person suffering from heat exhaustion?	Give him sips of cool water	Administer artificial respiration	Cover him with a light cloth	Put him in a tub of ice water
3167	For small first-degree burns what is the quickest method to relieve pain?	Apply a bandage to exclude air	Apply petroleum jelly	Administer aspirin	Immerse the burn in cold water
3168	Chemical burns are caused by the skin coming in contact with what substance(s)?	Alkalies but not acids	Acids or alkalies	Diesel oil	Acids but not alkalies
3169	In any major injury first aid includes the treatment for the injury and what secondary condition?	For traumatic shock	Application of CPR	Removal of any foreign objects	Administration of oxygen
3170	A person has suffered a laceration of the arm. Severe bleeding has been controlled by using a sterile dressing and direct pressure. What should you do next?	Apply a tourniquet to prevent the bleeding from restarting.	Apply a pressure bandage over the dressing.	Administer fluids to assist the body in replacing the lost blood.	Remove any small foreign matter and apply antiseptic.
3171	What is the appropriate first aid treatment for small cuts and open wounds?	Apply an ice pack to the wound and cover it when the bleeding stops	Lay the patient down and cover the wound when the bleeding stops	Stop the bleeding clean medicate and cover the wound	Apply a hot towel to purge the wound then medicate and cover it
3172	A victim has suffered a second-degree burn to a small area of the lower arm. What is the proper	Immerse the arm in cold water for 1 to 2 hours open	Open any blisters with a sterile needle apply burn	Apply burn ointment remove any foreign material	Immerse the arm in cold water for 1 to 2 hours apply

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	treatment for this injury?	any blister and apply burn ointment	ointment and bandage	and insure that nothing is in contact with the burn	burn ointment and bandage
3173	What is of importance when a patient has an electrical burn?	Look for a second burn which may have been caused by the current passing through the body	Apply ointment to the burn area and wrap with clean cloth	Remove any dirt or charred skin from the area of the burn	Locate the nearest water source and flood the burn with water for five minutes
3174	If a rescuer finds an electrical burn victim in the vicinity of live electrical equipment or wiring what would be the first action to take?	Apply ointment to the burned areas on the patient	Remove the patient from the vicinity of the live electrical equipment or wiring	Get assistance to shut down electrical power in the area	Flush water over any burned area of the patient
3175	While carrying out artificial respiration how should rescuers be changed out?	At ten-minute intervals	Without losing the rhythm of respiration	By not stopping the respiration for more than 5 minutes	Only with the help of two other people
3176	How should you FIRST treat a simple fracture?	Alternately applying hot and cold compresses	Applying a tourniquet	Attempting to set the fracture	Preventing further movement of the bone
3177	What is/are the treatment/s of heat exhaustion consist of?	Bathing with rubbing alcohol	Placing the patient in a tub of cold water	Drinking a cup of coffee	Moving to a shaded area and laying down
3178	What is the principle treatment of sunstroke?	Bathing with rubbing alcohol	Cooling removing to shaded area and lying down	Placing the patient in a tub of icy cold water	Drinking ice water
3179	What should a person do after being revived by artificial respiration?	Keep lying down and warm	Give several shots of whiskey	Walk around until he is back to normal	Allow him to do whatever he wishes
3180	Where can a rescuer most easily check to determine whether or not an adult victim has a pulse?	Femoral artery in the groin	Radial artery in the wrist	Brachial artery in the arm	Carotid artery in the neck
3181	What should you do when treating a person for third-degree burns?	Submerge the burn area in cold water	Break blisters and remove dead tissue	Cover the burns with thick sterile dressings	Make the person stand up and walk to increase circulation
3182	How does bleeding from a vein appear?	Dark red and spurting	Dark red and has a steady flow	Bright red and spurting	Bright red and slow
3183	After pinching a victim s nostrils how can a rescuer best provide an airtight seal during mouth to mouth ventilation?	By applying his mouth tightly over the victim s mouth	By keeping the head elevated	By holding the jaw down firmly	By cupping a hand around the patient s mouth

3184	When it is necessary to remove a victim from a life threatening situation what must the person giving first aid do?	Pull the victim by the feet	Carry the victim to a location where injuries can be assessed	Place the victim on a stretcher before attempting removal	Avoid subjecting the victim to any unnecessary disturbance
3185	What are the symptoms of heat stroke?	Cold and moist skin high body temperature	Cold and dry skin low body temperature	Hot and dry skin high body temperature	Black and cold skin
3186	What should you do if a crew member is having an epileptic convulsion?	Give the victim artificial respiration	Keep the victim from injuring him or herself	Give the victim one 30 mg. tablet of phenobarbital	Completely restrain the victim
3187	In all but the most severe cases how should bleeding from a wound be controlled?	Applying a tourniquet	Applying direct pressure to the wound	Cooling the wound with ice	Submerging the wound in lukewarm water
3188	A person reports to you with a fish hook in his thumb. What acceptable procedure in removing the fish hook?	Pull it out with pliers	Have a surgeon remove it	Push the barb through, cut it off, and then remove the hook	Cut the skin from around the skin
3189	A person suffering from a heart attack may show which of the following symptoms?	All of the above	Pain in the left arm	Nausea	Shortness of breath
3190	A person suffering from possible broken bone and internal injuries should _____.	not be allowed to lie down where injured but moved to a choir or bunk	be examined then walked to a bunk	not be moved but made comfortable until medical assistance arrives	be assisted in walking around
3191	A system where spread of disease onboard can be controlled is also known as _____.	quarantine	isolation	recovery	contagious
3192	A tourniquet should be used to control bleeding, only _____	when the victim is unconscious	with puncture wounds	to prevent bleeding from minor wounds	when all other means have failed
3193	After doing first aid what is the final step of the victim assessment?	Check the ears and nose	Lock in the mouth for blood or foreign materials	Head to toe examination	Ask the victim what he is doing
3194	An effective method for moving a patient with spinal injuries to a stretcher or spine board is known as the _____.	pack strap carry	firemans drag	two man extremities carry	four man roll
3195	An emergency treatment for a surface bleeding includes _____.	all of these choices	elevate part with wound above the heart	apply sterile dressing with pressure	pressure over point of bleeding

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3196	Artificial respiration may be necessary in cases of:	Poisoning	Drowning	All of the above	Electrocution
3197	Before CPR is started on the victim, you should _____.	treat any bleeding wounds	establish an open air way	make the victim comfortable	insure the victim is conscious
3198	Better treatment of frostbite is to _____.	Warm the feet with a heat lamp	Wrap tightly in warm cloths	Rub with ice or snow	Warm exposed parts rapidly
3199	Crew has suffered a burn on the arm. There is a reddening of the skin but no other apparent damage. This is an example of _____.	First degree burn	Extremity burn	Minor burn	Painter
3200	Except there is danger of further injury, a person with a broken bone should not be moved until bleeding is controlled and _____.	The bone has been set	Remain constant	Stabilize at an angle of loll	The fracture is immobilized
3201	Excessive heat can affect the human body by which of the following conditions?	Heat stroke and heat exhaustion	Heat stroke	Heat exhaustion	None of these choices
3202	FIRST thing you should do when a person is lying prone, not breathing and an electric wire is touching the victim is to _____.	Immediately begin cardiac massage	Call for medical assistance	Switch off the power	Fire dampers only
3203	Following an accident, the victim may go into shock and die. Which of the following actions should be taken to help avoid shock?	Keep the person awake	Nearly calm, clear nights or early morning	Keep the person lying down and at a comfortable temperature	Give the person a stimulant to increase blood flow
3204	For every 15 compressions, the safe quick lung inflations that must be delivered by a single rescuer to an unconscious victim without waiting for full exhalation of the victims breath is _____.	5	1	3	2
3205	For small first degree burns the quickest method to relieve pain is to _____.	Apply petroleum jelly	Immerse the burn in cold water	Administer aspirin	Apply a bandage to exclude air
3206	High risk behaviors for HIV infection includes _____.	all of these choices	use of drugs	unprotected sex	engaging in multiple sexual partners

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3207	How do you treat a victim exposed to profound hypothermia?	Keep the victim in a warm environment	All of these choices	Re-warm the victim	Embrace the victim during transportation
3208	How many chest compressions and inflation must be applied if one person is administering CPR to an adult victim?	30 compressions then 4 inflations	20 compressions then 3 inflations	5 compression then 1 inflation	15 compressions then 2 inflations
3209	How to initiate CPR on a drowning victim?	Start chest compressions before the victim is removed from the water	Do not tilt the head back since it may cause vomiting	Begin with mouth to mouth ventilations	Drain water from the lungs before ventilating
3210	If a crew member has suffered frostbite to the toes of his right foot. The first aid measure that is NOT an acceptable is:	Warm the feet with a heat lamp	Rub the toes briskly	Rub with ice or snow	Elevate the foot slightly
3211	If a crewman suffers a second degree burn on the arm, you should _____.	Immerse the arm in cold water	Apply antiseptic ointment	Scrub the arm thoroughly to prevent infection	Drain any blisters
3212	In which way may intake of poisonous material occur?	Swallowing.	All mentioned.	By inhalation.	Skin penetration and skin absorption.
3213	____ is the proper stimulant for an unconscious person?	water	tiger balm	dextran	ammonia
3214	A burn may occur when electricity of high current and voltage passes through the body. Most damage occurs at the points of entry and exit of electricity. What is the treatment of electrical burns?	Remove loose skin and apply ointment. Dont secure with bandage.	Break blisters and secure with bandage.	Apply lotions and ointment to injured area and secure with a bandage.	Place sterile dressing over the burn and secure with a bandage.
3215	A burn may occur when electricity of high current and voltage passes through the body. Most damage occurs at the points of entry and exit of electricity. What is the treatment of electrical burns?	Apply lotions and ointment to injured area and secure with a bandage.	Break blisters and secure with bandage.	Place sterile dressing over the burn and secure with a bandage.	Remove loose skin and apply ointment. Dont secure with bandage.
3216	A casualty suddenly loses consciousness and falls to the ground letting out a strange cry. The patient is	Loose tight clothing, ask all unnecessary bystanders to	Move the casualty in a sit-up position and put something	Forcibly restrain and try to wake the casualty.	Give the casualty a lot to drink and keep talking to the

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	red-blue in the face and froth may appear around the mouth. You are witnessing a major epileptic attack. What should you do?	leave and carefully place something soft under the head. If casualty is unconscious, place the person in Recovery position.	in the persons mouth to protect the tongue.		person at all times.
3217	A compound fracture is a fracture _____.	in which the same bone is broken in more than one place	in which more than one bone is broken	which causes external bleeding at the site of the fracture	which is accompanied by internal bleeding
3218	A conscious victim who has suffered a blow to the head has symptoms that indicate the possibility of concussion. If the patient feels no indication of neck or spine injury, recommended treatment would include _____.	positioning the victim so the head is lower than the body	elevating the head and shoulders slightly	turning the victims head to the side to keep his airway open	giving the victim water if he is thirsty, but no food
3219	A crew member has suffered a burn on the arm. There is extensive damage to the skin with charring present. This is an example of what kind of burn?	Dermal burn	Lethal burn	Third degree burn	Second degree burn
3220	A crew member has suffered frostbite to the toes of both feet. You should _____.	immerse the feet in warm water	warm the feet with a heat lamp	warm the feet at room temperature	rub the feet to restore circulation
3221	A crew member has suffered frostbite to the toes of the right foot. Which is NOT an acceptable first aid measure?	Rewarm rapidly.	Elevate the foot slightly.	Give aspirin or other medication for pain if necessary.	Rub the toes briskly.
3222	A crew member is unconscious and the face is flushed. You should?	lay the crew member down with the head lower than the feet	Lay the crew memer down with the head and shoulders slightly raised	Administer a liquid stimulant	Attempt to stand the crew member upright to restore consciousness
3223	A crewman has suffered a blow to the head and various symptoms indicate a concussion. Proper treatment should include _____.	giving the victim water but no food	placing a pillow only under the victims head	positioning the victim so the head is lower than the body	turning the victims head to the side to keep his airway open

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3224	A diabetic has eaten too little food and the person may feel dizzy and lightheaded. The skin becomes pale, with profuse sweathing. Limbs may begin to tremble and pulse becomes rapid. The urine glukose reaction is negative. What kind of medicine will the	Sugar lump, sugar drink or something sweet.	Insuline.	A glass of cold milk.	Nothing at all.
3225	A man has suffered a burn on the arm. There is a reddening of the skin but no other apparent damage. Using standard MEDICAL terminology, this is a:	Extremity burn	Minor burn	Superficial Burn	First-degree burn
3226	A man has suffered a burn on the arm. There is extensive damage to the skin with charring present. How is this injudry classified using standard medical terminology?	Lethan burn	Major burn	Dermal burn	Third degree burn
3227	A minor heat burn of the eye should be treated by _____.	mineral oil drops directly on the eye	laying the person flat on his back	gently flooding with water	warming the eye with moist warm packs
3228	A patient in shock should not be placed in which position?	arms above their head	on their side if unconscious	head down and feet up, no injuries to face or head	flat on their back with head and feet at the same level
3229	A patient is given cathartics in order to _	Induce constipation	Induce vomiting	Relieve constipation	Induce urinating
3230	A patient suffering from heat exhaustion should first be _____.	given a mild seawater solution to drink to replace salt and fluids	given a glass of water and told to return to work after 15 minutes of rest	kept standing and encouraged to walk slowly and continuously	moved to a cool room and told to lie down
3231	A person chokes suddenly, cannot speak and starts to turn blue. What action should you do?	make the victim lie down with face elevated to get blood to the brain	administer CPR	administer the Heimlich maneuver	do nothing until the victim becomes unconscious, then administer CPR
3232	A person reports to you with a fishhook in their thumb. The accepted procedure for removing it should be to _____.	push the barb through, cut it off, and then remove the hook	cut the skin from around the hook	have a surgeon remove it	pull it out with pliers
3233	A person slowly feel more sleepy and thirsty.The skin	Sugar lump, sugar drink or	Insuline.	Nothing at all.	A glass of cold milk.

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	and slimhinner become very dry and there is a sweet taste of the breath. The glukose reaction shows positive. What kind of medicine will the person need as soon as possible?	something sweet.			
3234	A person suffering from a heart attack may show symptoms of:	shortness of breath	nausea	all of these	pain in the left arm
3235	A person suffering from a heart attack may show which of the following symptoms?	Nausea	Pain in the left arm	Shortness of breath	All the above
3236	A person suffering from possible broken bones and internal injuries should _____.	not be moved, but made comfortable until medical assistance arrives, provided he is in a safe environment	not be allowed to lie down where injured but moved to a chair or bunk	be assisted in walking around	be examined then walked to a bunk
3237	A person suffering from possible broken bones and internal injures should	Not be allowed to lie down where injured but moved to a chair	Be examined then walked to bunk	Be assisted in walking around	Not be moved but made comfortable until medical assistance arrive
3238	If a patient has an electrical burn, after checking breathing and pulse, _____.	Put into an container of water	Locate the nearest water source and flood the burn with water for five minutes	Look for an second burn, which may have been caused by the current exiting body	Apply ointment to the burn area and wrap with clean cloth
3239	If a rescuer discover a burn victim in the vicinity of electrical equipment or wiring, his first step is to _____.	Flush water over any burned area of the patient	Leave it on continuously	Apply ointment to the burned areas on the patient	Shutdown electrical power in the area
3240	If crew member has suffered frostbite to the toes of the feet, you should _____.	A noxious environment	Warm the feet at room temperature	Immerse the feet in warm water	Warm the feet with a heat lamp
3241	If treating a chemical burn, you should flood the burned area for at least _____.	Five minutes	Ten minutes	Two minutes	Fifteen minutes
3242	In reviving a person who has been overcome by gas fumes, the treatment that should be AVOIDED is	prompt removal from the suffocating atmosphere	keep him warm and comfortable	to give stimulants	applying artificial respiration and massage

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	_____:				
3243	Indication of heat exhaustion are _____.	Slow and strong pulse	Flushed and dry skin	Be drier	Pale and clammy skin
3244	Physical effort on the part of a person who has fallen into cold water can _____.	Increase survival time in the water	Limit the amount of cable on the drum	Be the best thing to try if there were no rescue in sight	Increase the rate of heat loss from the body
3245	Proper effective warming treatment for a crew member suffering from hypothermia is _____.	A warm water bath	Gas freed	Mouth- to - mouth resuscitation	Running or jumping to create heat
3246	Provided every effort is used to produce, as well as preserve body moisture content by avoiding perspiration, how long is it normally possible to survive without stored quantities of water?	Up to 3 days	8 to 14 days	25 to 30 days	15 to 20 days
3247	The administering of artificial respiration may commence when the victim is _____.	irregular breathing	Slow and strong pulse	unconscious	bluish in color and lacks breathing
3248	The cause of chemical burns is by the skin coming in contact with _____.	Acids	Acids, but not alkalies	Acids or alkalies	Alkalies, but not acids
3249	The general signs and symptoms of a patient suffering from shock are:	all of the above	increased state of confusion	rapid and shallow breathing	cold and clammy skin
3250	The method in controlling external bleeding is to _____.	Apply pressure on a pressure point	Elevate the wounded area	Call for medical assistance	Apply direct pressure on the wound
3251	The most effective warming treatment for a crew member suffering from hypothermia is.	laying prone under heat lamps to rewarm rapidly	lying in the sun	running or jumping to create heat	a warm water bath
3252	The most excellent beverage for a person suffering from shock is the _____.	medicinal brandy	hot coffee	cold water	warm water
3253	The necessity of administering artificial respiration may be recognized by the victims _____.	blue color and lack of breathing	vomiting	irregular breathing	unconscious condition
3254	The part of the victims body where the first-aider can determine if the victims brain is receiving	nose	eye	neck	heart

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	adequate blood and oxygen, during the conduct of chest compression is _____.				
3255	The result if you wear extra clothing when entering the water after abandoning a vessel is _____.	It will reduce your body heat	It will make it more difficult to breathe	It will preserve body heat	Generator space
3256	The statement that best defines first aid is the _____.	spleening of broken bones and transport of victim	emergency treatment of the injured on scene	application of bandage and taking oral medicine	medical treatment of internal injury
3257	The symptom of heat stroke is _____.	Hot and dry skin, high body temperature	Hot and moist skin, high body temperature	Cold and dry skin, low body temperature	Male end attached to the adjacent fire hydrant
3258	The thing you will do if a person suffers a simple fracture in the limb is to _____.	It should be weighed again in one month	Apply a tourniquet without delay	Alternately apply hot and cold compresses	Prevent further movement of the bone
3259	The treatment that is NOT for traumatic shock is _____.	Relieve the pain of the injury	Keep the patient warm, but not hot	Massage the arms and legs to restore circulation	Have the injured person lie down
3260	The treatment used for traumatic shock is to _____.	Administer CPR	Administer fluids	Self-contained breathing apparatus	Open clothing to allow cooling of the body
3261	The type of first aid you should provide to victims with bones dislocations is _____.	remove clothes to expose the bone	call the second officer	do not let him move	splint as you would a broken bone
3262	The virus causing HIV infection invades the body causing damage to the _____.	The immune system	The circulatory system	The reproduction system	Skin
3263	To determine whether or not an adult victim has a pulse, the rescuers should check for the pulse at the _____.	Femoral artery in the groin	Radial artery in the wrist	Carotid artery in the neck	Brachial artery in the arm
3264	A person suffering from possible broken bones and internal injuries should:	Not be allowed to lie down where injured but move to a chair or bunk	Be assisted in walking aroun	Not be moved but made comfortable until medical assistance arrives	Be examined then walked to a bunk
3265	A person wearing lifejacket or immersion suit, shall be able to turn from a face-down to a	10 seconds	15 seconds	8 seconds	5 seconds

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	face-up position in not more than:				
3266	A person who gets battery acid in an eye should IMMEDIATELY wash the eye with _____.	water	boric acid solution	ammonia	baking soda solution
3267	A rescuer can most easily determine whether or not an adult victim has a pulse by checking the pulse at the:	femoral artery in the groin	carotid artery in the neck	brachial artery in the arm	radial artery in the wrist
3268	A seaman has sustained a small, gaping laceration of the arm requiring sutures to close if medical facilities were available. Which of the following remedies can be done to temporarily close the wound?	Use temporary stitches of sail twine.	Wrap a tight bandage around the wound.	Apply butterfly strips and cover with a sterile dressing.	Gently close the wound and while holding it closed apply a compression bandage.
3269	A severe blow to or a heavy fall on the upper part of the abdomen (solar plexus) can upset the regularity of breathing. What is the symptoms and signs?	The casualty may start sweating profusely and develops a fever.	The casualty is speaking in a very load manner.	The casualty feel very hungry.	Difficulty in breathing in and the casualty may be unable to speak.
3270	A shipmate chokes suddenly, cannot speak, and starts to turn blue. You should _____.	perform the Heimlich maneuver	make the victim lye down with the feet elevated to get blood to the brain	immediately administer CPR	do nothing until the victim becomes unconscious
3271	A shipmate suffers a heart attack and stops breathing. You must _____.	immediately give a stimulant, by force if necessary	make the victim comfortable in a bunk	immediately start CPR	administer oxygen
3272	A shipmate suffers a heart attack and stops breathing. You must _____.	administer oxygen	immediately check his pulse and start CFR	make the victim comfortable in a bunk	immediately give a stimulant, by force if necessary
3273	A shipmate suffers a heart attack and stops breathing. You must _____.	make the victim comfortable in a bunk	immediately give a stimulant, by force if necessary	immediately start CPR	administer oxygen
3274	A shipmate suffers a heart attack and stops breathing. You must _____	check his pulse and start CPR	administer oxygen immediately	let him lie on his side	make the victim as comfortable as he could be
3275	A strain occurs when a muscle or group of muscles is over- stretched	Rest, Injury, Care, Evaluation.	Rest, Ice, Compression, Elevation.	Rubber, Internal, Careful, Estimation.	Right Internal Cooperative Ending.

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	and possibly torn, by violent or sudden movement. Strain can be caused by lifting heavy weights incorrectly. The treatment of strain may be remembered as the word RICE.What is RICE an a				
3276	A tourniquet should be used to control bleeding only _____.	when the victim is unconscious	with puncture wounds	when all other means have failed	to prevent bleeding from minor wounds
3277	A victim has suffered a second degree burn to a small area of the lower arm. Which of the following statements represents the proper treatment for this injury?	Apply burn ointment, remove any foreign material, and insure that nothing is in contact with the burn.	Immerse the arm in cool water for 1 to 2 hours, apply burn ointment, and bandage.	Open any blisters with a sterile needle, apply burn ointment, and bandage.	Immerse the arm in cold water for 1 to 2 hours, open any blister, and apply burn ointment.
3278	A victim is coughing and wheezing from a partial obstruction of the airway. An observer should _____.	allow the person to continue coughing and dislodge the obstruction on his own	perform the Heimlich maneuver	immediately start CPR	give back blows and something to drink
3279	Abdominal Thrust is the name on a technique which involves applying a series of thrusts to the upper abdomen in an attempt to force air out of a choking casualtys lungs. How to perform this technique?	Lay casualty on a hard surface, e.g. deck, and press firmly and rapidly on the middle of the lower half of the breast bone.	Let the casualty grab a list and hang up right down for a period of minimum 5 minutes.	Stand behind the casualty. Clench your fist with the tumb inwards in the center of upper abdomen. Grasp your fist with your other hand and pull quickly inwards.	Remove the obstruction and restore normal breathing.
3280	After a person has been revived by artificial respiration, they should be _____.	walked around until he is back to normal	asked about the circumstances of the accident	given several shots of whiskey	kept lying down and warm
3281	After an accident, the victim may go into shock and die. Which of the following actions should be taken to help prevent shock?	Keep the person awake.	Give the person a stimulant to increase blood flow.	Slightly elevate the head and feet.	Keep the person lying down and at a comfortable temperature.
3282	After an injury, which of the following can be determined by examining the condition of a victims	whether or not the brain is functioning properly	spontaneous circulation and ventilation have been restored	return of color to the skin	All of these

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	pupils?				
3283	After checked for open airway, given the first two inflations and checked the pulse to make sure that the heart is beating, what is the rate of inflations given until natural breathing is restored ?	25 - 27 times per minute	Doesnt matter how many times	12 - 16 times per minute	10 - 12 times per minute
3284	After establishing the daily ration of drinking water in a survival situation, how should you drink it?	Small sips only after sunset	Small sips at regular during the day	One-third the daily ration times daily	The complete daily ration at one time during the day
3285	An effective method for moving a patient with spinal injuries to a stretcher or spine board is known as the _____.	firemans drag	pack strap carry	two man extremities carry	four man log roll
3286	The standard outside diameter pipelines to enable pipes of reception facilities to be connected with the ships discharge pipelines for residues from machinery bilges should be_____.	250 mm	225 mm	235 mm	215 mm
3287	Plastic material may be discharged overboard from a vessel if it is _____.	12 miles from shore	25 miles from shore	Prohibited to throw overboard	3 miles from shore
3288	One of the requirements for an oil tanker operating with Dedicated Clean Ballast shall be that it is equipped with_____.	Segregated Ballast Tanks and PL	Two separate slop tanks	A COW system	An oil content meter
3289	Which list is not required to be provided as part of the appendices of the Shipboard Oil Pollution Emergency Plan?	A list of agencies or officials of Coastal State Administrators responsible for receiving and processing incident reports.	A list of agencies or officials in regularly visited ports.	A list of personnel duty assignments.	A list specifying who will be responsible for informing the parties listed and the priority in which they must be notified.
3290	Why is it important for fuel oil tank not to be topped off when loading cold oil?	The change in its specific volume when heated may cause an overflow	Air pockets may cause the fuel oil to bubble out of the ullage hole	Increased viscosity of the product needs higher loading pressure which increases the chance of spill	The fuelling valve may become stuck closed and cause the fuel oil to spill before the valve can be opened

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3291	Why is it important for fuel oil tank not to be topped off when loading cold oil?	Increased viscosity of the product needs higher loading pressure which increases the chance of spill	Air pockets may cause the fuel oil to bubble out of the ullage hole	The fuelling valve may become stuck closed and cause the fuel oil to spill before the valve can be opened	The change in its specific volume when heated may cause an overflow
3292	The Shipboard Oil Pollution Emergency Plan must include _____.	a one-line schematic of the plan to be implemented	the operating instructions for any and all oily-water separators installed aboard the vessel	an explanation and purpose of the plan	all information ordinarily provided in the Oil Record Book
3293	Bilges may be pumped .	overboard only after dark	overboard on the outgoing tide	anytime as long as the oil content is very little	overboard only through an approved oily water separator and oil content monitor
3294	When using mechanical foam to fight a bilge fire, the stream of foam is most effective when directed .	at a vertical surface	at the overhead	onto the deck	directly into the bilge water
3295	The term 'discharge', as it applies to the pollution regulations, means _____.	ballasting & deballasting	spilling, leaking, pumping	Gassing Up &Incinerating	inerting & venting
3296	Before a vessel can pump oily water within a Special Area, it has to comply with the following conditions except_____.	be underway	have an oily water separating system in operation	it must be more than 12 miles from the nearest coast	that the filter system have an automatic cut-off when the wastes are found to exceed 15 ppm of oily residue
3297	Which of the following classes of fire would probably occur in the engine room bilges?	Class A	Class D	Class C	Class B
3298	When bunkering is completed, the hoses should be _____.	drained, blanked off, and stored securely	cleaned internally with a degreaser	washed out with hot soapy water	stowed vertically and allowed to drain
3299	If you observe any situation which presents a safety or pollution hazard during fuel transfer operations which action should you take first?	Sound the general alarm.	Shut down the operation.	Notify the person in charge of the shore facility.	Close the valves at the manifold.

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3300	To whom is the first report rendered in the oil pollution contingency plan of the vessel?	Ship's owner	Ship's agent	Port authorities	Coast guard
3301	The process of grinding, shredding, or reducing the size of sewage particles is known as _____.	detention	chlorinating	bulking	maceration
3302	Which should be done with the ashes from your vessel?s incinerator which has burned packages containing plastic?	discharge overboard provided you are not in a river or estuary	discharge to shore facility only	discharge at sea provided you are at least 12 miles offshore	discharge at sea provided you are more than 25 miles offshore
3303	Fueling results in the collection of waste oil in drip pans and containers. Which is an approved method of disposing of the waste oil?	Draining it overboard when the vessel gets underway	Mixing it with dispersants before draining it overboard	Adding sinking agents and discharging it into the water	Placing it in proper disposal facilities
3304	Small oil spills on deck is prevented from going overboard by _____:	driving wooden plugs into the vents	closing the lids on the vents	plugging the scuppers	plugging the sounding pipes
3305	The best way to combat an engine room bilge fire is through the use of a_____ .	foam extinguisher and low velocity water fog	dry chemical extinguisher and solid stream water	foam extinguisher and solid stream water	foam and soda acid extinguishers
3306	Most minor spills of oil products are caused by_____.	major casualties	unforeseeable circumstances	equipment failure	human error
3307	The operator of each vessel subject to the pollution regulations is NOT required to keep written records of _____.	the name of each person designated as a person in charge	cargoes carried and dates delivered, including destinations	hose information not marked on the hose	the date and results of the most recent equipment inspection
3308	The fixed CO2 fire extinguishing system has been activated to extinguish a large engine room bilge fire. When is the best time to vent the combustible products from the engine room?	Immediately after the fire is extinguished.	One half-hour after the fire is extinguished.	After any personnel in fireman outfits reenter the engine room.	After the metal surfaces have cooled down.
3309	The regulations that were passed to implement MARPOL 73/78 concerning oil pollution apply to a U.S. flag vessel that sails on which waters?	International waters	Inland waters only	Great Lakes only	All of the above
3310	Which statement is true concerning gasoline spill?	It will sink more rapidly than	It is visible for a shorter time	It does little harm to marine	It is not covered by the pollution

		crude oil.	than a fuel oil spill.	life.	laws.
3311	Is it possible to discharge overboard plastic material from a vessel?	It is possible provided the vessel is 12 miles from shore	It is possible provided the vessel is 3 miles from shore	It is possible provided the vessel is 12 miles from shore	No, it is prohibited to discharge
3312	When a vessel violates the oil pollution laws, who may be held responsible?	Licensed officers only	Any individual connected with the vessel involved in the operation	Owners only	Master only
3313	With no environmental forces present, the center of gravity of an inclined vessel is vertically aligned with the .	center of buoyancy	longitudinal centerline	center of flotation	original vertical centerline
3314	On a tanker ship, sanitary inspections of the crew's quarters are the responsibility of the _____.	Master and union delegate	Master and Chief Engineer	Master and Chief Mate	Master and Second Mate
3315	Sanitary inspections of the crew's quarters are the responsibility of the____.	Master and Second Mate	Master and Chief Mate	Master and union delegate	Master and Chief Engineer
3316	Among other restrictions, an oil tanker may not discharge an oily mixture into the sea from a cargo tank, slop tank, or cargo pump room bilge unless the vessel is_____ .	more than 12 nautical miles from the nearest land	discharging at an instantaneous rate of oil content not exceeding 30 liters per nautical mile	is within "Special Areas" defined in Regulation 1 (10) of Annex I to MARPOL 73/78	at anchor or stopped
3317	Under the Pollution Regulations, when you dump garbage in to the sea you must _____.	No action is required if you are more than 25 miles from land and no plastic materials are dumped.	notify the U.S. Coast Guard	make an entry in the Official Logbook	keep a record for two years
3318	When amendments are made to the Shipboard Oil Pollution Emergency Plan, the revisions must be submitted to the Coast Guard _____.	and cannot be implemented without approval	one month before the anniversary date of the plan	six months before the end of the approval period	and can be implemented without immediate approval as long as final approval is received within six months of submission
3319	When amendments are made to the Shipboard Oil	and can be implemented	six months before the end	and cannot be implemented	one month before the

	Pollution Emergency Plan, the revisions must be submitted to the administration _____.	without immediate approval as long as final approval is received within six months of submission	of the approval period	without approval	anniversary date of the plan
3320	Under the Pollution Regulations, garbage disposal records must be kept for _____.	until the next Coast Guard inspection	one year	until the end of the voyage	two years
3321	A precaution you should take before bunkering is to _____	plug the sounding pipes	plug the vents	plug the scuppers	close the lids on the vents
3322	Which is a mandatory section of the shipboard Oil Pollution Emergency Plan?	Reporting requirements	Removal equipment list	Planned exercises	List of individuals required to respond
3323	Which is not a mandatory part of the Shipboard Oil Pollution Emergency Plan?	Reporting requirements	National and local coordination	Diagrams	Steps to control a discharge
3324	The scuppers had been plugged as required at the time an oil spill occurs on deck. After shutting down the transfer, the engineroom should first be informed and then _____.	rig a fire hose and call for water on deck	remove the plugs from the scuppers	sound the general alarm	spread an absorbent material, such as sawdust
3325	SOPEP means _____.	Shipboard Oil Pollution Emergency Protection	Shipboard Oil Pollution and Emergency Plans	Shipboard Oil Prevention and Environmental Protection	Spill of Oil Prevention and Environmental Protection
3326	A ocean going ship having an inoperative oily water separator may dispose of its bilge slops by_____ .	holding its slops onboard until they can be discharged to a shore side reception facility	slowly operating the bilge pump at half capacity so that it never completely dewaters the bilges	circulating them through the lube oil purifier to remove water and debris	pumping them into a settling tank for separation before pumping the oily water residue overboard
3327	The preferred type of pollution control for oil spills on the water is_____.	chemical dispersant	skimmer	boom	straw
3328	Which statement is true for the 30,000 DWT tanker ship engaging in trade to another country signatory to MARPOL 73/78?	The Certificate of Inspection is prima facie evidence of compliance with MARPOL 73/78	The IOPP Certificate is valid for 5 years	An IOPP Certificate is renewed at each inspection for certification	An IOPP Certificate is invalid if the ship carries cargoes outside the classes

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					authorized thereon
3329	Which of the circumstances listed is an exception to the garbage discharge requirements in Annex V to MARPOL 73/78?	The destination port or terminal cannot receive garbage.	Garbage accumulation onboard has exceeded storage space.	The garbage to be discharged will sink.	A person falls overboard, and a plastic ice chest is thrown for flotation.
3330	Which statement is true concerning small oil spills?	They may cause serious pollution as the effect tends to be cumulative	They usually disappear quickly	They usually stay in a small area.	A small spill is not dangerous to sea life in the area.
3331	When oil is accidentally discharged into the water, what should you do after reporting the discharge?	Obtain your permit from the Corps of Engineers	Contain the oil and remove as much of it as possible from the water	Throw sand on the water to sink the oil.	Throw chemical agents on the water to disperse the oil.
3332	An acceptable method of dealing with accumulated oil found in the pump room bilges is to_____ .	pump the oil into a clean ballast tank	discharge the oil over the side on an outgoing tide	pump the oil into the slop tanks	transfer the oil to the sea chest
3333	The approval period for a shipboard Oil Pollution Emergency Plan expires after _____.	two years	four years	three years	five years
3334	Pollution regulation requires that each scupper in an enclosed deck area have a _____.	mechanical means of closing	wooden plug	soft rubber plug	two-piece soft patch
3335	In reference to accidental oil pollution, the most critical time during bunkering is when _____.	hoses are being disconnected	hoses are being blown down	final topping off is occurring	you first start to receive fuel
3336	An ocean going ship of 4000 gross tons must be fitted with a standard discharge shore connection for the discharge of oily wastes to a reception facility. The dimensions for the connection are specified in the Pollution Prevention Regulations under Part _____.	151	153	155	154
3337	An ocean going ship of 4000 gross tons must be fitted with a standard discharge shore	151	155	154	153

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	connection for the discharge of oily wastes to a reception facility. The dimensions for the connection are specified in the Pollution Prevention Regulations under Part _____.				
3338	An ocean going ship of over 400 gross tons must be fitted with a standard discharge shore connection. What size bolt circle diameter is required for this shore connection to transfer oily ballast to a shore side reception facility?	183 mm	125 mm	215 mm	250 mm
3339	According to the Coast Guard Pollution Prevention Regulations (33 CFR), what is the minimum number of bolts required in a temporarily connected standard ANSI coupling?	8 bolts	4 bolts	6 bolts	2 bolts
3340	Pollution Prevention Regulations state that no person may transfer oil to or from a vessel unless _____.	a sample has been taken from the oil being received	each part of the transfer system is blown through with air	an oil containment boom is available for immediate use	hoses are supported so that couplings have no strain on them
3341	According to regulations, when loading, or discharging oil in bulk at a dock, which of the following signals must be displayed?	A green flag (day), green light (night)	A red flag (day), red light (night)	A signal is not required for discharging oil, only gasoline	A yellow flag (day), red light (night)
3342	A shipboard oil pollution emergency plan is required of _____.	an oil tanker of 150 gross tons or above, or other ship of 400 gross tons or above	all vessels, regardless of size and commercial application	any barge or other ship which is constructed or operated in such a manner that no oil in any form can be carried aboard	an oil tanker of 400 gross tons and above, or other ships of 10 gross tons and above
3343	Shipboard oil pollution emergency plans must be reviewed _____.	annually by the owner and a letter sumitted six months prior to expiration	annually by the owner and submit a letter to the Coast Guard within one month of the anniversary	and the entire plan resubmitted for approval once every five years, six months prior to expiration	only once every five years and a letter submitted six months prior to expiration

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			date of the plan approval		
3344	Coast Guard Regulations require the emergency bilge system to _____.	be a part of the independent bilge system	have a cross connection to the ballast system	be independent of the main bilge system	have an independent priming pump
3345	Coast Guard regulations require a shipboard oil pollution emergency plan to be reviewed _____.	biennially only	only one every five years	quad-annually only	annually only
3346	The term arrival ballast refers to _____.	clean ballast	brackish water ballast	dirty ballast	any form of sea water ballast
3347	Which of the following liquids can ordinarily be discharge overboard without being processed through an oily water separator?	Engine room bilges	Cargo pumproom bilges	Segregated ballast	Cargo tank ballast
3348	Water ballast placed in a tank that has been crude oil washed, but not water rinsed, shall be regarded as _____.	crude oil	segregated ballast	clean ballast	dirty ballast
3349	Regulations, state that ocean going ships of 400 gross tons and above must be fitted with a standard discharge shore connection for the discharge of oily waste from machinery space bilges to reception facilities. The flange of this discharge connection must be _____.	designed to accept pipes up to a maximum internal diameter of 100mm	10 mm in thickness	suitable for a service pressure of 6 kg/cm2	slotted to receive eight bolts and 20 mm in diameter
3350	In an oil pumping operation where pumping connections are made up of flanged hoses the weakest link is the _____.	hose	flange	stud	bolt hole
3351	The term segregated ballast is defined in the Pollution Prevention Regulations as ballast water introduced into a/an _____.	fuel settling tank for segregation from lighter fluids	tank that is completely separated from the cargo oil and fuel oil systems	isolated tank for analysis because of its noxious properties	oily water separator for segregation
3352	No person may transfer oil to or from a vessel unless the person in charge	has in his or her possession a copy of the	has in his or her possession a valid Certificate	is in the immediate vicinity and	has notified the captain of the port at least 24

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	_____.	vessels Oil Record Book	of Inspection or Tank Vessel Examination Letter	immediately available to the oil transfer personnel	hours before beginning each oil transfer operation
3353	Pollution Prevention Regulations require that on the completion of oil transfer operations all _____.	hoses shall be blown down with air	soundings shall be entered in the oil record book	persons on duty during oil transfer shall be accounted for	valves used during transfer shall be closed
3354	Pollution regulations require that the oil transfer procedures, which must be posted on every vessel having a capacity of 250 or more barrels of oil, must contain a description of each oil transfer system installed on the vessel including each _____. I. valve II. pump III. vent	II & III	I & II	I, II & III	I only
3355	According to the Coast Guard Pollution Prevention Regulations, no person may transfer oil to or from a vessel unless _____. I. each part of the transfer system not necessary for the transfer operation is securely blanked or shut off II. the discharge containment is in place III. each scupper or drain in a discharge containment system is closed	II & III	I & II	I only	I, II & III
3356	According to Pollution Prevention Regulations, no person may transfer oil to or from a vessel unless _____. I. each hose is supported in a manner that prevents strain on its coupling II. Each part of the transfer system necessary to allow the flow of oil is lined up for transfer III. each oil transfer hose has no loose covers, kinks, bulges, or soft spots, and no gouges, cuts or slahses that	II & III	I, II & III	I only	I & II

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	penetrate the hose reinforcement				
3357	Which of the following statements is true concerning oil transfer connections? I. Any permanently connected flange coupling must have a bolt in each hole II. Approved quick-connect couplings may be used III. When a temporary connection utilizes an American National Standard Institute (ANSI) standard flange, a bolt in every other hole is accpetable if at least four bolts are used	I & II	I only	I, II & III	II & III
3358	Oil Pollution Prevention Regulations, require that the person-in-charge of transfer operations is to insure that the _____. I. drains and scuppers are closed by the mechanical means II. transferrer and transferee know the identity of the product to be transferred III. hose is supported to prevent kinking or damage	I only	I & II	II & III	I, II & III
3359	In accordance with Regulations, a 25,000 gross ton cargo vessel on an ocean route, having two 10,000 HP oil fired boilers, requires a certain quantity of hand portable and semi-portable fire extinguishing systems in the engine room. Which of the following quantities of extinguishing agents would meet these requirements? I. 100 lbs. CO2, 20 lbs. dry chemical II. 30 lbs. CO2, 40 gals. foam III. 5 gals foam, 50 lbs. dry chemical	I, II & III	I only	I & II	II & III
3360	Which of the following	II & III	I, II & III	I only	I & II

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	statements is true concerning oil transfer connections? I. Any permanently connected flange coupling must have a bolt in each hole II. Approved quick-connect couplings may be used III. When a temporary connection utilizes an American National Standard Institute (ANSI) standard flange, a bolt in every other hole is accpetable if at least four bolts are used				
3361	The transfer procedures for oil products are required to be posted _____.	in the pilothouse	in the officers lounge	in the upper pumproom flat	where they can be easily seen or readily available
3362	Remote control for stopping machinery driving fuel oil service pumps is required. These controls shall be _____.	provided with a locked cover	accessible to authorized personnel only	protected against accidental operation	located at the control platform
3363	When completing the ballasting operation of a contaminated tank, which of the following problems must be guarded against?	Back flow of contaminated water	Loss of pump suction	Insufficient pump pressure when topping off	Motor overload due to high discharge head
3364	If a leak in an oil hose coupling cannot be stopped by tightening the coupling bolts, you should _____.	reduce pumping pressure to reduce the leakage rate	spread absorbent material on deck beneath the leak	notify the terminal operator, then shutdown and repair the leak	notify the Coast Guard of a potential oil spill
3365	When you notice oil on the water near your vessel while taking on fuel, you should FIRST _____.	determine whether your vessel is the source	stop loading	notify the senior deck officer	notify the terminal superintendent
3366	Pollution Prevention Regulations, state that no person may transfer oil to or from a vessel unless _____.	an oil containment boom is available for immediate use	a representative sample has been taken from the oil being received	all parts of the transfer system have been properly lined up	oil residue has been drained from all hoses
3367	When amendments are made to the shipboard oil pollution emergency plan, the revisions must be submitted to the Coast Guard _____.	and cannot be implemented without approval	one month prior to the anniversary date of the plan	six months prior to the end of the approval period	and can be implemented without immediate approval as long as final approval is received

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					within six months of submittal
3368	The approval period for a shipboard oil pollution emergency plan expires after _____.	four years	one year	two years	five years
3369	To prevent oil from escaping into the sea when ballasting through the cargo piping system, you should FIRST _____.	open block valves, then start the cargo pump	start the cargo pump, then open sea suction valves	open sluice valves, then start the cargo pump	open sea suction valves, then start the cargo pump
3370	According to the Pollution Prevention Regulations, the declaration of inspection is the _____.	paper issued by the Coast Guard marine inspector which allows you to conduct a transfer operation	annual report submitted by vessel personnel to the Coast Guard declaring that all transfer equipment has been inspected	application you must complete and submit to the Coast Guard to have an inspector visit your vessel	document signed by vessel and shore facility persons-in-charge declaring that all transfer requirements have been met
3371	Which of the listed operations must be personally supervised by the person-in-charge while taking on fuel?	Topping off of any tanks being loaded.	Posting of the Declaration of Inspection in a conspicuous place under glass.	Disposing overboard all waste oil or slops from drip pans.	Periodic sampling during the loading to ensure uniformity.
3372	While loading bulk oil, you notice oil on the water near the barge. Which of the following actions should you carry out FIRST?	Notify terminal superintendent	Search the vessel for leaks	Stop loading	Notify the Coast Guard
3373	According to 33 CFR Part 151, all tankships of 150 GT and above and all other ships of 400 GT and above,are required to prepare and maintain an approved _____.	vapor recovery procedures plan	shipboard oil pollution emergency plan	oil discharge plan	synthetic plastic discharge plan
3374	During topping off of bunker tanks, the loading rate must be personally supervised by the _____.	terminal operator	chief engineer	person-in-charge	master
3375	According to Pollution Prevention Regulations , no person may connect or engage in any other critical oil transfer	that person holds a valid port security card	the designated person-incharge is present	that person holds a license as master, mate, or engineer	that person holds a tankerman endorsement

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	operation unless _____.				
3376	According to the Pollution Prevention Regulations, who makes the final decision of when oil transfer may begin?	The senior deck officer present	Any local Coast Guard representative	The designated personin-charge	The captain of the port
3377	According to Pollution Prevention Regulations, if a cargo hose shows a small leak in its fabric, you may transfer oil after_____.	the hose is replaced	the terminal foreman is notified	the hose leak is securely wrapped	a drip pan is placed under the leak
3378	According to Pollution Prevention Regulations (33 CFR), the minimum number of bolts permitted in an ANSI standard flange on an oil hose is_____.	six	four	three	nine
3379	The minimum number of bolts necessary for a standard ANSI oil transfer hose temporary flange coupling (eight bolt hole flange) is _____.	six bolts	two bolts	four bolts	eight bolts
3380	According to Regulations (46 CFR), no vessel can come alongside or remain alongside a tank vessel while it is loading A, B, or C grade cargo without having the permission of the _____.	tank ship owner	terminal manager	USCG captain of the port	officer-in-charge of the vessel which is loading
3381	According to Pollution Prevention Regulations, when may a person serve as the person-in-charge of both a vessel and a facility during oil transfer operations?	When authorized by the Captain of the Port.	When licensed as a certified refueling officer.	Whenever the vessel is short of manpower.	Whenever the facility is unmanned.
3382	Which significant combustion elements of fuel oil is a major source of air pollution/	Carbon	Hydrogen	Sulphur	Nitrogen
3383	To avoid oil from discharge into the sea when ballasting _____.	start cargo p/p then open sea strainer valve	start the cargo p/p then close sea suction valve	start the cargo p/p then open sea suction valve	start cargo p/p then open sea discharge valve
3384	In the event of a small bunker oil spill on deck	wash down the area with	wash down the area	cover the area with saw dust	cover the area with foam

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	occurring while refueling, you should _____.	kerosene	immediately with a fire hose		
3385	The pollution prevention regulation state that liquid waste collected in drip pans buckets or tanks should be disposed by_____.	discharging into slop barge or shore tank	discharging ashore into the sewer system	sealing in disposable plastic barrels aboard ship	discharge overboard.
3386	What is a report when an incident takes place involving the discharge or probable discharge of oil (Annex I of MARPOL 73/78)?	Effective report	Dangerous goods report	Final report	Harmful substances report
3387	A tank for the collection and storage of sewage is_____.	sludge tank	holding tank	settling tank	general service tank
3388	An event involving the actual or probable discharge into the sea of a harmful substance or effluents containing such substance is termed as_____.	pollution	accident	discharging	incident
3389	Any spoiled or unspoiled victual substances such as fruits vegetables dairy products poultry products and all other materials contaminated as waste is called _____.	garbage	food frottage	food waste	food emulsification
3390	Which of the following refers to the remnants of any cargo materials on board that cannot be placed in proper cargo holds and elsewhere after unloading operation is completed?	Cargo residues	Plastic residues	Oil residues	Waste
3391	Which of the following refers to a mixture with any oil content?	Oily waste	Oily water	Oily bilge	Oily mixture
3392	Which of the following can be considered as a cargo-associated waste and maintenance waste cargo residues?	Waste oil	Domestic waste	Operational waste	Emitted waste
3393	All victual domestic and operation waste such as fresh fish and parts thereof is known as_____.	pollutant	garbage	left over	sewage

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3394	The term for all types of food and waste generated in living spaces on board ship is_____.	domestic waste	material waste	living waste	noxious waste
3395	The noxious substance which should remain on board until it can be disposed in a reception facility ashore is called_____.	emulsion	pollutant	residue	sludge
3396	The drainage from laundry bathroom and washbasin drains but does not include drainage from toilets urinals hospital and animal spaces is called_____.	cutwater	dishwater	greywater	blue water
3397	A solid material which contains synthetic polymers is called_____.	asbestos	glass	hose plastic	plastic
3398	All types of food wastes generated in the living spaces on board the ship are known as_____.	domestic waste	matter waste	living waste	noxious waste
3399	Regarding oil transfer pump which of the following is the normal practice with regards to connection to the bilge pump ?	With the universal connections	Other connections is not applicable	No connection fitted	In-line with the pump
3400	Which of the following refers to a mixture with any oil content?	Oily water	Oily mixture	Oily bilge	Oily waste
3401	Which of the following can be considered as a cargo-associated waste and maintenance waste cargo residues?	Waste oil	Emitted waste	Domestic waste	Operational waste
3402	All victual domestic and operation waste such as fresh fish and parts thereof is known as_____.	garbage	pollutant	sewage	left over
3403	The noxious substance which should remain on board until it can be disposed in a reception facility ashore is called_____.	residue	pollutant	emulsion	sludge
3404	When you are at sea and a high bilge level alarm sounded which of the following should you do ?	Transfer to bilge holding tank and pump it overboard at	Transfer to sludge tank	Use oily bilge separator	Pump it out to sea

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		night			
3405	Which of the following senior officers shall sign each completed page of the oil Record Book?	Chief mate	Master	Chief engineer	Engineer on watch
3406	Once bunkering is completed including tank soundings which of the following should be confirmed and an entry be made?	Deck Log Book	Engine Log Book	Bell Book	Oil Record Book
3407	In the event of a small bunker oil spill on deck occurring while bunkering you should _____.	cover the area with sawdust	wash down the area immediately with a fire hose	wash down the area with kerosene	cover the area with foam
3408	Which of the equipment listed is most effective in processing bilge water for overboard discharge?	A 100ppm oily water separator	A magnetic strainer	Fine filter	A 15ppm oily water separator
3409	Under what circumtances may untreated bilges be discharged overboard in Special Areas ?	during the hours of darkness	only in case of emergency	if the bilges are only to be lowered and not pumped right out	when procceding full ahead
3410	Which of the following purpose of the Oil Record Book?	to record oily bilge levels	to record quantity of fuel onboard	to record all fuel bunkers and bilge discharges	to record fuel consumption
3411	Which hapeen if the seperator oil content exceeds the equipment allowed level?	the pump is stopped and an alarm souds	the discharge is dumped to the bilge	a visible alarm	an audible alarm
3412	Why are conventional strainers not fitted in the cargo hold bilge wells?	because the cargo holds are cleaner than the engine room	because they might be damaged during loading and discharging	because they are in acceccible when catgo is loaded	they would restrict the pumping of bilge wells
3413	Which maximum oil content must oil/water seperators generally discharge?	50ppm	0ppm	100ppm	15ppm
3414	If an oil sheen is detected in the water adjacent to your vessel during bunkering operation but was determined it did not come from your vessels your FIRST action is _____ .	make an entry in the oil record book to that effect	secure the operations until the exact type of oil is determined	notify the Coast Guard	continue bunkering operation and call coast guard later on
3415	An incinerator is a waste disposal unit that will burn	non-metals and sludge	liquid waste	solid material	gases
3416	Which significant	Nitrogen	Carbon	Hydrogen	Sulphur

	combustion elements of fuel oil is a major source of air pollution/				
3417	What kind of tank is being used onboard that collects the dirty water from basins and sinks when the vessel is in port so that water pollution can be prevented?	Bilge	Sewage	Drain	Sludge
3418	Which significant combustion elements of fuel oil is a major source of air pollution?	Nitrogen	Hydrogen	Sulphur	Carbon
3419	Which is NOT covered by Pollution Prevention (MARPOL)?	Machinery	Arrangement	Damage Stability	Accidental
3420	The combustible element in fuel that could cause major air pollution is _____.	carbon	sulphur	hydrogen	nitrogen
3421	What is the most frequent incidents of tanker pollution occurring during tanker operation?	due to collisions	due solely to grounding	loading and discharging	routine discharge of oil during ballasting and tank crude oil washing
3422	An event involving the actual or probable discharge into the sea of a harmful substance or effluents containing such substance is termed as _____.	accident	incident	discharging	pollution
3423	Any spoiled or unspoiled victual substances such as fruits vegetables dairy products poultry products and all other materials contaminated as waste is called _____.	food waste	food frottage	garbage	food emulsification
3424	Which of the following refers to the remnants of any cargo materials on board that cannot be placed in proper cargo holds and elsewhere after unloading operation is completed?	Oil residues	Plastic residues	Cargo residues	Waste
3425	Which of the following refers to a mixture with any oil content?	Oily waste	Oily mixture	Oily water	Oily bilge

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3426	Which of the following can be considered as a cargo-associated waste and maintenance waste cargo residues?	Emitted waste	Domestic waste	Operational waste	Waste oil
3427	All victual domestic and operation waste such as fresh fish and parts thereof is known as _____.	garbage	pollutant	sewage	left over
3428	The term for all types of food and waste generated in living spaces on board ship is _____.	living waste	domestic waste	noxious waste	material waste
3429	The noxious substance which should remain on board until it can be disposed in a reception facility ashore is called _____.	emulsion	residue	sludge	pollutant
3430	The drainage from laundry bathroom and washbasin drains but does not include drainage from toilets urinals hospital and animal spaces is called _____.	blue water	greywater	dishwater	cutwater
3431	A solid material which contains synthetic polymers is called _____.	plastic	glass	asbestos	hose plastic
3432	All types of food wastes generated in the living spaces on board the ship are known as _____:	matter waste	living waste	domestic waste	noxious waste
3433	Which of the following is a liquid hydrocarbon mixture occurring naturally in the earth?	Mineral oil	Linseed oil	Natural oil	Crude oil
3434	Which of the following should you do if you see large quantities of oil on the water near your vessel ?	Call all hands if necessary	Notify terminal superintendent	All of these choices	Shut down loading/unloading
3435	In the open sea engine room bilges could be pumped out overboard when _____.	using oily bilge separator of 100 PPM	all of these choices	collecting bilges and pump to bilge tank	using oily bilges separator of not more than 15 ppm
3436	The oil content monitoring for engine room bilge shall be zero adjusted every _____ after	four months	three months	five months	two months

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	cleaning the light receiving unit.				
3437	What is the most frequent incidents of tanker pollution occurring during tanker operation?	due solely to grounding	due to collisions	loading and discharging	routine discharge of oil during ballasting and tank crude oil washing
3438	Extra chemicals maintained aboard the vessel producing chemical foam should be stored ____.	At a temperature not less than 80oF	In a cool dry place	In open bins	In a freezer
3439	An ocean going ship of 4000 gross tons must be fitted with a standard discharge shore connection for the discharge of oily wastes to a reception facility. Under what part of the Pollution Prevention Regulations stated the specified dimensions for the connection?	151	155	153	154
3440	A ship of 400 gross tons, constructed in January 1974, may carry fuel oil in tanks forward of the collision bulkhead, if such tanks were _____.	designated for fuel oil carriage after Jan 31, 1975	installed for fuel oil carriage on August 1, 1974	designed for cargo oil using specifications from 1976 Pollution Prevention Regulations	designated, installed, or constructed for fuel oil carriage before July 1, 1974
3441	Which cargo will put full and down a vessel with a deadweight carrying capacity of 10,500 tons. Fuel, water, and stores require 1500 tons. The cubic capacity is 500,000 cubic feet.	Slabs of zinc, SF 7.1	Rolls of barbed wire, SF 55.5	Barrels of tallow, SF 66.8	Bundles of rubber, SF 140.2
3442	A vessel sailing out to sea may pump overboard an untreated sewage holding tank?	25 nautical miles	12 nautical miles	3 nautical miles	6 nautical miles
3443	Fuel oil and bulk lubricating oil discharge containment on a 200 gross ton ship (constructed before July 1, 1974) may consist of a/an _____.	overflow manifold that empties into the day tank	enclosed deck area with a capacity of 5 U.S. gallons (19 l)	fixed container with a capacity of one-half barrel (.08 m3)	fixed container with a capacity of 5 U.S. gallons (19 l)
3444	Fuel containers used for refueling portable gasoline	in the paint locker	on or above the weather deck in	in the pumproom	in the engine room

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	driven pumps and exceeding a capacity of five gallons, should be stowed _____.		locations designated by the master		
3445	For a ship of 10,000 gross tons, constructed after 30 June 1974, a fixed container, or enclosed deck area, must exist under or around each fuel oil tank vent. The container must have a capacity of at least _____.	42 gallons (158.9 l)	5 gallons (18.9 l)	10 gallons (37.8 l)	21 gallons (79.5 l)
3446	Engine room bilge water can be pump out overboard safely by using or by passing water bilge through.	fine mesh filter	oil purifier	oil separator	foam type filter
3447	Who would be responsible to guarantee that the posted transfer procedures are being followed during oil transfer operations?	The tankerman	The oiler	The senior able seaman	The designated person in charge
3448	Which of the listed precautions should be taken when topping off fuel tanks during bunkering?	Place 5 gallon containers under all flange connections in the fuel line.	Close all overflow valves.	Reduce the pumping rate and sound tanks frequently	Reduce the pumping rate by closing the deck filling valve.
3449	During discharging fuel, you dectect oil in the water around your vessel, what is the first thing to do.	shutdown operations	try to find out where the oil is coming from	call the Master	have the pump man check the discharge piping
3450	How many hours for a motor-propelled lifeboats are required to have sufficient fuel to operate continuously at 6 knots?	18	6	12	24
3451	No person may discharge garbage from a vessel located near a fixed or floating platform engaged in oil exploration at a distance of less than _____.	2000 feet	1650 feet	2500 feet	1850 feet
3452	Ballast Water Management Regulations can be found in _____.	46 CFR Part 35	33 CFR Part 110	33 CFR Part 151	46 CFR Part 56

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3453	On a newly constructed oceangoing vessel of 10,000 gross tons, equipped with an approved 100 ppm oily water separator, and bilge monitor, the bilge monitor continuous record must be _____.	maintained onboard for not less than 3 years	initialed after each engineering watch by the watch engineer	kept readily available for 1 year only	detached monthly for enclosure in the Oil Record Book
3454	In what Regulations concerning the record keeping requirements of shipboard garbage disposal can be found_____.	46 CFR Part 56	33 CFR Part 151	46 CFR Part 32	33 CFR Part 155
3455	Sanitary, ballast, bilge or general service pumps may be accepted as fire pumps provided: (SOLAS II-2/4.3.2)	They are ready for use as fire pump at any time	They are fitted with automatic start connected to the fire alarm	They are not normally used for pumping oil	They can be started from a position outside the engine room
3456	In order to avoid one head being used during the tank washing procedure a sufficient portable drive heads for a crude oil washing system must be provided more than _____.	5 times	4 times	3 times	2 times
3457	When you discovered he tank top in engine room has a high quantity of oil residues floating around, what action should be taken?	Open the overboard valve and start the bilge pump.	Apply foam to the tank top to minimise the risk of fire.	Start the fire pump.	Notify Ch.Eng., find cause of leakage, remedy the leakage and then immediately start cleaning of the tank top.
3458	LNG Tankers carrying cryogenic cargoes are fitted with gas detector systems alarmed at 30% of the lower explosive limit. If the gas detector alarms sounds, this means _____.	a flammable vapor concentration exists at the sample point, but it is too lean to burn	the detector sensor is sampling a space where the cargo vapor concentration is 30 percent by volume	an explosion is about to take place	the detector is sampling a space in which 30 percent of the atmosphere is explosive
3459	The aft, starboard bilge-well can not be pumped out, and back flushing has not been successful. The next practical solution will be to carry out which of the following actions?	Place 20 gals. (75.7 L) of fuel oil tank-wash into the affected bilge well for one hour to dissolve	Change over and use one of the two remaining bilge pumps to dewater the starboard bilge	Take all necessary steps to properly and safely pump out the affected bilge well, then manually muck	List the ship to port in order to pump out the bilges for the remainder of the voyage.

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		the stoppage.	well.	it out.	
3460	Amount of garbage disposed must be entered into the records maintained by each ship and stated in _____.	weight in either kilogram or pounds	cubic meters	cubic yards convertible to long tons	barrels, measured in 55 gallon drums
3461	The federal water pollution control act requires the person in charge of a vessel to immediately notify the Coast guard as soon as he knows of any oil discharge. Failure to notify the coast guard can lead to a fine of dollar:	1000	10000	5000	500
3462	The bilge system is unable to pump out the aft starboard engine room bilge-well due to the bilge-well suction being fouled. With two feet of water over the top of the bilge-well, which of the following actions should be carried out?	Simultaneously operate all available bilge pumps.	Transfer half the contents of a drum of degreaser into the bilge well and pump out the bilge well with the system.	Remove the effected bilge manifold valve and attempt to back flush the line.	Send the wiper into the bilge-well with a scoop and pail.
3463	To avoid excessive electrostatic effect in the crude oil washing process, due to the presence of water in the crude oil washing fluid, the contents of any tank to be used as a source of crude oil for washing must first reduce a portion of the tank content	one meter	one-half meter	one and one-half meters	two meters
3464	To prevent shock pressures in the fuel oil filling hoses while you are topping off tanks.	oiler should sound all tanks continuously	tank vent valves should be clear	hoses should be looped	loading rate should be decreased
3465	To avoid excessive pressures in the fuel oil filling system during bunkering, you should _____.	top off all tanks at the same time	close the tank filling valves quickly	reduce the loading rate when topping off	fill one tank at a time
3466	An oil tanker of 150 gross tonnage is subject to survey under Regulation 4, Annex 1 of MARPOL 73/78. What tonnage of other vessel is included?	less than 150	400 and above	150 and above	less than 400

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3467	A water ballast placed in a tank that has been crude oil washed shall be regarded as	segregated ballast	crude oil	clean ballast	dirty ballast
3468	What tank use to collect the dirty water from basins and sinks when the vessel is in port so that water pollution can be prevented?	sewage	drain	bilge	sludge
3469	What would be the minimum distance from any shoreline that a vessel must be located before it is permitted to perform a complete ballast water exchange to be in compliance with U.S. Federal Ballast Water Management Regulations?	100 nautical miles	12 nautical miles	200 nautical miles	50 nautical miles
3470	What should be the first step in combating a fire on deck during oil transfer?	Prevent the spread of fire with a foam dam	Shut off the transfer of cargo	Blanket the cargo spill with foam	Apply CO2 on burning fuel at its source
3471	During cargo oil tank cleaning using crude oil washing while in port	water should be allowed to settle on top before discharging	filters should be installed in bilge strainers to absorb oil before discharge overboard	the inert gas system must be properly operating in that tank	the dock supervisor need not be notified before discharging oily mixtures overboard
3472	When a fuel oil tank is being topped off during bunkering operations, the tank valve should be closed _____.	after the shore pumps are stopped	rapidly to prevent overflow	slowly to prevent surge stresses	to prevent gas from escaping through the pressure-vacuum relief valves
3473	In Annex V to MARPOL 73/78, which of the circumstances listed is an exception to the garbage discharge requirements?	Garbage accumulation onboard has exceeded storage space.	A person falls overboard, and a plastic ice chest is thrown for flotation.	The garbage to be discharged will sink.	The destination port or terminal cannot receive garbage.
3474	Which of the following items is not required to be contained in the vessels oil transfer procedures?	A line diagram of the vessels oil transfer piping.	The number of persons on duty during oil transfer operations.	Any special procedures for topping off tanks.	The location and capacity of all fuel and cargo tanks on the vessel.
3475	Which of the following liquids can ordinarily be discharged overboard without being processed through an oily water	Cargo tank ballast	Segregated ballast	Cargo pumproom bilges	Engine room bilges

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	separator?				
3476	In bunkerking operation, if you close off one tank in the line of tanks being filled, the flow rate to the other open tanks on the same line will _____.	stabilize	increase	decrease	stop
3477	You are transferring fuel from the storage tanks to the day tanks by means of an electric fuel oil transfer pump. If the pump motor catches fire, you should_____.	shut off the power ventilation	secure the fuel manifold	spray water on the fire	shut off power to the pump
3478	Your vessel has run aground and upon taking fuel oil tank soundings, you find that a fuel tank level has increased. You therefore should suspect _____.	a crack in the hull portion of the fuel tank	condensation in the fuel tank	a load of bad fuel	contamination from the saltwater flushing system
3479	The vessel is colliding with another tanker and the vessels are interlocked. Which action/judgement should first of all be taken?	Separate the two vessels immediately.	Take separation of the two vessels into an immediate consideration, but consider that a separation may create a larger oil spill.	Reduce cargo content by dropping into empty/slack tank.	Shut down non - essential air intakes.
3480	Your vessel is taking on fuel oil when a small leak develops in the hose and you have ordered the pumping stopped. Before resuming pumping you should _____.	repair the hose with a patch	notify the terminal superintendent	replace the hose	place a large drip pan under the leak and plug the scuppers
3481	Your vessel is a tanker in ballast and the two vessels are interlocked after collision. You have already made clear that all people are well taken care off and you will try to separate the two vessels. What should be your greatest concern?	That you have your permission from the company to do so.	If the vessels separate, the other vessel may run away and you will be the only one to blame.	The exact time of the collision.	That the separation may cause sparks that can possibly ignite the oil or any other flammable substances.
3482	When tanks have been washed with crude oil, and ballasted without	dirty ballast	clean ballast	segregated ballast	dedicated ballast

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	being water rinsed, the ballast is referred to as _____.				
3483	Garbage Record Book as provided under the Appendix to Annex V of MARPOL 73/78, which entries not included if the Garbage is incinerated?	date and time	ships position	estimated amount	time of occurrence
3484	In a situation which presents a safety or pollution hazard during fuel transfer operations, which action should be taken?	Notify the person in charge of the shore facility.	Shut down the transfer operation.	Sound the fire alarm.	Close the valves at the transfer manifold.
3485	If the overflow tank high-level alarm sounds while the fuel oil tanks are being topped off, the engineer should _____.	close the static leg filling valve	reduce the fuel oil pumping rate	stop the fuel oil pumping operation	close the overflow tank filling valve
3486	If substantial oil is accidentally discharged due to grounding, water may enter the engine room and may aggravate conditions due to possible fire or explosions. To prevent this situation, which of the following should be done?	shut off engine water intake, secure engine room	close all cargo tanks opening	blank off all pipelines on the manifold	maintain vessel in upright position
3487	If it becomes necessary to pump bilges while a vessel is in port, which of the following procedures should be followed?	Pump only during the hours of darkness.	Pump only on the outgoing tide.	Pump only as much as is necessary.	Pump only if the discharge is led to a shore tank or barge.
3488	If flammable vapors have penetrated a gas free space, which of the following actions would be the most hazardous to perform?	Securing all power to the space from a remote location.	Opening switches in the space to de-energize circuits.	Closing switches adjacent to the space to operate vent fans.	Leaving electrical circuits energized in the space.
3489	What is the disadvantage of crude oil washing?	Its cleaning ability is very poor.	Allows buildup of cargo residue on tank walls.	It requires following additional work procedures and close attention by the crew during cargo operations.	When completed, more cargo is retained aboard the ship than with water washing.
3490	Diesel fuel is relatively safe to handle due to its low volatility, but the	flash point	ignition point	upper explosive limit	volatility point

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	fumes will self-ignite and continue to burn steadily if the fuel is heated to the _____.				
3491	Comminuted or ground garbage which will be discharged into the sea, must be able to pass through a screen with a mesh size no larger than _____.	75 millimeters	100 millimeters	25 millimeters	50 millimeters
3492	Bottom mounted crude oil washing machines are primarily used for _____.	areas where direct impingement from deck mounted machines cannot be satisfactorily reached	the majority of crude oil tank cleaning	washing the entire bottom of the tank	all vertical surfaces
3493	When the scuppers are plugged and an oil spill occurs on deck, you should _____.	remove scuppers and wash the fuel overboard with a solvent	remove the plugs from the scuppers to allow the spill to run overboard and wipe the area dry with rags	sound the general alarm	use absorbent material, such as sawdust, to clean up the spill
3494	The practice to be done when a vessel is in port and necessary to pump bilges is to pump only _____.	during the hours of darkness	none of the above	if the discharge is led to a shore tank or barge	as much necessary
3495	The most critical time for preventing an accidental oil spill during bunkering, is when the _____.	hoses are being disconnected	fuel begins to come aboard	hoses are being blown down	tanks are being topped off
3496	No vessel may use or carry an oil transfer hose larger than three inches in diameter unless it meets certain requirements. Which of the following is NOT a requirement?	Metallic reinforcement	A bursting pressure greater than 600 psi	A working pressure greater than 150 psi	Identification markings
3497	Most stringent regarding pollution of noxious liquid	meditterranean sea	red sea	black sea	china sea
3498	Mandatory on the shipboard oil pollution emergency plan is _____.	removal equipment list	clean up procedures	record of events	reporting requirements
3499	Garbage that can be discharge within special	donnage	comminuted glass	food waste	floating paper

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	area.				
3500	An oil spills on deck can be prevented from contaminating any water by _____.	Plugging all scuppers and drains	Placing floating booms around the ship	Regularly emptying all drip plans	remove scuppers and wash the fuel overboard with a solvent
3501	If flammable liquids are being pumped with a centrifugal pump, you should _____.	gag relief valves to prevent recirculating and heating of the liquid	throttle the suction valve to control capacity	throttle the discharge valve to assure positive pumping	stop the pump immediately if it becomes vapor bound
3502	Failure to notify the Coast Guard about pollution as soon as he knows of any oil discharge can lead to an individual being imprisoned for a maximum of	60 days	6 months	30 day	1 year
3503	According the Pollution Prevention Regulations, a tank vessel with a total capacity of over 250,000 barrels of cargo oil, having two loading arms with a nominal pipe size diameter of 10 inches, each being 75 feet in length, must have an enclosed deck area	491 gallons	126 gallons	252 gallons	168 gallons
3504	A pan on the galley stove containing oil catches fire, do not_____.	cover pan with fire blanket and switch of heat source.	raise the alarm, close galley door and wait for the fire teams to arrive.	cover pan with lid and switch of heat source.	use water extinguisher to put out the fire.
3505	A vessel over 100 gross tons in coastwise service is to pump out its fuel tanks to a facility while in port. This vessel must have a/an _____.	adapter or shore connection made in accordance with 33 CFR Part 155	deballasting pump which is independent of the ballasting pump	stop-check valve located at the pump discharge	oil and water separator to retain oily waste in a holding tank
3506	If a vessel has a mean draft of 28ft 08 inches. The TPI immersions is 50 and the final forward draft is 30ft 00 inches, what will be the draft on nine hundred tons of fuel oil?	30ft. 02 inches	30ft. 04 inches	30ft. 08 inches	30ft. 00 inches
3507	According to MARPOL, the definition of graywater includes drainage from _____.	toilets	cargo spaces	dishwashers	hospital sinks

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3508	According to MARPOL, the definition of medical waste does NOT include _____.	pathological wastes	expired pharmaceuticals	dialysis wastes	sharps
3509	According to MARPOL, the definition of oil does not include _____.	cooking oil	crude oil	sludge	oil refuse
3510	According to the Regulations, all escape hatches and other emergency exits on small passenger vessels of less than 100 gross tons shall be marked on _____.	exterior side, in less than 2-inch letters watertight opening- keep clear	both sides, in at least 2-inch letters watertight door-close in emergency	both sides, in at least 2-inch letters emergency exit-keep clear	exterior side only, in at least 2-inch letters emergency exit-keep clear
3511	After fuel tanks have been filled and bunkers completed, which of the listed procedures should be followed next?	The tanks should be marked with a bull stamp on the manifold filling valve.	The pressure-vacuum relief valve should be reset.	The tanks should be made seaworthy to prevent contamination.	The tanks should be sounded to verify levels.
3512	After grounding, the extent of the damage to the vessel can determined by	checking if the engine room of flooded	testing if the engine is still working	sounding of all compartments	taking sounding around the vessels
3513	After fuel oil transfer, the hoses should be disconnected and _____.	drained into buckets or fuel tanks	draped over the fantail to dry out	drained over the side and washed out	drained into the bilges and washed out
3514	An acceptable method of dealing with accumulated oil found in the pump room bilges is to _____.	pump the oil into a clean ballast tank	pump the oil into the slop tanks	transfer the oil to the sea chest	discharge the oil over the side on an outgoing tide
3515	An application for an exemption of any requirements of the regulations for oil transfer operations must be submitted to the _____.	Nearest Coast Guard office	Commandant	District Commander	Captain of the Port
3516	Applications for a waiver of any requirements of the regulations for oil transfer operations must be submitted _____.	the day before the operations	30 days before the operations	5 days before the operations	10 days before the operations
3517	The International Oil Pollution Prevention (IOPP) Certificate ceases to be valid on a U.S. Ship when _____.	an intermediate survey as required by 33 CFR 151.17 is not carried out	the vessel owners cease to belong to IMO (International Maritime Organization)	the ship changes its port of documentation to San Francisco	the certificate exceeds 2 years from the date of issue

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3518	An oceangoing ship of 370 gross tons, constructed in January 1976, and not equipped with an oily water separator, may retain all bilge slops _____.	in a cofferdam	onboard in the ships bilges	in the forward peak tank	in the oil purifier reservoir
3519	An uncontrolled flow of gas, oil, or other well fluids into the atmosphere is called a _____.	breakout	blowout	flow	kick
3520	Any motor vessel of 400 tons gross tonnage and above must be fitted with:	Inert gas system	Crude oil washing	Segregated ballast tanks	Oily water separating equipment
3521	Emergency pump control is used as the emergency shutdown on a tank vessel, it must stop the flow of oil through _____.	the pump	a means that is not dependant on electrical power	the main deck manifold	the facility
3522	If an oil spill occurs on deck, you should _____.	cover the area with foam	cover the area with absorbent material	wash down immediately with a fire hose	wash down immediately with an oil dispersing solvent
3523	If hot oil comes in contact with a diesel engine turbocharger, catches fire, and causes in excess of $(USA)25,000 damage to your ship, by law this must be reported to the _____.	engine manufacturer	American Bureau of Shipping	U.S.C.G. Officer in Charge, Marine Inspection at the next port	vessel underwriters
3524	The form of containment specified for harmful substances in the IMDG Code?	Labeling Form	Packaged Form	Stowage Form	Documentation Form
3525	The lowest temperature at which sufficient vapors exits above the oil to yield a flammable mixture?	Freezing point	Flash points	Boiling point	pour points
3526	Drainages from dishwater, shower, laundry, bath and washbasin drains and does not include drainage from toilets, urinals, hospitals, and animal spaces, as well as drainage from cargo spaces?	Black water	Grey water	Accommodation water	Dishwater
3527	Transport information relating to the carriage of harmful substances in	Documentation	Labelling	Stowage	Marking

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	accordance with the relevant provisions of the IMDG Code and are made available to the person or organization designated by the port State authority				
3528	A tank specifically designated for the collection of tank draining, tank washings and other oily mixtures on a tanker ship.	Fore Peak Tank	Slop Tank	Sludge Tank	Drain tank
3529	A sea area is for recognized technical reasons in relation to its oceanographical and ecological condition and to the particular character of its traffic the adoption of special mandatory methods for the prevention of sea pollution by oil is required?	Special area	Particularly sensitive sea area	Special sea	Special sea area
3530	The first action if there is an accidental discharge during bunkering?	Follow SOPEP.	Stop bunkering operation	Inform port authorities.	Contain pollution and prevent overboard spillage.
3531	If you observe any situation which presents a safety or pollution hazard during transfer of fuel operation , which of the action should be taken first?	wait for the person in-charge to act	notify the ballast control operator	shut down the transfer operation	Sound the fire alarm
3532	Which of the following statements is correct regarding the installation of incinerator?	The installation of incinerator is mandatory only for dry ship	The installation of an IMO approved incinerator is mandatory for all ships.	The installation of the incenerator for all ships.	The installation of incinerator is mandatory for all ships above 400 GRT
3533	Victual waste is _____.	any garbage that comes from food or food provisions	the resultant sludge that is collected after waterwashing a boiler	the final waste product of a manufacturing process	the final discharge of sewage treatment plants
3534	You have abandoned ship and after two days in a raft, you can see an aircraft near the horizon apparently carrying out a	Turn on the strobe light on the top of the EPIRB	Use visual distress signals in conjunction with the EPIRB	Use the voice transmission capability of the EPIRB to guide the aircraft to	Switch the EPIRB to the homing signal mode

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	search pattern. You should:			your raft	
3535	You have abandoned ship and are in charge of a liferaft. How much water per day should you permit each occupant to drink after the first 24 hours?	1 quart	1 pint	1 can	1 gallon
3536	How often must inspection of proper working of the EPIRB ?s and SART ?s take place on board? Once per_____	14 days	Don't know	week	month
3537	On an oceangoing vessel, for each person a lifeboat (without desalting kits) is certified to carry, the boat must be supplied with _____.	3 liters of water	2 pounds of condensed milk	a signaling whistle	a life preserver
3538	Part of the required equipment for a lifeboat includes_____ .	a boathook	whistle	painter	all of the above
3539	Which is TRUE concerning immersion suits and their use?	They should be tight fitting.	They provide sufficient flotation to do away with the necessity of wearing a life jacket.	A puncture in the suit will not appreciably reduce its value.	Only a light layer of clothing may be worn underneath.
3540	A life float on a fishing vessel must be equipped with _____.	a righting line	red hand flares	pendants	drinking water
3541	A life float on a fishing vessel must be equipped with _____.	pendants	a righting line	red hand flares	drinking water
3542	Your vessel is equipped with totally enclosed lifeboats. Which statement is TRUE when the boat is enveloped in flames?	The ventilators will automatically close by the action of fusible links.	An air tank will provide about ten minutes of air for the survivors and the engine.	A water spray system to cool the outside of the boat is operated by a high-volume manual pump.	The motor takes its air supply from outside the lifeboat to prevent asphyxiation of the crew.
3543	You are underway when a fire breaks out in the forward part of your vessel. If possible, you should _____.	call for assistance	keep going at half speed	put the vessel's stern into the wind	abandon ship to windward
3544	The purpose of the tripping line on a sea anchor is to _____.	maintain maximum resistance to broaching	direct the drift of the vessel	aid in its recovery	aid in casting off

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3545	You are at sea in an inflatable liferaft. In high latitudes, the greatest danger is _____.	starvation	hypothermia caused by cold temperature	asphyxiation due to keeping the canopy closed	collapse of the raft due to cold temperatures
3546	Most lifeboats are equipped with _____.	unbalanced rudders	balanced rudders	contraguide rudders	straight rudders
3547	What should you do with your EPIRB if you are in a life raft during storm conditions?	bring it inside the life raft and turn it off until the storm passes	bring it inside the life raft and leave it on	bring it inside the life raft and turn it off until the storm passes	bring it inside the life raft and turn it off until the storm passes
3548	What should you do with your EPIRB if you are in a life raft during storm conditions?	bring it inside the life raft and turn it off until the storm passes	bring it inside the life raft and turn it off until the storm passes	bring it inside the life raft and turn it off until the storm passes	bring it inside the life raft and leave it on
3549	How are lifelines attached to a life float?	By serving	With an approved safety hook or shackle	By splicing one end of the line around the apparatus	Securely attached around the outside in bights no longer than three feet
3550	To turn over an inflatable liferaft that is upside down, you should pull on the _____.	righting strap	canopy	manropes	sea painter
3551	Which of following items shall be included in an abandon ship drill?	Checking passenger's immersion suits.	Checking that lifejackets are correctly donned.	Checking the lifeboat provisions and supplies.	Checking the distress signal rockets and other distress signals.
3552	Which type of EPIRB must each ocean-going ship carry?	Class B	Class A	Category 1	Class C
3553	Your small vessel is broken down and rolling in heavy seas. You can reduce the possibility of capsizing by _____.	constantly shifting the rudder	rigging a sea anchor	moving all personnel forward and low	moving all personnel aft
3554	The following information must be given on the SART	date of replacement of the battery	Don't know	the MMSI number	date of replacement of the hydrostatic release unit
3555	The battery of an EPIRB_____	must be replaced before the expiry date is exceeded	Don't know	must be renewed every year	load must be checked weekly
3556	If you reach shore in a liferaft, the first thing to do is _____.	drag the raft ashore and lash it down for a shelter	find some wood for a fire	get the provisions out of the raft	set the raft back out to sea so someone may spot it

3557	The number 2 lifeboat on a tanker would be _____.	forwardmost on the starboard side	abaft #1 lifeboat port side	abaft #1 lifeboat starboard side	forwardmost on the port side
3558	The greatest effect on stability occurs from loose liquids flowing _____.	from side to side in the tanks of the vessel	from fore to aft in the tanks of a vessel	in and out of a vessel that is holed in a wing tank	in and out of a vessel that is holed in a peak tank
3559	The greatest effect on stability occurs from loose liquids flowing _____.	from fore to aft in the tanks of a vessel	in and out of a vessel that is holed in a peak tank	from side to side in the tanks of the vessel	in and out of a vessel that is holed in a wing tank
3560	If more than one raft is manned after the vessel has sunk, you should _____.	tie the rafts together and try to stay in a single group	reduce the number of rafts by getting as many people as possible into as few rafts as possible	spread out to increase the possibility of a search aircraft finding you	go in a different direction in search of land
3561	If you have to abandon ship and enter a life raft, your main course of action should be_____ .	get a majority opinion	remain in the vicinity of the vessel	head for the closest land	head for the closest sea-lanes
3562	If you are forced to abandon ship in a lifeboat, you should _____.	head for the closest sea-lanes	head for the nearest land	vote on what to do, so all hands will have a part in the decision	remain in the immediate vicinity
3563	After the lifeboat has reached the top of the davit heads, the davit arms begin moving up the tracks until the movement is stopped by the_____ .	hoist man	limit switch	preventer bar	brake handle
3564	If, for any reason, it is necessary to abandon ship while far out at sea, it is important that the crew members should _____.	separate from each other as this will increase the chances of being rescued	immediately head for the nearest land	get away from the area because sharks will be attracted to the vessel	remain together in the area because rescuers will start searching at the vessel's last known position
3565	If a life raft should capsize_____ .	right the raft using the righting straps	inflate the righting bag	climb onto the bottom	swim away from the raft
3566	You have abandoned ship in a life raft. Which of the following actions should you take?	organize a lookout system	Organize a watch system, post as a lookout, tie up with other survival craft if possible, and stream the sea	start paddling in the direction of the nearest land	Join up with any other survival craft and stream the sea anchor

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			anchor		
3567	After abandoning ship, you should deploy the sea anchor from a liferaft to _____.	keep the liferaft from capsizing	Keep personnel from getting seasick	Stay in the general location	Navigate against the current
3568	Which of the following is considered primary life-saving equipment?	Life Preserver	Lifeboat	Personal flotation device	Lifering
3569	A rigid lifesaving device designed for a group of survivors to hold on to while in the water is defined as a_____.	buoyant apparatus	life raft	life cushion	life preserver
3570	Lifejackets should always be stowed in_____ .	poop deck	locked watertight containers	mess room	readily accessible spaces
3571	All personnel should be familiar with the lifeboats_____ .	navigational systems	boarding and operating procedures	fuel consumption rates	maintenance schedule
3572	Which is an indication of reserve buoyancy?	Freeboard	Rolling period	Righting moment	Metacentric height
3573	A hydrostatic release mechanism for a life raft_____ .	must be wet before it will release	will inflate the raft in its cradle if operated manually	must be submerged to a certain depth to release automatically	should be kept in a watertight cover except in an emergency
3574	Which one of the given requirements regarding survival craft muster and embarkation arrangements corresponds to the present SOLAS regulations?	Searchlights to be provided at the launching station.	Muster and embarkation stations are to be arranged separately to improve working conditions.	Muster and embarkation stations shall be readily accessible from accommodation and work areas.	Davit-launched survival craft muster and embarkation stations shall not be arranged to enable stretchers to be placed in survival craft.
3575	The number 2 lifeboat on a tanker would be found _____.	abaft #1 lifeboat on the port side	on the port side	on the starboard side	abaft #1 lifeboat on the starboard side
3576	Generally, which of the following gases is used to inflate life rafts?	Hydrogen	Compressed air	Oxygen	CO2
3577	If your life raft is to leeward of a fire on the water, you should first_____ .	get out of the raft and swim to safety	cut the line to the sea anchor	splash water over the life raft to cool it	paddle away from the fire
3578	You have just abandoned ship and boarded a raft. After the raft is completely inflated you	not become alarmed unless it continues for a long period of	plug the safety valve	unscrew the deflation plugs	remove the safety valve and replace it with a soft patch

	hear a whistling noise coming from a safety valve. You should _____.	time			
3579	The Muster List shall show the duties assigned to members of the crew. Which of the following duties shall be included in the "muster list" according to present regulations?	Preparation of survival craft's Emergency Positions Indicating Radio Beacons.	Closing of watertight doors, fire doors, valves, scuppers, side scuttles, skylights.	Preparation of immersion suits and thermo protective aids for the ship's passengers.	Operation of the vessel's propulsion system.
3580	To disengage a survival craft suspended from the cable above the water, you must pull the safety pin and _____.	use the ratchet bar and depress the retainer	pull the hook release handle and depress the retainer	pull the hook release handle and use the ratchet bar	pull the hook release handle
3581	If an inflatable liferaft inflates upside down, you can right it by _____.	standing on the CO2 bottle, holding the bottom straps, and throwing your weight backwards	getting at least three or four men to push down on the side containing the CO2 cylinder	pushing up on one side	doing nothing; it will right itself after the canopy supports inflate
3582	You hear air escaping from the liferaft just after it has inflated. You should _____.	check the painter line attachment for a tear caused by the initial opening	not panic since the safety valves allow excess pressure to escape	check the sea anchor line attachment for a tear if the seas are rough	quickly hunt for the hole before the raft deflates
3583	One can check the functioning of the SART by_____	removing it from the holder and turning the SART upside down	activating it by extracting the antenna	activating the SART and checking the effect on the radar screen	Don't know
3584	Most enclosed lifeboats will right themselves after capsizing IF the _____.	fuel tanks are not less than half full	sea anchor is deployed to windward	lower ballast tanks are filled with water	passengers are strapped to their seats
3585	Fire and lifeboat stations are required to be listed In the_____ .	muster list	official log book	ship's articles	bunk card
3586	A liferaft which has inflated bottom-up on the water _____.	must be cleared of the buoyant equipment before it will right itself	will right itself when the canopy tubes inflate	should be righted by standing on the life line, holding the righting straps, and leaning backwards	should be righted by standing on the carbon dioxide cylinder, holding the righting straps, and leaning backwards
3587	A liferaft which has inflated bottom-up on the	should be righted by	should be righted by	will right itself when the	must be cleared of the buoyant

	water _____.	standing on the life line, holding the righting straps, and leaning backwards	standing on the carbon dioxide cylinder, holding the righting straps, and leaning backwards	canopy tubes inflate	equipment before it will right itself
3588	When a sea anchor is used in landing stern first in a heavy surf, sternway is checked by _____.	slacking the tripping line and towing the sea anchor from the stern	towing the apex end forward with the tripping line	towing with the tripping line and leaving the holding line slack	slacking the tripping line and towing the sea anchor by the holding line
3589	The Emergency Position Indicating Radio beacon on a cargo vessel must be stowed _____.	so that it will float free if the vessel sinks	so that it is accessible from the bridge of the vessel	in an approved bracket	in an inside passageway
3590	The Master shall insure that the Emergency Position Indicating Radio beacon (EPIRB) is _____.	secured in the emergency locker	secured inside the wheelhouse	tested monthly	tested annually
3591	While adrift in an inflatable liferaft in hot, tropical weather _____.	the canopy should be deflated so that it will not block cooling breezes	the pressure valve may be periodically opened to prevent excessive air pressure	the entrance curtains should never be opened	deflating the floor panels may help to cool personnel
3592	Preventer bars are fitted on lifeboat releasing gear to prevent _____.	the falls from unhooking if the releasing gear is operated accidentally	the falls from rehooking after they have been released	accidental unhooking when the falls become slack	operation of the release lever until the boat is waterborne
3593	An orage colored smoke signal or detonating luminous signals fired at interval of one minute means_____.	we see you, we will provide help as soon as possible	to embark here is dangerous	this is the most suitable place to embark	man in the buoy
3594	An orage colored smoke signal or detonating luminous signals fired at interval of one minute means_____.	to embark here is dangerous	this is the most suitable place to embark	we see you, we will provide help as soon as possible	man in the buoy
3595	You are tending the lifeline of a person who has entered a compartment wearing a breathing apparatus. How many tugs of the lifeline mean "Are you all right"?	Three	Two	. Four	One
3596	The steering oar in a lifeboat is _____.	shorter than the others	used for the stroke oar	longer than the others and	used by the forward man in

				should be lashed to the stern	the boat to direct the bow
3597	The vessel's Emergency Position Indicating Radio beacon (EPIRB) must be tested _____.	every 3 months	monthly	every 2 months	weekly
3598	The purpose of storm oil is to:	Repel dangerous fish	Lubricate sea anchor	Smooth the sea	Weight down the sea anchor
3599	The center of flotation of a vessel is the point in the waterplane _____.	about which the vessel lists and trims	which coincides with the center of buoyancy	which, in the absence of external forces, is always vertically aligned with the center of gravity	which is shown in the hydrostatic tables as VCB
3600	A hydrostatic release mechanism for a liferaft_____.	will inflate the liferaft	should be kept watertight before release	must be submerged to a certain depth to release automatically	must be wet before it will release
3601	The bypass valve on a self-contained breathing apparatus (SCBA) bypasses_____.	oxygen to the atmosphere	the regulator in an emergency	the regenerator in an emergency	a breathing bag containing excessive pressure
3602	Prior to entering a compartment containing an atmosphere potentially dangerous to life or health, you should don an approved self-contained breathing apparatus. Which one of the listed devices is a self-contained breathing apparatus?	A canister-type gas mask	All of the above	A demand-type breathing apparatus	A fresh-air breathing apparatus
3603	Why should you wear a self-contained breathing apparatus before entering the engine room after the fixed CO2 system has been discharged to combat a major fire?	This action is unnecessary as carbon dioxide is not poisonous nor toxic but is a relatively harmless gas.	Because carbon dioxide breaks down in a fire into carbon monoxide which may cause blood poisoning in the person breathing this gas.	Because carbon dioxide dilutes the oxygen concentration in the atmosphere and may cause asphyxiation.	Because carbon dioxide is a colorless and odorless gas that becomes highly toxic in the presence of high temperatures and will quickly incapacitate a person exposed to this gas.
3604	Manufacturers of self contained breathing apparatus use color coded facepieces to indicate different sizes. Which of	I & II	I only	II & III	I, II & III

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	the following statements is true concerning the colors of SCBA facepieces? I. Size "Small" is green II. Size "Large" (standard) is black III. Size "Extra Large" is red				
3605	While wearing a self-contained breathing apparatus the alarm bell begins ringing. Which of the following conditions does this indicates? I. There is a 4-5 minute supply of air remaining in the air cylinder II. There is approximately 500 psi (3.5 Mpa) of pressure left in the air cylinder III. The wearer should immediately leave the contaminated area	I, II & III	I only	I & II	II & III
3606	Why should you wear a self-contained breathing apparatus before entering a closed compartment to fight a fire? I. The fire produces carbon monoxide which causes an oxygen deficiency in the brain and body, leading quickly to death II. The fire produces smoke, which contains toxic gases that cause breathing difficulties and irritation of the respiratory tract III. The fire consumes oxygen which may lead to asphyxiation	II & III	I & II	I, II & III	I only
3607	While wearing a self-contained breathing apparatus, the user must be aware of the bulkiness of the unit in order to avoid confined spaces. Of what other limitations should the user be aware? I. The weight of the unit changes the user's center of gravity II. The lens of the facepiece reduces the	I & II	I, II & III	I only	II & III

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	user's peripheral vision III. The attached lifeline limits of the user's mobility				
3608	What operational limitation should the user of a self-contained breathing apparatus be concerned with when using the device? I. The weight of the unit changes the user's center of gravity II. The lens of the facepiece reduces the user's peripheral vision III. The attached lifeline limits the user's mobility	I only	I & II	II & III	I, II & III
3609	What should you do when the alarm bell on a self-contained breathing apparatus sounds?	Move the tank selector lever to the full tank position and reset the alarm so you can evacuate the area when it sounds again.	Move the reserve lever to the `reserve' position on the regulator and immediately evacuate the area when it sounds again.	Open the bypass valve on the regulator and immediately evacuate the contaminated area.	Immediately evacuate the contaminated area
3610	While donning the positive -pressure self-contained breathing apparatus, you discover that the air cylinder pressure gage and the regulator pressure gage differ from each other by 500 psi. Which of the listed action should you consider as appropriate?	Replace the defective gages with a new pair from the spare parts inventory.	Replace the air cylinder.	Assume that the lower gage reading is correct.	Take the average of the two gages as the correct pressure.
3611	To safely enter a closed compartment, where CO2 has been released from a fixed extinguishing system, you should_____.	wear a canister type gas mask	test the air with an Orsat apparatus	test the air with an explosimeter	wear a self-contained breathing apparatus
3612	What is a major advantage of using a positive pressure type self-contained breathing apparatus?	The equipment is lightweight and the wearer can work without difficulty in confined spaces.	The average operating time is over an hour.	The speed with which it can be put into operation is around 45 seconds.	Facial hair will not affect the mask performance.
3613	Which of the components listed are interchangeable between different	The air cylinder	All of the above	The regulator	The facepiece

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	backpack self-contained breathing apparatus produced by various manufacturers?				
3614	The bypass valve on a self-contained breathing apparatus (SCBA) bypasses_____.	the regulator in an emergency	a breathing bag containing excessive pressure	oxygen to the atmosphere	the regenerator in an emergency
3615	Prior to entering a compartment containing an atmosphere potentially dangerous to life or health, you should don an approved self-contained breathing apparatus. Which one of the listed devices is a self-contained breathing apparatus?	A fresh-air breathing apparatus	All of the above	A demand-type breathing apparatus	A canister-type gas mask
3616	Why should you wear a self-contained breathing apparatus before entering the engine room after the fixed CO2 system has been discharged to combat a major fire?	Because carbon dioxide breaks down in a fire into carbon monoxide which may cause blood poisoning in the person breathing this gas.	Because carbon dioxide dilutes the oxygen concentration in the atmosphere and may cause asphyxiation.	Because carbon dioxide is a colorless and odorless gas that becomes highly toxic in the presence of high temperatures and will quickly incapacitate a person exposed to this gas.	This action is unnecessary as carbon dioxide is not poisonous nor toxic but is a relatively harmless gas.
3617	Manufacturers of self contained breathing apparatus use color coded facepieces to indicate different sizes. Which of the following statements is true concerning the colors of SCBA facepieces? I. Size Small is green II. Size Large (standard) is black III. Size Extra Large is red	II & III	I only	I & II	I, II & III
3618	While wearing a self-contained breathing apparatus the alarm bell begins ringing. Which of the following conditions does this indicates? I. There is a 4-5 minute supply of air remaining in the air cylinder II. There is	I only	II & III	I, II & III	I & II

	approximately 500 psi (3.5 Mpa) of pressure left in the air cylinder III. The wearer should immediately leave the contaminated area				
3619	Why should you wear a self-contained breathing apparatus before entering a closed compartment to fight a fire? I. The fire produces carbon monoxide which causes an oxygen deficiency in the brain and body, leading quickly to death II. The fire produces smoke, which contains toxic gases that cause breathing difficulties and irritation of the respiratory tract III. The fire consumes oxygen which may lead to asphyxiation	I, II & III	I & II	II & III	I only
3620	While wearing a self-contained breathing apparatus, the user must be aware of the bulkiness of the unit in order to avoid confined spaces. Of what other limitations should the user be aware? I. The weight of the unit changes the users center of gravity II. The lens of the facepiece reduces the users peripheral vision III. The attached lifeline limits of the users mobility	I & II	I, II & III	II & III	I only
3621	What operational limitation should the user of a self-contained breathing apparatus be concerned with when using the device? I. The weight of the unit changes the users center of gravity II. The lens of the facepiece reduces the users peripheral vision III. The attached lifeline limits the users mobility	I only	I & II	II & III	I, II & III

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3622	What should you do when the alarm bell on a self-contained breathing apparatus sounds?	Open the bypass valve on the regulator and immediately evacuate the contaminated area.	Move the reserve lever to the `reserve position on the regulator and immediately evacuate the area when it sounds again.	Move the tank selector lever to the full tank position and reset the alarm so you can evacuate the area when it sounds again.	Immediately evacuate the contaminated area
3623	While donning the positive -pressure self-contained breathing apparatus, you discover that the air cylinder pressure gage and the regulator pressure gage differ from each other by 500 psi. Which of the listed action should you consider as appropriate?	Assume that the lower gage reading is correct.	Replace the air cylinder.	Take the average of the two gages as the correct pressure.	Replace the defective gages with a new pair from the spare parts inventory.
3624	To safely enter a closed compartment, where CO2 has been released from a fixed extinguishing system, you should_____.	wear a canister type gas mask	wear a self-contained breathing apparatus	test the air with an explosimeter	test the air with an Orsat apparatus
3625	What is a major advantage of using a positive pressure type self-contained breathing apparatus?	The speed with which it can be put into operation is around 45 seconds.	The equipment is lightweight and the wearer can work without difficulty in confined spaces.	Facial hair will not affect the mask performance.	The average operating time is over an hour.
3626	Which of the components listed are interchangeable between different backpack self-contained breathing apparatus produced by various manufacturers?	The regulator	The air cylinder	The facepiece	All of the above
3627	Your vessel has 3 lifeboats on each side. The aftermost boat on the port side is designated as boat number _____.	3	5	3 PORT	6
3628	You must ensure that lifesaving equipment is_____.	inaccessible to passengers	readily accessible for use	on the topmost deck of the vessel at all times	locked up
3629	While at your lifeboat station you hear a signal consisting of two short	secure from boat stations	commence lowering boats	abandon ship	stop lowering boats

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	blasts of the whistle. This signal indicates _____.				
3630	When whistle signals are used for launching lifeboats one short blast means _____.	lower all boats	raise all boats	drill is over secure all boats	use the float-free method only
3631	The boat command that means complete the stroke and level the oars horizontally with the blades trimmed fore and aft is _____.	Way enough	Hold water	Oars	Up oars
3632	Each person on a MODU carrying immersion suits must wear the immersion suit in a boat drill or participate in a drill which includes donning the suit and being instructed in its use at least once every _____.	2 months	1 month	6 months	3 months
3633	Your vessel has 3 lifeboats on each side. The middle boat on the starboard side is designated as boat number _____.	2	4	2 STARBOARD	3
3634	A fully loaded motor-propelled lifeboat must be capable of attaining a speed of at least _____.	6 knots in rough water	6 knots in smooth water	3 knots in smooth water	3 knots in rough water
3635	A MODU must have a self-contained breathing apparatus to be used as protection from gas leaking from a refrigeration unit. To meet this requirement you may use _____.	an oxygen breathing apparatus provided that the device has been inspected within three years	a portable ventilation system that will provide a complete change of air every three minutes	a gas mask certified by the Mine Safety and Health Administration	the same self-contained breathing apparatus required with the fireman s outfit
3636	When launching a lifeboat frapping lines should be rigged _____.	at the embarkation deck	after the boat is in the water	before the gripes are released	before the boat is moved from the davits
3637	Inflatable liferafts are provided with a/an_____.	portable radio	oil lantern	towing connection	canned milk
3638	Seawater may be used for drinking_____.	at a maximum rate of two ounces per day	under no conditions	if gathered during or immediately after a hard rain	after mixing with an equal quantity of fresh water
3639	The grab rail of a metal lifeboat is normally located_____.	near the top of the gunwale	at the bow and at the stern	along the turn of the bilge	along each side of the keel

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3640	Drinking salt water will_____.	dehydrate you	be safe if mixed with fresh water	protect against heat camps	prevent seasickness
3641	A safety feature provided on all inflatable liferafts is_____.	overhead safety straps	internal releasing hooks	built in seats	water stabilizing pockets
3642	Which approved lifesaving device is required for each person on board a motor vessel carrying passengers?	Buoyant cushion	Ring life buoy	Life jacket	Buoyant vest
3643	The lights on the outside of the canopy on an inflatable liferaft operate_____.	by a switch at each light	automatically when the raft is inflated	by turning the globe clockwise	by a light sensor
3644	Each crewmember has an assigned firefighting station. This assignment is shown on the_____.	muster list	Certificate of Inspection	fire fighting plan	shipping articles
3645	Each person on the rig has a designated area to proceed to in the event of a fire. This assignment is shown clearly on which of the following documents?	fire fighting plan	shipping articles	Certificate of Inspection	Muster List (Station Bill)
3646	You are at sea in an inflatable liferaft. In high latitudes the greatest danger is_____.	asphyxiation due to keeping the canopy closed	hypothermia caused by cold temperature	starvation	collapse of the raft due to cold temperatures
3647	The purpose of a water spray system on a covered lifeboat is to_____.	put out a fire inside the lifeboat	keep the lifeboat from reaching combustion temperature while operating in a fire	cool the lifeboat engine	
3648	Which type of davit is not considered to be a mechanical davit?	Radial	Sheath-screw boom	Quadrantal	Crescent
3649	Under normal conditions a liferaft is released from its cradle by_____.	cutting the restraining strap	unscrewing the turnbuckle on the back of the cradle	lifting one end of the raft	pushing the plunger on the center of the hydrostatic release
3650	The light on a life jacket must be replaced_____.	every six months	when the power source is replaced	when it is no longer serviceable	each year after installation
3651	Water pockets on the underside of an inflatable liferaft are for_____.	maneuverability	stability	easy drainage	catching rain water
3652	The vessel s Emergency Position Indicating Radio	monthly	every 3 months	weekly	every 2 months

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	beacon (EPIRB) must be tested_____.				
3653	Lifeboat winches on mobile offshore drilling units are required to be inspected and an entry made in the logbook. How often should this entry be made?	Every year	Only after conducting a boat drill	Every 6 months	Every 3 months
3654	A new liferaft has been installed on your vessel. The operating cord should be_____.	checked to see that it s unattached	attached to the raft stowage cradle or to a secure object nearby with a weak link	coiled neatly on the raft container	faked on deck and lead through a chock
3655	Which of the listed procedures should be carried out first during boat drill ?	Gather all your belongings	Run to engine room or bridge and ask for deck water	Go to your fire station and wait	Wear a lifejacket and proceed to boat station
3656	Which of the following life saving equipment should be brought when entering a tank not considered safe to enter?	Fresh air breathing apparatus	Gas indicator	Cannister gas mask	Safety lamp
3657	What would you do if the safety valve of the oxygen breathing apparatus starts to whistle while wearing it?	Open the bypass valve wide	Reset the timer for an additional ten minutes	Go out into the fresh air	Close the bypass valve until the whistling stops
3658	After the lifeboat has reached the top of the davit heads the davit arms begin moving up the tracks until the movement is stopped by the _____.	Preventer bar	Hoist man	Limit switch	Brake handle
3659	A fully charged standard SCBA can be expected to supply air under nonstressful conditions for approximately:	30 minutes	45 minutes	60 minutes	15 minutes
3660	A Inflatable liferafts are provided with:	Jackknife	lifeline	All of the above	towing connection
3661	A life line must be connected to the liferaft.	at the stern	in the middle	at the bow	all around
3662	A liferaft with a capacity of 8 people in ocean service is required by regulation to carry:	12 units of provisions	8 liters of fresh water	12 liters of fresh water	24 units of provisions
3663	A liferaft with a capacity of 8 people in ocean service is required by regulation	12 liters of fresh water	12 units of provisions	24 units of provisions	8 liters of fresh water

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	to carry:				
3664	A qualified person must be assigned as the second in command of a lifeboat on a MODU if the lifeboat has a capacity of more than:	40 persons	30 persons	20 persons	50 persons
3665	According to 46 CFR, the float free link attached to a sea painter on a liferaft shall have a breaking strength of:	400-536 lbs for buoyant apparatus with a capacity of 21 persons or more	100-134 lbs for buoyant apparatus with a capacity of 10 persons or less	All of the above	200-268 lbs for buoyant apparatus with a capacity of 11 to 20 persons
3666	Cartridge-operated dry chemical fire extinguishers used on MODUs, should have the propellant cartridge weighed every:	three months	two years	six months	12 months
3667	Chemical burns are caused by the skin coming in contact with:	diesel oil	acids or alkalis	alkalis, but not acids	acids, but not alkalis
3668	Coast Guard Regulations (46 CFR) require inflatable liferafts to be equipped with:	all of the above	an instruction manual	a sea anchor	a first aid kit
3669	Coast Guard Regulations (46 CFR) require that lifejackets shall be:	provided for all personnel on watch	readily accessible to persons in the engine room	provided for each person onboard	all of the above
3670	Component/s that is/ are required equipment for a lifeboat includes _____.	Painter	Whistle	All of these	A boathook
3671	Concerning immersion suits, which of the following statements is correct?	The wearer of the suit is not severely restricted in body movement and permits the wearer to perform any form of strenuous work.	All models will automatically turn an unconscious person face-up in the water.	The suit is flameproof and provides protection to the wearer while swimming through burning oil.	The immersion suit seals in all body heat and provides protect ion against hypothermia for weeks.
3672	Each OSV must carry:	all of the above	at least 12 rocket parachute flares	one category 1 406 MHz satellite EPIRB	at least one lifebuoy on each side of the vessel fitted with a buoyant lifeline
3673	Each vessel in ocean and coastwise service must have an approved EPIRB.	must be stowed in a manner so that it will float	must be stowed where it is readily	is a device that transmits a radio signal	all of the above

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	An EPIRB:	free if the vessel sinks	accessible for testing and use		
3674	Engines for lifeboats are required to have sufficient fuel to operate for how many hours?	12 hours	24 hours	18 hours	6 hours
3675	Every distress signal and self - activated smoke signal must be replaced not later than the marked date of expiration, or from the date of manufacture, not later than _____.	36 months	42 months	12 months	24 months
3676	Your chemical tanker was built to the IBC Code and has foam as the main fire fighting medium. During one of your safety meetings you review the properties of foam as an extinguishing agent. Which of the following is a correct statement that would be appropriate to share during the meeting?	Foam will blanket the fire and cut off the supply of oxygen but it does not provide the best cooling protection for the firefighters.	Foam will blanket the fire and cut off the supply of oxygen and it also provides excellent cooling protection for the firefighters.	Foam will blanket the fire and cut off the supply of oxygen and is therefore perfectly suited to A, B and C class fires.	Foam will blanket the fire and cut off the supply of oxygen but it does generate toxic vapors that may harm the firefighters.
3677	You are conducting training on fire fighting procedures. What type of fire is characterized by the burning of ordinary combustible materials where the quenching and cooling effects of quantities of water, or solutions containing large percentages of water, are of first importance?	Type C	Type B	Type A	Type D
3678	Which statement about immersion suits is TRUE?	The wearer of the suit is severely restricted and requires twice the time to climb a ladder than without the suit.	Prior to abandonment, the suit allows body movement such as walking, climbing a ladder and picking up small objects.	The suit is flameproof and provides protection to the wearer while swimming through burning oil.	The immersion suit seals in body heat and provides protection against hypothermia for weeks.
3679	Which of the following must be eliminated to prevent accidents?	Good work habit/practices	Orderliness	Frequent inspections	Unsafe actions
3680	Which of the following methods should be used to prevent a class A fire	Sweep all exterior surfaces with	Sweep all exterior surfaces with water fog	He should activate the emergency	He should open the doors and prepare the

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	from spreading to the adjacent compartments in a topside compartment with steel bulkhead?	water fog until steam is no longer produced, secure the nozzle, and repeat as necessary.	until the fire is reportedly extinguished.	release handle	craft for boarding
3681	Which of the following is the reason why it is necessary to cool the outside bulkheads, decks, and overheads of compartment on fire?	Prevent oxygen from reaching the flames	Form a dense coating of smothering steam	Cool the metal below its ignition temperature	Prevent the fire from spreading by heat conduction
3682	Which of the following is the propellant in a dry chemical fire extinguisher?	Distilled water	Carbon dioxide	Compressed air	A chemical reaction
3683	Which extinguishing agent is the best for use on electrical fires?	Water fog	Dry chemical	CO2	Foam
3684	When the mainline valve of a self-contained breathing apparatus is open, the bypass valve should be:	completely closed	completely open	disconnected	partially opened
3685	When the alarm bell sounds on a self-contained demand-type breathing device, how long will the supply last?	About 18-20 mins.	About 12-15 mins.	About 8-10 mins	About 4-5 mins.
3686	When testing a lifebuoy to a Flotation Test, how much weight should it be suspended from it and how long should it remain floating?	10.5 kgs of iron for a period of 24 hours	14.5 kgs of iron for a period of 24 hours	30.0 kgs of iron for a period of 36 hours	20.0 kgs of iron for a period of 36 hours
3687	When an oil fire has been extinguished, the surface of the oil should be kept covered with foam to prevent:	boiling of the heated oil	spontaneous combustion below the oil surface	air from contacting the oil vapors permitting reignition	toxic fumes from escaping to the surface
3688	What is the thing to do when a number of survivors is in the water after abandoning a vessel?	They should group to form a small circle of survivors to create a warmer pocket of water in the center of the circle	They should send the strongest swimming person to shore for assistance	They should form a raft by lashing their lifejackets together	Tie themselves to the unit so they wont drift with the current
3689	What is the FIRST firefighting attack should be done when a heavy	Loss of ship stability	To enter the use a portable extinguisher	To secure the door and vents, then manually	Contamination of food with the extinguishing

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	smoke is coming out from a partially open door of the paint locker?			release the CO2	agent
3690	A 6-men inflatable liferaft shall be carried as far forward as is reasonable and practicable. Where is the best stowing position?	Aft of the forecastle, secured with wire and turnbuckle.	Aft of the forecastle secured with the use of hydrostatic release device.	All forward on the forecastle and secured with the use of hydrostatic release device.	Under the forecastle.
3691	A feature of an inflatable raft which helps keep people stationary in rough weather is _____.	straps from the overhead	lashings on the floor of the raft for the passengers feet	lifelines on the inside of the raft	ridges in the floor of the raft
3692	A fire hose is subject to damage if the swivel on the female coupling is lubricated with _____.	Grease	Soap	Talc	Graphite
3693	A fire hose should be stowed in its rack with the _____.	hose sections rolled separately	foam nozzle attached	hose sections disconnected	all-purpose nozzle attached
3694	A fire hoses located at protected fire stations, must be:	supplied with a smooth bore nozzle	none of the above	connected to the fire hydrant	capped on the ends for protection
3695	A hydrostatic release mechanism for a liferaft _____.	should be kept in a watertight cover except in an emergency	must be submerged to a certain depth to release automatically	will inflate the raft in its cradle if operated manually	must be wet before it will release
3696	A sea anchor is _____.	a pad eye to which the sea anchor is made fast	a heavy metal anchor with an extra long line used to anchor in deep water	made of wood, if it is an approved type	a cone shaped bag used to slow down the wind drift effect
3697	A self contained breathing apparatus is used to _____	enter area that may contain dangerous fumes or lack oxygen	make underwater repairs to barges	determine if the air in a tank is safe for men	resuscitate an unconscious person
3698	A self contained Breathing Apparatus should contain at least 1200 litters of air. How long should this last a normal person who is not carrying out hard work?	60 minutes	45 minutes	30 minutes	15 minutes
3699	A semisubmersible floating in sea water displaces 717,500 cubic feet. What is the displacement?	19,977 long tons	20,500 long tons	11,211 long tons	11,498 long tons
3700	A smoke signal giving off _____ smoke,	red smoke	orange colored smoke	blue smoke	black smoke

	indicating vessel in distress and in need of assistance.				
3701	A solid stream of water is produced by an all-purpose firefighting nozzle when the handle is _____.	pushed forward one notch	pushed all the way forward	pulled all the way back	pulled halfway back
3702	A solid stream of water might be useful in fighting a burning oil fire on deck when it is used _____.	to wash burning oil over the side	to provide cooling for the fire fighters	in conjunction with chemical foam	to cool the main deck
3703	After putting on a canister type OBA, you grasp the lower end of the left hand breathing tube and inhale. You are doing this to _____	remove nitrogen and salive from the OBA	charge the canister	see if pressure is maintained in the breathing bags	test for the tightness of the mask
3704	An emergency life-saving procedure that consists of recognizing and correcting failure of the respiratory or cardiovascular system is called _	Emergency medical care	Emergency first aid	Basic life support	Advanced life support
3705	An emergency sea anchor may be constructed by using _____.	an air tank filled with water	a boat bucket	an oar and canvas weighted down	All of the above
3706	An immersion suit must be equipped with a(n)_____.	whistle, light, and sea dye marker	air bottle for breathing	whistle, light, and reflective tape	whistle and light
3707	An immersion suit must be equipped with a(n)_____.	whistle, light, and reflective tape	air bottle for breathing	whistle and light	whistle, light, and sea dye marker
3708	An immersion suit should be equipped with a/an _____.	air bottle for breathing	whistle, handheld flare, and sea dye marker	whistle, strobe light, and reflective tape	whistle and handheld flare
3709	Breathing apparatuses is an important piece of equipment for being able to fight a fire onboard a vessel. What routine precautions to be observed with regard to use and maintenance of such equipment?	That personnel that are appointed as smoke divers, primarily are given a shore based proper basic education and training.	All the mentioned alternatives.	That the equipment always to be kept cleaned,checked and bottles are recharged immediately upon use, and frequently inspected.	That personnel having a beard are not selected as smoke divers.
3710	considered as personal life saving appliances I.lifebuoys	I & II	I & III	I,II & III	II & III

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	II. Life rafts				
3711	Every vessel personnel should be familiar with the survival craft _____.	Maintenance schedule	Navigational system	Boarding and operating procedures	Generator
3712	Following the activation of the emergency position indicating radio beacon, you should _____.	Leave it on continuously	Turn it off during daylight hours	Turn it off for five minutes every half - hour	Turn it off for 10 minutes every half - hour
3713	If a helicopter is lifting personnel from a survival craft, the other individuals in the craft should _____.	Remove their lifejackets to prepare for their transfer to the helicopter	Remain seated inside the craft to provide body weight for stability	Preventing the fire from spreading by the conduction of heat	Stand on the outside of the craft to assist the person being lifted
3714	If you are forced to abandon ship in a lifeboat, you should _____.	head for the closest sea lanes	vote on what to do, so all hands will have a part in the decision	remain in the immediate vicinity	Head for the nearest land
3715	In activating an air regeneration canister on a survival craft, you _____.	Push on button	Put into an container of water	To steady the craft in heavy seas	Tear off the tabs on the canister
3716	In case of an evacuation from a vessel, an individual without the option of a survival craft or liferaft should enter the water on the leeward side, except when _____.	A rigid survival craft is in the area	Faulty electrical equipment	There is burning oil on the water	Water temperature is below 5 Deg. C
3717	In case of evacuation from a vessel, an individual without the option of a survival craft or liferaft should enter the water on the leeward side, except when _____.	There is a severe list to the windward side of the vessel	Water temperature is below 5 deg. C	There is a rescue craft in the area	A rigid survival craft in the area
3718	In kapok lifejackets, it requires proper care and should NOT be _____.	Stowed near open flame	Used as seats or pillows	Left an open decks	All of these
3719	In supplementing to the lifejackets stowed in places that are readily reachable, lifejackets must be stowed at _____.	Each fire station	Reacting chemically with the fire	Each manned watch station	The mess room
3720	In the evacuation from a vessel, an individual without the option of a survival craft or liferaft should enter the water on the leeward side, except when _____.	Water temperature is below 5 deg. C	There is hydrogen sulfide present	Faulty electrical equipment	There is a rescue craft in the area
3721	Inflatable liferafts are	towing	Jackknife	all of the above	lifeline

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	provided with a:	connection			
3722	Inflatable liferafts are provided with:	a portable radio	an oil lantern	canned milk	a towing bridle
3723	Just after being launched from a vessel, a totally enclosed survival craft which has been afloat over a long period of time, requires _____.	Regular checks of bilge levels	Frequent opening of hatches to permit entry of fresh air	There is hydrogen sulfide present	There is burning oil on the water
3724	Kapok lifejackets require proper care and should NOT be:	stowed near open flame or where smoking is permitted	used as seats, pillows, or foot rests	left on open decks	all of the above
3725	Life preserver or buoyant work vest is required to be worn on a vessel when a person is _____.	Operating line throwing equipment	Working over water	Working on the pipe racks	Only when it happens while underway
3726	Lifejackets should always be stowed in:	readily accessible spaces	the after peak	the forepeak	the forepeak
3727	Of the required ring life buoys for a MODU, how many must be equipped with water light?	8	4	1	2
3728	Of the required ring life buoys for an OSV on ocean service, how many must be equipped with water light?	2	8	4	1
3729	Oil Pollution Prevention Regulations (33 CFR), require that the person-in-charge of transfer operations is to insure that the:	drains and scuppers are closed by the mechanical means	transferor and transferee know the identity of the product to be transferred	hose is supported to prevent kinking or hose is supported to prevent kinking or	all of the above
3730	Regulations concerning the recordkeeping requirements of shipboard garbage disposal can be found in:	46 CFR Part 32	33 CFR Part 151	33 CFR Part 155	46 CFR Part 56
3731	The breaking strength of the service lines of the rockets used with an impulse-projected, rocket type line throwing appliances is:	500 lbs	300 lbs	1500 lbs	1000 lbs
3732	What are the main objects a leader of fire fighting must take in consideration of?	Fighting the fire, communicate with the fire brigade and	Secure cargoes and the ship from fire	Rescuing of life, fighting the fire, limitation of the fire and secure	Keep company reputation

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		arrange the lifeboats to evacuate the ship		the retreat	
3733	Under the regulations for cargo vessels, which statement is TRUE concerning firemans outfits?	If a vessel carries two outfits, they may be stored in the same location.	Each firemans outfit shall contain a fresh-air breathing apparatus.	All of the choices	Each firemans outfit shall contain a flame safety lamp of an approved type.
3734	The spreading of fire as a result of heat being carried through a vessels ventilation system is an example of heat transfer by:	convection	venting	conduction	radiation
3735	The MAJOR disadvantage in the use of a dry chemical fire extinguisher on an electrical fire is that the _____.	extinguisher will need to be recharged	powder conducts electricity back to the fire fighter	breaks up the molecular chain reaction	dry chemical leaves a powder residue which may render electrical equipment inoperative
3736	The fixed piping system for CO2 fire-fighting systems for machinery spaces shall be such that:	90% of the gas can be discharged into the space within three minutes	100% of the gas can be discharged into the space within two minutes	70% of the gas can be discharged into the space within one minute	85% of the gas can be discharged into the space within two minutes
3737	The fixed CO2 fire extinguishing system has been activated to extinguish a large engine room bilge fire. When is the best time to vent the combustible products from the engine room?	Immediately after the fire is extinguished.	After the metal surfaces have cooled down.	One half-hour after the fire is extinguished.	After any personnel in fireman outfits reenter the engine room.
3738	The airborne concentrations of substances (such as hydrogen sulfide) under which nearly all workers may be repeatedly exposed without adverse effects are called:	exposure limits	substance limit values	threshold limit values	concentration limits
3739	Steel-toed safety shoes are recommended for many types of work. What type of work activity would be an exception to the rule and where steel-toed shoes would NOT be recommended?	Welding fabrications work	Electrical maintenance work	Rigging and hoisting work	Machine shop work

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3740	Poster or signs shall be provided on or in the vicinity of survival crafts and their launching controls. Which one of the following requirements has to be included according to present SOLAS regulations?	Give relevant instructions and warnings.	Give an overview of location of all lifesaving appliances.	Give adequate instruction how to use the appliances	Give the list of appliances, safety and procedures to use
3741	Method for effectively applying foam on a fire is by _____.	apply traction to the hand to keep the bones in line, splint and apply a pressure dressing	force the ends of the bones back into line, treat the bleeding, and splint	sweeping the fire before you with the foam	flowing the foam down in a vertical surface
3742	Liferaft shall be so constructed that when it is dropped into the water from a height of _____, the liferaft and its equipment will operate satisfactorily.	18 meters	22 meters	24 meters	20 meters
3743	If you have to carry out hot work close to a smoke detector in the engine room, what precautions should be taken?	Inform the duty engineer and have a fire extinguisher available on side of hot work area	No precautions needed except you have fire extinguisher and fire pump is running with standby fire hose and assistant	No special precautions except for having a watch man and a fire extinguisher available.	Notify Master, Deck officer and engineer in charge. The loop for this special sensor to be switched off and take normal precautions for hot work.
3744	The nut of the bowl assembly is confirmed tight_____.	when the nut is no longer move after several hammer blows	when marks on the body and nut are aligned	by a torque wrench	by hand only
3745	4/3 Way valve is a type of directional valve with _____ .	4 positions and 3 method of operation	4 positions and 3 ports	2 ports and 3 positions	4 ports and 3 positions
3746	The size of flexible hose used in a hydraulic system is indicated by_____.	the thickness of the tube wall	the numerical designation found on the 'skin' of the hose	a color code on the armor	the inside diameter of the tube
3747	Good maintenance is decisive and best be achieved in the engine room if there is_____.	maintenance work	natural routine work	all engine personnel are present	high degree of safety
3748	What is used as a jointing materials for fresh and sea	Rubber	Asbestos	Hard Paper	Plastics

	water pipes?				
3749	A welding procedure used for joining dissimilar metals used in the construction of a MODU would be recorded in the	construction portfolio	Coast Guard file	welding plan	ASTM specifications
3750	Most common type of hydraulic pump is _____.	rotary pump	gear pump	centrifugal pump	piston pump
3751	Which of the following will speed up the recovery process when performing maintenance on a refrigeration system _____?	heating the appliance only	chilling the recovery vessel and heating the appliance	close the cooling water valve of condenser	chilling the recovery vessel only
3752	A hydraulic system where all oil goes back to the tank is termed as_____.	close loop system	A2V system	A4V system	open loop system
3753	Before carrying-out maintenance to the engine, one should _____.	engage turning gear and switch off power	close the fuel oil valve	shut-off the jacket cooling heating	through a solenoid operated valve
3754	An aligning punch is used to_____.	make a starting mark for a drill	mark centers and lines in layout work	line up corresponding holes in adjacent parts	completely loosen a jammed bolt
3755	What factors shorten the life of valve springs?	Compression and corrosion	Misalignment and compression	Corrosion and fatigue	Fatigue and compression
3756	Which of the fittings listed should be used for the installation of piping to permit removal of the pump for servicing?	Quick disconnect	Coupling	Union	Nipple
3757	A fixed displacement pump is a hydraulic pump in which the_____.	discharge capacity is constant	discharge pressure is constant	discharge capacity is changing	discharge capacity is dependent on the consumption
3758	The following are parts of the main bowl of purifier except_____.	body	hood	nut	bolt
3759	Improper maintenance of fuel oil burner in an auxiliary boiler could result to _____.	fan motor failure	decrease boiler efficiency	fuel oil pump failure	increase feedwater consumption
3760	What will happen when there is an excessive wear on a centrifugal pump shaft?	It will cause severe vibration when the pump is operating	It can cause damage in the stuffing box	There will be an excessive leakage past the packing gland	It will allow interstage leakage in the pump casing glands

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3761	Expansion valve maintenance should include which of the following procedures?	clean the seat with abrasive	lapping the seat	Ensuring that the thermal bulb is in good contact with the suction line.	heat up the expansion valve
3762	As part of a safe and effective maintenance onboard, the first valve to be opened first after the complete assembly of a newly ovehauled and clean big luboil cooler is the_____.	Luboil inlet	Sea water outlet	Luboil outlet	Sea water inlet
3763	What will be the result of badly leaking refrigeration compressor discharge valves?	Continues running of the compressor	Damage to the condenser	Flooding of the receiver	Overfeeding of the expansion valve
3764	A dial indicator is used to measure_____.	positive readings only	torque of a shaft	shaft eccentricity	scribed layout lines on vertical surfaces
3765	One of the four basic components of hydraulic system that provides the flow of oil in the system is called_____.	valve	pump	motor	power
3766	In hydraulic system, all machines which are consumers of hydraulic power equipped with _____.	tank	relief valve	motor	pump
3767	Important check to be done during overhauling of the pump is the_____.	pump shaft condition	wear ring clearance against impeller	mechanical seal condition	impeller condition
3768	What should be done if localized scoring is discovered on the pump shaft sleeve during routine maintenance inspection?	Correct the cause of scoring and install a new shaft sleeve.	Reassemble the pump and provide more water leak off for lubrication.	Check for parallel alignment of the sleeve radial face to the sleeve bore.	Reassemble the pump and set the governor to obtain a slower speed.
3769	Routine maintenance on a Central Control Room hermetically sealed air conditioning unit should include_____.	changing compressor lubricant	renewing container vacuum	recharging the system	changing the air filter
3770	The filter element of hydraulic oil in the system is _____.	to be sent back to manufacturer for recondition	reusable	disposable	to be disposed after second use
3771	Return port of a hydraulic directional valve is designated by letter _____.	R	S	T	P

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3772	After installing a new hydraulic pump in a system, what special attention should be given to the hydraulic system?	The filters and strainers should be checked frequently.	The relief valves in the system should be readjusted.	All system pressure should be readjusted.	The system should be drained and renewed with a fluid of different operating characteristics
3773	An oil film of a lubricant is affected by the_____.	thinner grade of oil	working temperature of the engine	excessive "drag" of the moving parts of the engine	thicker grade of oil
3774	Which of the following statements concerning braze welding is/are correct?	A braze welded joint should be cooled immediately with cold water or forced air draft to reduce the intensity of the heat path.	Repairs to working parts or containers used in chemical processes, especially strong alkaline solutions, are effectively accomplished with braze welding.	Braze welding is an exceptionally good method of repairing malleable (special heattreated) iron.	All of the above.
3775	Which of the following statements concerning braze welding is/are correct?	A braze welded joint should be cooled immediately with cold water to obtain the highest strength.	Repairs to containers used in chemical processes, especially strong alkaline solutions, are effectively accomplished with braze welding.	All of the above.	Braze welding is an acceptable method of repairing malleable iron and mild steel.
3776	If the intercooler relief valve lifts while an air compressor is operating under load, you should check for _____.	a leak in the intercooler piping	a defective pressure switch or pilot valve	leaking high pressure discharge valves	leakage through the low pressure unloaded control diaphragm
3777	Acetylene should never be used at pressures in excess of 15 psig because the _____.	slightest shock could cause an explosion	acetylene cylinders have a maximum allowable pressure of 15 pisg	fusible plug will blow out	relief valve will lift
3778	The tool used to makeup connection fittings for small diameter copper tubing is called a/an _____.	adjustable belling tool	tubing expander	adjustable tube roller	flaring tool
3779	If a small auxiliary diesel	Air bound fuel	Corrosion of	A leaky fuel	A defective

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	engine will not crank but can be barred over, the trouble may be due to _____.	injectors	starting battery terminal connections	pump relief valve	engine governor
3780	Engine operating conditions may be indicated by the color of the exhaust smoke. Black smoke could indicate _____.	clogged drain holes in the oil control rings	an insufficient speed droop setting	an overloaded engine	complete combustion
3781	You should never watch the arc generated during electric arc welder with the naked eye because _____.	arc blow will burn our face	the fumes are highly toxic	slag and metal splatter will get in your eyes	serious flash burns will result
3782	When a waste heat boiler is installed in the exhaust gas bypass would be used _____.	at low loads to prevent corrosion in the boiler	at high loads to prevent overheating	during periods of high steam demand	when the turbocharger is in operation
3783	An exhaust gas bypass is installed on a waste heat boiler in order to _____.	bypass exhaust gas at high loads to prevent excessive back pressure	minimize moisture condensation in the boiler gas passages at low loads	bypass a portion of the exhaust gas at peak loads for better efficiency	recycle exhaust gas to the turbocharger
3784	Which of the following problems would be the probable cause for the faulty operation of a reciprocating air compressor suction valve?	lifting of intercooler relief valve	compressor operation in an area of high relative humidity	faulty operation of a cylinder unloader	carbon build up in the piston ring belt
3785	If the drive belts on an air compressor were squealing during start up, you should _____.	check for a defective high-pressure cut-out switch	check for a receiver outlet valve which may be partially closed	check the air filter	check the operation of the unloaders
3786	A reciprocating air compressor is running roughly and vibrating excessively, indicating that the _____.	foundation bolts are loose	compressor is overloaded	motor is overloaded	belts are too tight
3787	A squealing sound occurring from within an operating reciprocating air compressor is an indication of _____.	badly leaking unloaders	tight compressor bearing	compressor overload	motor overload
3788	When arc welding, the flux that covers the electrode is used to _____.	reduce metal fatigue and warpage	control penetration	increase heat transfer	reduce oxidation
3789	Thermocouple pyrometers are sued on large, main propulsion diesel engines	fuel oil entering the injector	cooling water leaving each cylinder	exhaust gases at various locations	lube oil at the bearing supplies

	to indicate the temperature of the _____.				
3790	Flux is used when soldering, in order to _____.	decrease the surface tension of the solder	decrease the melting point of the solder	ensure proper tinning	control the soldering iron temperature
3791	A dirty intercooler inn the ship service air compressor will result in _____.	unloader malfunction	higher than normal power consumption	decreased compression ratio	water in the lubricating oil
3792	Protective equipment to be used while carrying out oxy-acetylene welding should always include _____.	non-sparking tools	steel toe safety shoes	tinted goggles	ear plugs
3793	Critical speeds occurring within the operating speed range of a main propulsion diesel engine may be changed, or have their damaging effects reduced by a/an _____.	spherically seated crankshaft bearing	definer or viscous fluid damper	engine support vibration isolator	lightened crankshaft flywheel
3794	The leaking valves in a low pressure, reciprocating, air compressor can result from _____.	abrasion by dust and dirt	excessive compressor discharge pressure	operating the compressor at excessive speed	uneven piston stroke in the compressor
3795	Black smoke exhausting from a diesel engine may be caused by _____.	high coolant temperature	excessive scavenging air pressure	a clogged air cleaner	insufficient fuel
3796	Which of the following statements is correct concerning welding sequences?	Each successive welded part should be restrained to lock in stresses and avoid cracking.	First, weld the joints that will tend to contract the most.	Make a weld across an unwelded plate joint in adjoining members.	First, weld attachments which will restrain the points of maximum contraction.
3797	Cylinder inlet valve failure in a low pressure air compressor can be caused by _____.	insufficient rocker arm clearance	excessive moisture build-up in the receiver	flywheel misalignment with the driving motor	mechanical failure in the unloader
3798	When securing an oxyacetylene outfit for an extended period, you should close the _____.	cylinder valves and close torch valves with 4 to 5 pounds of pressure in the hoses	cylinder valves and close torch valves when pressure in hoses and regulators is zero	cylinder valves only	hand valves on the torch only
3799	White smoke exhausting from a diesel engine can be caused by a _____.	cracked cylinder liner	high combustion temperature	high compression pressure	fuel with a high vanadium content

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3800	In order to minimize distortion in a weldment due to shrinkage, you should _____. I. use intermittent welds rather than continuous welds wherever possible II. make fewer passes with large electrodes as opposed to many passes with small electrodes III. use restraining forces such as clamps, jigs, and fixtures	II & III	I only	I & II	I, II & III
3801	Careful handling compressed gas bottles should include _____. I. stowing, to avoid them from crashing into one another II. keeping them away from flame, high heat, and direct sunlight III. keeping the valve protection caps in place	II & III	I & II	I, II & III	I only
3802	In certain circumstances, weldments are preheated before each pass to _____.	eliminate the need for post heating	allow the user the use of smaller welding rods	increase the temperature gradients in the weld areas	reduce internal stresses
3803	Excessive lube oil consumption by a reciprocating air compressor can be caused by _____.	using oil having an excessive viscosity	carrying the oil level higher than normal	increasing the operating pressure differential	intercooler or aftercooler leaks
3804	Combustion knock occurring in a diesel engine can be caused by _____.	Low coolant temperature	Insufficient fuel	High ambient temperature	Carbon buildup on the nozzle holder
3805	When welding or burning with an oxy-acetylene torch, _____.	never allow more than 10 PSIG pressure in the oxygen hose	it is important to remember that the acetylene hose thread connections are right handed	it is important to remember that the oxygen cylinder and hose thread connections are left handed	never allow more than 15 PSIG pressure in the acetylene hose
3806	A flare-type tubing connector is used in the hydraulic hatch-cover system and has developed a slight leak. To stop the leak you should _____.	stop the system and use only one wrench to tighten the flare nut	shut down the power unit and use two wrenches to avoid damaging the tubing when tightening	keep the system in operation and tighten the flare nut	replace both the tubing sections and the fitting
3807	Excessive lube oil consumption by a	defects in the high pressure	leakage in the aftercooler	worn or broken piston rings	leakage in the intercooler

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	reciprocating air compressor is an indication of _____.	loader			
3808	If an electric motor driven air compressor fails to start, it may be due to a _____.	tripped overload relay	leaking discharge valve	jammed suction valve	broken discharge unloader
3809	If the electric motor driving an air compressor fails to start, the cause may be a _____.	control line leak	tripped circuit breaker	defective pop valve	leaking unloader
3810	If a diesel engine is smoking excessively under load, the cause could be _____.	low exhaust back pressure	compression pressure in one of the cylinders	early fuel injection in one of the cylinders	plugged injector holes
3811	The loss of a diesel engine cylinder air charge through leaky valves, pistons rings, worn or scored liners, would be indicated by which of the following sets of exhaust of conditions?	Low compression pressure and high exhaust temperature	Low firing pressure and high mean effective pressure	Low compression pressure and low exhaust temperature	Low firing pressure and low exhaust temperature
3812	For mild steel and general work the correct angle of a drill point is _____ degrees.	29	90	45	118
3813	Safety precautions for the operator of the milling machine should be aware. If proper precautions are taken dangers can be avoided and_____.	safe and worry free operation can be assured	safe and profitable operation can be assured	fast operation can be done	low maintenance cost can be assured
3814	Which of the wrenches listed practically eliminates the possibility of its slipping off while tightening a nut or bolt?	Monkey wrench	Box end wrench	Crescent wrench	Open end wrench
3815	In Lathe machine the gear between the driver and the follower gears in a simple train is known as a/ an intermediate gear or _____.	reduction	helical	pinion	idler
3816	The drill size is marked on the_____.	Flute	Margin	Shank	Point
3817	Most modern lathes for feed and thread lead are provided with_____.	quick change gear	reduction gears	cutting tool	pulley
3818	Before using an all-purpose electric measuring instrument	calibrate using a known external resistance	remove all the batteries	remove one of the batteries	select the proper resistance range

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	(multimeter) utilizing internal batteries to supply power for resistance measurements you should FIRST____.				
3819	Knowing the construction and the operating action of the milling machine will lessen the chance of the machine from being_____.	used frequently	damaged frequently	damaged seriously	cleaned frequently
3820	To obtain a 1/2 inch per foot taper on an 18 inch workpiece the tailstock of the lathe must be set over _____	3/4 inch	7/8 inch	3/8 inch	1/2 inch
3821	The maximum speed (surface feet per minute) for a rough machining of a carbon steel material if a high-speed cutter is used in the operation of the modern milling machine onboard is _____.	110 rpm	80 rpm	100 rpm	90 rpm
3822	In the event of power failure during cargo loading operations the movement of an electric powered cargo winch will be stopped by_____.	a hand operated band brake	a manual override switch	the weight of the load on the boom	a spring set brake
3823	When tightening the nozzle nut of fuel injector which of the following tools is used?	Torque wrench	A spanner and an extension	pipewrench	close wrench
3824	An inert gas used as shielded gas in MIG and TIG welding is_____.	cadmium	argon	acetylene	copper
3825	When renewing sections of pipe in a hydraulic system the nominal pipe size of the piping always indicates the ____	wall thickness	actual inside diameter	actual outside diameter	size for threaded connections
3826	Before measuring an unknown resistance with an ohmeter you should_____.	center the meter s pointer at infinity	short the test leads and calibrate the meter reading to zero	adjust the meter s pointer to mid-scale	change the meter s batteries
3827	The taper produced by a lathe taper attachment is determined by setting the _____	guide (swivel) bar	automatic cross feed	tailstock off center	compound rest angle

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3828	Which part of the universal and plain type milling machine listed below can be found on both types?	Speed dial	Backlash eliminator	Over arm positioning	Swiveled table
3829	To avoid deformation when cutting thin sheet metal while using a handheld hacksaw it should be placed between two_____.	blocks of steel	pieces of cloth	pieces of sand paper	blocks of wood
3830	Which of the following metal material has the lowest cutting speed for an effective rough cutting operation if a high-speed cutter is to be used in the modern milling machine onboard?	Milleable iron	Carbon steel	Brass	Bronze
3831	Increasing the feed pressure on a drill as the drill point begins to break through the bottom of the work piece will cause the drill to _____.	break cleanly through the bottom of the work piece	cut an elongated hole in the bottom of the work piece	form a tapered hole in the bottom of the work piece	dig into the work piece and tend to whirl around
3832	Which of the following is the property of a material that enables it to resist strain when stress is applied?	Strength	Brittleness	Elasticity	Hardness
3833	Which of the following commercially available gas fuel when mixed with the proper ratio of oxygen produces a metallurgically neutral flame?	Carbon dioxide	Nitrogen	Acetylene	Butane
3834	Which of the metal materials uses the highest cutting speed for an effective rough cutting in a modern milling machine?	Bronze	Milleable iron	Carbon steel	Brass
3835	If all the metals listed below are two inches in diameter which of those listed can be cut with the highest operating lathe speed?	soft brass	aluminum	cast iron	machine steel
3836	It is the cheapest of the cast metals and can be easily cast into any sizes and forms.	cast Iron	cast titanium	cast steel	cast uranium

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3837	What refers to the production of shaped parts from metal powder?	Extruding	Casting	Sintering	Forging
3838	Which among the materials listed below is used in the manufacture of cutting tools that retains hardness at the highest temperature?	Ceramics	Cemented carbide	High speed steel	Cast alloy
3839	The operation of machining a uniformly roughened or checked surface on round stock in a lathe is called_____.	crosshatching	checker	swaging	knurling
3840	A roughened checkered surfaced is machined by a lathe on round stock using a_____.	knurling tool	checkering tool	chamfering tool	threading tool
3841	A lathe dog fitted with a headless set screw is known as a_____	standard lathe dog	clamp lathe dog	common lathe dog	safety lathe dog
3842	After using a pipe cutter to cut a piece of pipe the inside edge of the pipe should be ____.	made square with a taper tool	threaded for a standard pipe fitting	deburred with a pipe reamer	cleaned with a pipe cleaner
3843	When drilling hole in a piece of work chuked in a lathe you should mount the drill chuck in the_____.	compound rest	cross feed	headstock	tailstock
3844	Which of the listed non-ferrous metal is not included on the group?	Steel	Copper	Brass	Manganese
3845	Brass is an alloy of_____.	copper and tin	copper and aluminum	copper and zinc	copper and manganese
3846	What alloy is used as propeller material?	Titanium and Bronze	Manganese and Bronze	Copper and Zinc	Copper and Tin
3847	What kind of piping materials are used to produce piping in standard extra strong and double extra strong weights?	Copper pipe	Plastic	Reinforce cast iron	Iron
3848	Before making up a flanged joint you should _____.	be certain that the flanges line up squarely	cut grooves in the flange face with a chisel	heat the pipeline to expand the bolt holes	have a second spare gasket on hand
3849	What should you do FIRST to correct a condition wherein a diesel engine is operating with excessively	Increase the lube oil pressure	Increase the cooling water flow	Adjust the fuel rack	Reduce the engine load

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	high exhaust temperature on all cylinders?				
3850	What do you call a component used to thoroughly separate small fine dust-like particulate contamination from hydraulic fluid?	Separator	Filter	Accumulator	Strainers
3851	Leakage of hydraulic fluid from around the shaft of a hydraulic motor may be caused by _____.	Worn shaft seals	High level in the oil sump	Low motor RPM	Permanent loss of pump suction
3852	After how many hours would you consider changing the turbocharger bearings even though all appears to be normal?	30000 hours	25000 hours	4000 hours	12000 hours
3853	What could cause air to blow out through the inlet air filter of a running compressor?	An improper adjusted discharge valve	A dirty inlet filter element	High compression pressure in the cylinder	A broken suction valve
3854	Which of the following likely reason when the exhaust temperature is increasing in all cylinders of a normally-running main engine?	A faulty fuel valve	Broken piston ring	Rising scavenging air temperature	A cracked liner
3855	In a closed cooling system for a turbocharged four stroke diesel engine fluctuating water pressure can be caused by_____.	an incorrectly set cooling system pressure control	a totally clogged impeller in the cooling water pump	improper venting of the cooling system	carrying the expansion tank water level too high
3856	In a freon system the filter drier is filled with_____.	sodium nitrate	activated alumina	sodium compound	activated chloride
3857	If the hydraulic governor has been drained and refilled with fresh oil the engine should be operated until it reaches normal temperature then the air should be purged by_____.	adjusting rack position	compensating needle valve full open	adjusting speed limiter	compensating needle valve adjusted for stability
3858	An internal bypass is provided on some hydraulic system suction strainers to help reduce the possibility of _____.	aeration of the oil	spongy actuator movements	pump cavitation	contamination of the oil
3859	Why would you cut a hole in a boiler tube which has been plugged?	To prevent pressure build up	To replace it with a new tube	To allow it to turn out more quickly	To identify tube when it is time to renew

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3860	What is the proper time to take water test to obtain better chemical results?	After adding chemicals to the boiler	After circular saw blow	After surface blow	Before adding chemicals or blowing down
3861	What is the possible fault when compressor capacity is low?	Air line delivery valve	Dirty or damaged valve	Defective non-return valve	Air nozzle flapper signal
3862	Which of the following can cause crankshaft misalignment of a crankshaft?	Engine overload	Worn thrust bearing	Worn main bearings	Uneven M.E.P. of the cylinders
3863	One common cause of cylinder liner wear is _____.	burning heavy fuel oil with significant amount of sulphur	correct scavenge air temperature	engine load changes carried out gradually	correctly fitted piston rings
3864	Which of the following prevents the entry of large object to the pipeline and safeguard the internal parts of the pumps?	Perforated Plate	Suction Valve	Safety Valve	Mud Box
3865	In preparing the boiler for survey the boiler should be cooled down slowly until the pressure gauge registers zero. Which of the following should be opened to avoid formation of a vacuum?	Main Steam Valve	Manhole Cover	Air Cock	Drain Valve
3866	The best way to recondition a defective fuel injector is to _____.	overhaul clean and lap with grinding compound	lap the needle to its seat with metal polish	overhaul and clean each parts	send to the nearest authorized repairer
3867	Which of the listed interlocks stops the valve in the remote operating valve line of air starting system from opening?	Turning Gear	Clutch Lever	Shifting Lever	All of these choices
3868	When an engine will not start on air which of the following maybe the cause of the problem?	The turning gear is engaged	All of these choices	Starting air distributor valves are sticking	Stop valves between air reservoirs and engine are shut
3869	If a serious cavitation problem is experienced affecting the pump casing and impeller the shape and design of which pump part could be altered and why?	The shape of the inlet piping to smooth the flow into the impeller	The shape of the outlet pipe to dampen turbulence	The shape of the impeller to decrease capacity	The shape of the mouth ring to extend it and avoid turbulence
3870	Which liquid is used to clean the compressor side of a low speed main engine turbo charger?	Oil	A chemical mixture of acid and water	A chemical mixture of oil and water	Water

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3871	Which of the following two most important factors influencing the crankshaft deflection readings?	Bearing wear and bedplate alignment	Condition of ballast tanks and temperature of engine	Ballast tank condition and bedplate alignment	Bedplate alignment and condition after peak
3872	Which of the following refers to the distance between the piston top at BDC and TDC?	The cylinder distance	Any of these choices	The stroke	The compression clearance
3873	Broken piston rings on diesel engines if not visibly broken can be identified because _____	the piston crowns have developed hot spots and burning marks over the surface	the ring or groove clearances have worn in excess	the piston skirts show marks of burned oil	they are darker in colour and lack elasticity when pushed towards the inside of their grooves
3874	When checking the tightness of nuts and bolts during a diesel engine crankcase and hold-down bolt inspection the quickest and most effective method is _____.	checking the stress on the locking plates or split pins	tapping the nuts and bolts with a hammer	checking bold clearances with feeler gauges	checking the tightness using torque spanners
3875	Putting additives into diesel engine cooling water is primarily designed to prevent _____.	scaling	overheating	freezing	leakages
3876	The water cooling space on the turbocharger is damaged and you have no spares the cooling water must be closed what steps would you take to ensure least possible damage?	Run the engine at lower speed with the turbine drains open	Remove rotor assembly and fit the sealing plate	Open turbine drains and tell the duty engineer to pay special attention for abnormalities	Shut off cooling water and run at reduced RPM
3877	After how many hours would you consider changing the turbocharger bearings even though all appears to be normal?	25000 hours	12000 hours	4000 hours	30000 hours
3878	Which component of a service air compressor requires most maintenance?	Intercooler and aftercooler	None of these choices	Suction and Delivery valves	Piston and rings
3879	Vibration testing is an integral part of what type of maintenance?	Condition monitoring	Breakdown maintenance	Planned maintenance	External surveillance
3880	When tapping holes on the radial drill how is the tap prevented from	By advancing the tap very slowly	By using a very slow speed	by using a cutting fluid	Using a slipping clutch chuck

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	beaking?				
3881	Where does the generator cooling water comes from during dyr-docking?	ship s sanitary system	circulating fresh water tanks	culating fore or aft peak tank	ballast pumps
3882	The ventilation system aboardships has fire dampers restrained by fusible links that will _____.	be replaced before inspection by port authority	need replacement if the damper remains closed	automatically open after a fire is extinguished and then reset the damper	be replaced after each use
3883	Automatically closed fire dampers installed in the vessel s ventilation system are operated by the use of a _____.	CO2 system pressure switch	remote operated valve	heat or smoke detector	fusible link
3884	Fusible link fire dampers are operated by _____.	the heat of a fire melting the link	a mechanical arm outside the vent duct	electrical controls on the bridge	a break glass and pull-cable system
3885	The insulation and screen of diesel engine exhaust manifold shoul be put back after each overhaul because it _____ .	enhances the good appearance of the engine	insulates noise coming from the engine wgen running	protects engine personnel from burns due to accidental contact	protects engine personnel from hot flush
3886	Which of the lowest oxygen content in percent of oxygen where a crew can work safely inside enclosed spaces?	21	20	19	22
3887	Which of the following procedure must be made before making repairs on the evaporator of a refrigeration system?	exhaust the refrigerant to the atmosphere	pump the refrigerant from the system to a clean empty drum	drain the system through the purge valve connection	pump the refrigerant to the receiver
3888	An acceptable method of temporary repairs in the vessels hulls is _____.	shore up the crack with welded brace	drive the wedge	doubler-plater to be pitted	apply a patch of sheet packing backed by a hole and shoring
3889	What could be the result of uneven bolt tightening during installation of a fuel injection pump?	Operating the cooler with a high seawater outlet temperature	A holed strainer supplying cooling water to the heat exchanger	Leak in one of the cooler tubes	Baffle plates that have been bent during prior removal.
3890	When a vessel fitted with gland packing stern tube is underway a small amount of water is allowed to leak through the stern stuffing box in order to_____.	Faulty operation of fuel injector	Binding of pump moving parts	Poor fuel penetration into the cylinders	Improper pump timing
3891	What procedure is advisable before a heat	Drain the fresh water side of	Clean and flush through with	Flush through with chemicals	Drain the sea water side of

	exchanger will be subjected for repairs refitting etc.?	heat exchanger	sea water		heat exchangers
3892	In order to install piping easier and to facilitate and disconnect the pump for servicing which of the following fittings should be used?	Nipple	Flange	Union	Quick disconnect coupling
3893	What fittings are usually found on the inter-coolers and after-coolers of multi-stage air compressors?	Relief valves	Inlet and outlet pressure gauges	Suction and discharge valves	Thermometer
3894	Which of the following is the physical property of material useful in a bolt or similar threaded metals?	Malleability	Elasticity	Plasticity	Ductility
3895	Which of the following is a colorless gas with high carbon content lighter than air with chemical formula of C2H2?	Aspalthene	Acetone	Argon	Acetylene
3896	Which one is an inert gas used as shielded gas in MIG and TIG welding?	Acetylene	Copper	Argon	Cadmium
3897	Which of the following is the angular type of edge preparation for welding process?	Bevel	Fillet	Butt	Crater
3898	What do you call a weld that is made to hold parts of weldment in alignment until final weld is made?	Mig weld	Tack weld	Gpot weld	Tact weld
3899	In order to obtain a good weld which of the correct pointers are to be considered?	Angle of the electrode	Electrode travel	All of these choices	Current and length of arc
3900	Which of the following choices is/are considered as external defect/s in welding?	Undercut inclusion blowhole penetration crack & twisting	All of these choices	Sagging crater porosity & lack of fusion	Spatter overlap
3901	The formation of a number of small holes in the weld bead is usually caused by a_____.	porosity	crater defect	fusion defect	blowhole defect
3902	Soft solders have relatively low melting points and consist mainly of _____.	nickel base alloys	copper base alloys	lead base alloys	silver base alloys

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3903	Safe welding practice requires _____.	that a fire watch be posted	all of these choices	checking the area for items that may catch fire	checking for explosive gases to be made
3904	In an oxyacetylene welding outfit each cylinder has a regulator and two pressures gages. One pressure and the other gage are used to indicate_____.	tip pressure	arc pressure	upstream pressure	hose pressure
3905	Acetylene should never be used at pressure in excess of 15 psig because the _____.	slightest backfire could cause an explosion	acetylene cylinders have a maximum allowable pressure of 15 psig	fusible plug will blow out	relief valve will lift
3906	Protective equipment while carrying out oxy/acetylene welding should include the use of _____.	cotton gloves	trousers with deep pockets	wool jackets	goggles
3907	Which of the following practices is considered to be safe for the handling and use of compressed gas cylinders?	Routinely greasing or lubricating the valves on oxygen cylinders	The storage of the cylinders in a well ventilated compartment	Using oxygen as a substitute for compressed air for pneumatic tools	Cracking the valve on the cylinder to clear dust and dirt
3908	What is the result in a material after subjecting it to annealing?	Tougher	Smoother	Harder	Softer
3909	What is the fusion of two metals joined together to produce a strong bind as one metal?	Welding	Riveting	Soldering	Brazing
3910	required for any given welding job?	The strength of the bond and the welding process used	The type of metal being joined only	The type of metal being joined and the welding process used	The strength of the bond body
3911	What should you do if a leak in an oil hose coupling cannot be stopped by tightening the coupling bolts?	reduce pumping pressure to reduce leakage rate	notify the terminal operator then shutdown and repair the leak	notify the Coast Guard of a potential oil spill	spread absorbent materials on deck beneath the leak
3912	While taking on fuel oil the transfer hose begins leaking causing a sheen on the water you should _____.	repair the leak with a duck tape	apply dispersant to the sheen	shut down operations	reduce the rate of transfer
3913	Which of the following material has high tensile strength and corrosion	Titanium	Fiber glass	Rubber	Silicon

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	resistance and has been used to replace steel metal in both flat plate form and in matched-metal die processes where parts are molded in the preformed shape?				
3914	Most bearings can only hold a few drops and excess oil runs out and is lost when the milling machine starts to operate so it is better to _____.	Flood each bearing with continuous flow of oil and some diesel	Apply grease over the bearings every month	Apply a few drops of oil to each bearing at frequent intervals	Apply a few drops of oil with graphite before starting the machine
3915	What should you do when a turbine bearing shows signs of overheating?	Increase the lube oil pump discharge pressure	Stop the turbine	Increase the cooling water supply to the lube oil cooler	Immediately reduce speed
3916	When an engine will not start on air which of the following maybe the cause of the problem?	Emergency stop interlock activated	All of these choices	Stop valves between air reservoirs and engine are shut	The turning gear is engaged
3917	If the intercooler of a low-pressure air compressor becomes fouled either internally or externally what will happen?	volumetric efficiency will be decreased	normal running time will be decreased	discharge pressure will decrease	total capacity will be reduced
3918	What should you do if one drive belt on air compressor is found to be worn?	adjust belt tension	dress the worn belt	replace that belt only	replace all the belts
3919	What will be the result if the foundation bolts for a reciprocating air compressor are loose?	unloaders will jam shut	compressor will vibrate	intercooler will leak	drive belts will squeal
3920	For any piston ring to operate smoothly without scuffing the ring must be_____.	lubricated properly during engine operation	harder than the cylinder liner	cooler than the surrounding cylinder liner	prevent from rotating during the engine operation
3921	If during operation and the air compressor pressure will not raise the probable cause maybe_____.	cooler pipe has corroded	ingress of dust into cylinder	plugging of oil screen	clogged suction air filter
3922	Whenever abnormality is encountered in air compressor which of the measures should be done?	Refer to fault finding chart to ascertain in the cause of abnormality	Stopped immediately and check the faults	Unload compressor to minimum load	Observe compressor before stopping
3923	You should fix them by_____ if the drive belts on air compressor were	installing new belts	loosening	spraying oil	tightening

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	squealing.				
3924	Dirty intercoolers on an air compressor will cause_____.	increased motor current	damage to the unloader	high pressure in the receiver	excessive consumption
3925	What is the best way to recondition a defective fuel injector?	lap the needle to its seat with metal polish	send to the nearest authorized repairer	overhaul and clean each parts	overhaul clean and lap with grinding compound
3926	Nozzle assembly should be rinsed in _____ after removing all external traces of external carbon.	Gas Oil	Lubricating Oil	Paraffin	Injector Test Oil or Fuel Oil
3927	The needle should _____ to its seat when reconditioning the fuel injector nozzle.	be lapped	not Be lapped	be Replaced	be Ground
3928	The following conditions will occur if the power element of a thermostatic expansion valve fails.	The valve will move towards the closed position	The valve will begin to close but the external equalizing line will assist in keeping the valve unseated	The valve will fail to open as designed to provide continuous cooling	The valve will fail to open and the cooling capacity will be increased
3929	Which of the following has the LEAST part in the distribution of heat balance in a four-stroke diesel engine?	Exhaust Gases	Cooling Water	Radiation	Indicated Power
3930	What you call the process of removing moisture from air?	Vaporization	Humidification	Evaporation	Dehumidification
3931	What could be the result of uneven bolt tightening during installation of a fuel injection pump?	Leak in one of the cooler tubes	A holed strainer supplying cooling water to the heat exchanger	Operating the cooler with a high seawater outlet temperature	Baffle plates that have been bent during prior removal.
3932	To what temperature must a 1.00-L sample of neon at 0oF and 0.90 bar pressure be compressed to 0.25 L and 2.7 bar?	345 K	273 K	460 K	100 K
3933	what is the meaning of Laying out _____.	Removing or chipping off some portions in a workpiece.	Transferring drawing dimensions to the workpiece.	Measuring lines, circles, arcs, points for drilling holes and making cuts on workpiece(s).	Locating and scribing points, lines for machining and forming operations.
3934	In loosening most of the bolts or nuts, what would be the direction of a wrench?	Counter clockwise	Always push	Always pull	Clockwise

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3935	Which of the following is a propulsion device fitted to certain types of ships to improve maneuverability?	Tank stabilizer	Fin stabilizer	Water tight door	Thrusters
3936	Which statement is correct on wing tank system?	The greater height of a tank at the sides does not permit a larger build up so a greater movement to resist rolls.	The greater height of a tank at the sides permits a larger build up so a greater movement to resist rolls.	The greater height of a tank at the sides does not permit build up so a lesser movement to resist rolls.	The greater height of a tank at the sides permits build up so a lesser movement to resist roll.
3937	What will happen to the fin stabilizer if it reaches the desired value or position?	It will go back to the original position.	It will continue to move.	It will rotate.	It will stop/ rest.
3938	What is the mechanism used to steer a boat, airplane, ship, or submarine that works by cutting through any kind of fluid, water or air?	Steering System	wing	Rudder	Propeller
3939	it is a drawing that shows overall views of the equipment and provides all of the information to produce transportation, layout and installation.____.	Isometric view	complete front and side view	cut away view	isothermal view
3940	Which classification of carbon steel that cannot be hardened by direct heating and quenching but can be case-hardened?	low carbon steel	high carbon stee	mild steel	meduim carbon steel
3941	Which is the exact temperature at which a liquid vaporizes for a given pressure?	Superheated temperature	Degree superheat	Degree subcooled	Saturation Temperature
3942	This alloy is basically a 60/40 brass with additional alloying elements such as tin, iron, manganese and aluminum.	High tensile brass	Muntz metal	Naval brass	Admiralty Brass
3943	White metal bearing alloys maybe either tin or lead base materials containing _____.	brass and bronze	antimony and copper or antimony alone	nickel and chromium	aluminum and copper or aluminum alone.
3944	Why is copper primarily and extensively used for electrical fittings?	Copper	Because of its high mechanical strength	Tin	Because it has good electrical conduction properties

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3945	How is normalizing process carried out?	By reheating the material in a furnace at a lower temperature and finally allowing it to cool as slowly as possible?	By heating the material at a prescribed temperature and time in a furnace and finally allowing it to coolin still air	By melting the material in the furnace and then allowing it to cool inside the furnace	By slowly heating the material at a prescribed temperature and time inside the furnace and then applying abrupt cooling
3946	Which is a workshop or factory for casting metal?	electric arc casting	foundry	Bessemer furnace	oven
3947	Why do we need to check and adjust the zero reading of a micrometer caliper before use?	To check for accuracy	To check for alignment	To check if the ratchet is functioning	To check if the spindle will touch the anvil
3948	What types of pipe is used when handling liquid containing acids, this is flexible and will stand vibrations and expansion?	Plastic pipe	Copper pipe	Brass pipe	Lead pipe
3949	Which laying out tools is also called the metal worker`s pencil?	Scrapper	Scribble	Scriber	Inscriber
3950	The most common measurements made in general practice in the machine shop on flat surfaces is known as what measurements?	Angular measurements	Cylindrical measurements	Circular measurements	Linear measurements
3951	What will be the most logical thing to do after identifying the hazards in your work place such as the machine shop?	Evaluate and eliminate the hazards	Follow rules and regulations	Wear protective equipment (PPE)	Control the hazards
3952	Under which situations/conditions are ear cups/plugs used?	When the noise level reaches 85 decibels (dB) and above	When the noise level is higher than normal	When the noise level is low	When entering and performing tasks in an enclosed spaces
3953	Why do we need personal protective equipment/gear?	It can be relied upon as a last resort/last line of defense against risks to health and safety.	It is for your own good and welfare.	It will save you and others from all work related accidents.	It will protect you primarily from work environment.
3954	Which of the following common welding hazards can cause direct accident (from minor burns to hear failure) or indirect accidents (by falling from scaffoldings and flat	Radiation shock	Electric shock	Flying slags/chips	Arc rays shock

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	forms)?				
3955	Which of the following common welding hazards can kill or injure and can destroy equipment, properties, including your ship?	Fire and explosion	Fumes and gases	Electric shock	RadiationFumes and gases
3956	Which hand protection equipment/gear is best suited for electric arc welding operation?	Mittens	Cotton gloves	Leather gloves	Plastic gloves
3957	What is a collection of instruments or their application for the purpose of observation, measurement or control?	Automation	Instrumentation	Process	Identification
3958	Which is generally a hollow cylinder of ball working on direct action or displacement principle?	Piston	Sphere	Float	Buoy
3959	The part of a loop or instrument that first senses the value of the process variable, and that assumes a corresponding, predetermined and intelligible state or output?	transmitter	sensor	conveter	transducer
3960	What would be the end result of annealing process?	Slammer grains which is stronger but less ductile and increased strength, hardness and toughness.	Large grains in its structure that is soft, ductile, low in strength, and easily shaped by machining, pressing and bending	Large grains that is high in strength and hardness but less ductile.	Very fine small grains that is strong and hard but brittle.
3961	Which element is used extensively for electrical fitting?	Manganese	Gold	Brass	Copper
3962	It is virtually resistant to corrosion in sea water, only under exceptional conditions of erosion would the protective oxide film be damaged.	Zinc	Manganese	Titanium	Aluminum
3963	What category of maintenance is used to rectify equipment failures?	protective maintenance	Planned maintenance	repair maintenance	preventive maintenance
3964	A kind of PLC which is	Micro PLC	Small PLC	Modular PLC	Compact PLC

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	monolithic in construction.				
3965	PLC I/O program language which was developed to mimic relay logic wiring schematics is called	special purpose	analog	digital	discrete
3966	this is the PLC graphical programming language describing the relationship function between input and output variables.	STL	LAD	FBD	SFC
3967	it is the user program entered into the processor by using this.	programming devices	mouse	matrix wiring board	digital binary facilitator
3968	The function of maintenance is to keep equipment in this situation.	in the stock room	in safe operating condtion	testing and check-up orderly	brand new condition
3969	Maintenance which consists of scheduled inspection and upkeep is called _____-.	predictive maintenance	remedial maintenance	corrective maintenance	preventive maintenance
3970	Calibration done without removing the instrument from the process is called	In-Shop Calibration	Workshop calibration	Standard calibration	Field calibration
3971	Equipments wherein the wiring and design of construction is made in order to be incapable of releasing electrical or thermal energy to cause ignition of anhazardous atmosphere.	Explosion Proof enclosure	Intrinsically safe	Safety Barriers	Purging Enclosure
3972	The property of the result of a measurement whereby it can be related to an appropriate standard is called	precision	traceability	standards	accuracy
3973	Oxidation reduction potential (ORP) is measurement of :	The hydrogen ion concentration in a given solution	The degree of ionization for a particular solution	The oxidation or reducing chemical properties of a solution	The oxygen present in any quantity of a given gas mixture
3974	Which type of maintenance consist of scheduled inspection and upkeep that is specifically intended to prevent faults from occurring during subsequent operational?	remedial	operational	corrective	preventive
3975	What type of axonometric orthographic projection is	Dimetric projection	Trimetric projection	Equal angle projection	Isometric projection

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	referred to with no equal angles?				
3976	It is a type of parallel projection that can shows all three dimensions in a single view.	Three point projection	Oblique projection	Orthographic projection	Perspective projection
3977	It is an imaginary flat plane upon which the image created by the line of sight is projected.	Plane of projection	Imaginary plane	View plane	Projected plane
3978	What is the color code of a resistor whose nominal value 2.7 kiloohms10% ?	Red, violet, red and gold.	Red, violet, red and silver.	Red, violet, yellow and gold.	Red, violet, orange and silver.
3979	In a 4 band resistor, what color has a multiplier of 1000 ohms?	Orange	Brown	Black	Red
3980	You were tasked to create a small internal thread on a part/component of a machine. Which of the following hole-forming operation will you perform to accomplish the task?	Threading operation	Machine reaming operation	Boring operation	Tapping operation
3981	What is the most commonly used pipe that can handle high temperatures and pressures when galvanized and is used for carrying drinking water?	Wrought iron pipe	Plastic or PVC pipe	Cast iron pipe	Steel pipe
3982	Which type of pipe is used for plumbing, waste draining and vent lining that can be also used for underground piping?	steel and wrought-iron pipe	PVC pipe	seamless brass and copper pipe	cast-iron pipe
3983	Moisture absorbed in the windings or condensed on the surface of electrical machinery insulation ____.	will enhance insulation resistance only if it is fresh water and contains no salt.	lowers the insulation value and is a common cause of fault grounds in idle machines.	is good for long term preserving since most insulation is organic and contains some amount.	reduces the amount of current supplied or drawn by the machine so horsepower is limited.
3984	Which of the following laying out tools commonly used in checking the perpendicularity of an object?	Vernier caliper	Steel rule	Steel protractor	Square
3985	Which pipe fitting is generally used not only to change the direction of pipeline but flow of liquid	Coupling	Tee	Flange	Elbow

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	as well?				
3986	What do you call a special wrench with drive lugs and is designed to turn flush and recessed type threaded fittings?	Spanner	Socket wrench	Wrench	Plier
3987	What is the primary advantage of power hand tools as compared with the manually operated hand tools?	Power hand tools reduce manual effort and speeds up operation.	Power hand tools are handy and easier to operate.	Power hand tools are powerful due to its built-in motor.	Most power hand tools are portable and can be carried from one .place to another
3988	A power supply which pertains to or operated by air is called____.	pneumatics	electric	powder actuated	hydraulics
3989	The following statements pertains to safe working practices to avoid accidents when using a drilling machine except_.	using safety shoes	small drill diameters should revolve at low speed	chuck key/wrenches must be removed from the drill chuck before starting the machine	using properly sharpened drill bits
3990	Which of the following statements best describes the term nipple?	Types of pipe that is corrosive resistant.	Specialized valves designed for high pressure pipelines.	Types of pipe fittings that connect different lenghts of pipes.	Pieces of pipe 12 inches or less.
3991	It is used to join lenghts of pipe, change direction of piping run, connect pipe branches and connect pipes of different diameter pertains to____?	Pipe fittings	Pipe adaptors	Pipe threading tools	Pipe connectors
3992	What will be the logical thing to do after identifiying the hazards in your work place such as the machine shop?	Close the workplace	Control the hazards	Wear protective equipment (PPE)	Follow rules and regulation
3993	Why is it necessary to wear a safety shoes when performing an electic arc welding operation?	It can be relied upon for protection against falling object and floor obstruction.	To protect oneself against excessive heat during welding operation	It can protect the wearer against arc rays,flying slag or spars.	The wearer can depend on it against sharp object
3994	Which of the following is the most logical step when lighting a torch,for safety reasons,before squeezing the spark lighter under the tourch tip?	Open the acetylene valve slightly	Close the acetylene valve slightly	Ensure the oxygen torch valve is closed	Check the igniterif it is functioning to causes a sparkfor lightning the torch

3995	Which of the following is the best definiton of safety?	Exposures from working enviroment which can affect the system over a period of time.	FActors which can affect the employees health and well being	A Condition of being exposed to danger or loss.	A Condition of being near to danger or loss.
3996	Which is defined as the ratio of the uncertainty to the measured valued...multiplied by 100?	Uncertainty	Precision	Percent Uncertainty	Accuracy
3997	On a velocity-time graph (velocity being the ordinate and time as abscissa), the motion of a boat traveling along a straight path with the uniform acceleration of 2 m/s2 would appear as a ___.	straight line sloping upward to the right	curved line whose down ward slope to the right increases with time	straight line sloping downward to the right	horizontal straight line
3998	Which hand tap has2-3 tapered thread befire full cutting starts and good choice for cutting thread in a blind hole?	Bottoming tap	Pilot tap	Taper tap	Plug tap
3999	it is a power hand tool which will give rapid succession of sudden torques designed to assemble and disassemble different types of threaded fasteners.	torque limiting wrench	spanner	impact wrench	combination wrench
4000	Which type of alloy is used for valves, pump bodies, and fittings utilized with water and steam?	gunmetal	catridge brass	admiralty brass	muntz
4001	What is the purpose of molybdenum as an alloying element?	To increase resistance to corrosion, especially to seawater.	To increase tensile strength when under load.	To increase strength, especially for increasing strength at high temperature.	To increase strength and fatigue resistance.
4002	It is an opening in the shell and refractory of a furnace through which air is forced. What is it called?	trunnions	blast box	refractory bricks	tuyeres
4003	What do you call a solid material which is typically hard, shiny. malleable, fusible, and ductile, with good thermal and electrical conductivity?	Metal	Material	Chemical	Non-Metal

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4004	Which of the following is the US standard frequency?	60 Hz	50 Hz	70 Hz	40 Hz
4005	An ionized gas which acts as an electric conductor when subjected with high voltage is called _____.	carbon	neon	copper	mercury
4006	Which of the following is termed as freedom from risk which can lead to damage or injury?	Hazard	Work	Safety	Shock
4007	If a micrometer is opened to a distance of 0.0001 inch, you would say the reading is _____.	ten millionths of an inch	one millionth of an inch	one ten thousandths of an inch	ten thousandths of an inch
4008	Valve is generally use to _____.	change the direction of pipeline	control the flow of fluid	change the flow direction of fluid	connect different lengths of pipes
4009	The operation of enlarging a hole conically at one end pertains to _____.	boring operation	spotfacing operation	countersinking operation	counterboring operation
4010	The air duct between two wing tanks in a wing tank system contains valves, which are operated by a _____.	level sensing device	fluid sensing device	free surface sensing device	roll sensing device
4011	What type of stabilizing system uses fins to oppose the force that attempts to roll the ship?	level sensing device	free surface sensing device	tank stabilizer	roll sensing device
4012	Which of the following statements identifies the difference between the primary windings and the secondary windings of a 2:1 step-down transformer?	The secondary windings give off twice as much heat as the primary windings	The secondary windings have half as many turns as the primary windings	The secondary windings require half as much current as the primary windings	The secondary windings give off twice as much resistance as the primary windings
4013	it is a white metal bearing alloys may be either tin or lead base containing this materials.	nickel and chromium	brass and bronze	aluminum and copper or aluminum	antimony and copper or antimony alone
4014	it is the fins control system senses movements from the vertical and the other.	rolling acceleration	rolling angle	rolling velocity	naturalist
4015	The full torque electric brake on an electric cargo winch functions_____.	act as a backup brake in the event the mechanical brake should fail	automatically govern the hoisting speed of the load	automatically govern the lowering speed of the load	automatically hold the load as soon as current to the machine is shut off
4016	On a vessel with turbo-	Closed contact	Overheated	Excessive	Tripped main

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	electric drive, which of the following conditions would indicate that the propulsion motor had cut-out from synchronization with the propulsion generator?	in the field circuits	crosstie busses	vibration of the vessel	motor interlocks
4017	On some diesel-electric ships, the DC propulsion motor will only attain half speed when the generator fields are fully excited. Speeds above this are obtained by_____ .	decreasing excitation	lowering the generator engine speed	rotating brush alignment	raising the generator engine speed
4018	In a diesel electric plant, raising the generator's field excitation will cause the DC propulsion motor to _____ .	affect main motor speed if done in conjunction with higher generator engine speeds	affect generator speed only	increase in speed	decrease in speed
4019	Electric propulsion coupling excitation is reduced at slow speed to _____ .	prevent coupling overheating	increase speed control	increase shaft torque	prevent coupling slippage
4020	An electric tachometer receives the engine speed signal from a_____	stroboscopic sensing device	small generator mounted on the engine	bimetallic sensing device	vibrating reed meter generating a voltage proportionate to engine speed
4021	A three-phase alternator is operating at 450 volts with the switchboard ammeter indicating 300 amps. The kw meter currently indicates 163.6 KW, with a power factor of 0.7. If the power factor increases to 0.8, the KW meter reading would increase by_____.	17.8 KW	30.6 KW	37.8 KW	23.2 KW
4022	A semiconductor that decreases in resistance with an increase in temperature is known as a_____ .	thermopile	thermistor	diode	resistor
4023	The shunt use in an ammeter should be connected in_____. .	parallel with the load and in series with the meter movement	series with the load and in series with the meter movement	series with the load and in parallel with the meter movement	parallel with the load and in parallel with the meter movement

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4024	Moisture as a result of condensation occurring inside of the cargo winch master switches, can be reduced by_____ .	using strip heaters inside the switch box	installing a light bulb in the pedestal stand	coating the switch box internals with epoxy sealer	venting the switch box regularly
4025	Which of the following conditions will occur if the solenoid coil burns on a cargo winch with an electrical brake?	Nothing will happen; the winch will continue to operate as usual.	The motor will overspeed and burn up.	The load suspended from the cargo boom will fall.	The brake will be set by spring force.
4026	Which of the listed battery charging circuits is used to maintain a wet-cell, lead-acid, storage battery in a fully charged state during long periods of disuse?	High ampere charging circuit	Quick charging circuit	Trickle charging circuit	Normal charging circuit
4027	The output voltage of a 440 volt, 60 hertz, AC generator is controlled by the____ .	number of poles	exciter output voltage	prime mover speed	load on the alternator
4028	Any electric motor can be constructed to be ___	ground proof	overload proof	short proof	explosion proof
4029	Which of the following statements represents the main difference between a relay and a contactor?	Contactors can handle heavier loads than relays.	Contactors control current and relays control voltage.	A relay is series connected and a contactor is parallel connected.	Contactors are made from silver and relays are made from copper.
4030	Which of the following statements is true concerning a polyphase synchronous propulsion motor?	The starting current is held below the rated current.	The motor is started as an induction motor.	Resistance is gradually added to the rotor circuit.	The field winding is energized for starting purposes only.
4031	Where a thermal-acting breaker is required to be used in an area of unusually high, low, or constantly fluctuating temperatures, an ambient compensating element must be used. This element consists of a _____.	conical spring on the contact arm	cylindrical spring on the contact arm	second electromagnet	second bimetal element
4032	Which of the following statements represents an application of a silicon controlled rectifier?	To eliminate power supply hum.	For sensing flame in an automated burner.	To provide DC power for a main propulsion motor.	For use as a voltage reference diode.
4033	Which of the damages listed can occur to the components of a winch master control switch, if the cover gasket becomes	Rapid corrosion of switch components.	Contamination of lube oil.	Overheating of the winch motor.	Sparking at the winch motor brushes.

	deteriorated?				
4034	An accidental path of low resistance, allowing passage of abnormal amount of current is known as a/an_____ .	polarized ground	short circuit	polarized ground	open circuit
4035	A resistance in a circuit of unknown value is to be tested using the voltmeter/ammeter method. Therefore, the meters should be connected with _____.	both meters in parallel with the resistance	both meters in series with the resistance	the ammeter in series and the voltmeter in parallel with the resistance	the ammeter in parallel and the voltmeter in series with the resistance
4036	In general, polyphase induction motors can be started on full line voltage by means of _____ .	compensator starters	autotransformer starters	primary-resistor starters	across-the-line starters
4037	While starting a main propulsion synchronous motor, the ammeter pegs out at maximum and then returns to the proper value after synchronization. This indicates the_____.	field windings are grounded	motor has started properly	power transmission cables are grounded	slip rings are dirty
4038	Which of the following electric motors would be the safest and most reliable to use on the main deck of a vessel in foul weather conditions?	Watertight motors	Sealed motors	Drip proof motors	Enclosed motors
4039	A direct current passing through a wire coiled around a soft iron core is the description of a simple_____.	piezoelectric device	electromagnetic domain	electromagnet	magnetic shield
4040	To properly use a hook-on-type volt/ammeter in checking current flow, you must first_____ .	short the test leads and calibrate the instrument to zero	de-energize the circuit to allow connection of the instrument in series	connect the voltage test leads to the appropriate terminals	hook the jaws of the instrument around the insulated conductor
4041	The use of four diodes, in a full-wave bridge rectifier circuit, will_____. .	offer high opposition to current in two directions	provide unidirectional current to the load	convert direct current to alternating current	allow a very high leakage current from the load
4042	Autotransformer starters or compensators are sometimes used with polyphase induction motors to_____ .	allow the voltage to be either stepped up or down, depending on	increase the voltage for "across-the-line starting"	reduce the voltage applied to the motor during the starting period	provide a backup means of voltage regulation for emergency

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		the application, to ensure full torque			starting
4043	In an AC synchronous motor electric propulsion plant, propeller speed is controlled by varying the_____ .	prime mover speed	electric coupling field strength	number of energized main motor poles	propulsion generator field strength
4044	The method used to produce electron emission in most vacuum tubes is known as _____.	secondary electric emission	cold cathodic electric emission	photoelectric emission	thermionic emission
4045	When troubleshooting electronic equipment, you should use a high impedance multimeter _____.	for AC measurements only and a low resistance meter for DC measurements	to prevent excess current flow through the meter that would damage it	so as not to load down the circuit and obtain erroneous voltage readings	whenever a low impedance meter is not available, regardless of the components being tested.
4046	Which of the listed devices is used to measure pressure and convert it to an electrical signal?	Rectifier	Reducer	Transformer	Transducer
4047	A motor using a rheostat in the motor circuit to vary the speed is called_____ .	regenerative braking motor	wound-rotor induction motor	synchronous motor	squirrel-cage induction motor
4048	Which of the motors for the devices listed below is fitted with an instantaneous overload relay?	Winch	Fan	Pump	Machine tool
4049	The variable resistance placed in the rotor circuit of a wound-rotor induction motor provides for_____ .	use as a split-phase motor	frequency control	voltage control	speed control
4050	One factor that determines the frequency of an alternator is the_____. .	number of turns of wire in the armature coil	number of magnetic poles	output voltage	strength of the magnets used
4051	A tubular fuse should always be removed from a fuse panel with _____. .	a screwdriver	a pair of insulated metal pliers	any insulated object	fuse pullers
4052	The device that most commonly utilizes the principle of electromagnetic induction is the_____ .	rheostat	transformer	transistor	diode
4053	A molded-case circuit breaker provides	electromagnet	shading coil	arc quencher	burn away strip

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	protection against short circuits by using a/an_____ .				
4054	Which of the following statements concerning analog and digital devices are correct?	There are no basic differences between the two systems.	The variables in digital systems are fixed quantities and the variables in analog systems are continuous quantities.	Operations in a digital device are performed simultaneously.	Analog devices are superior in accuracy compared to digital devices.
4055	The number of cells in a 12 volt lead-acid battery is_____.	twelve cells	three cells	six cells	four cells
4056	The Wheatstone bridge is a precision measuring instrument utilizing the principle of changes in_____ .	capacitance	inductance	amperage	resistance
4057	The frequency output of an operating alternator is controlled by the_____.	relative speed of the rotor poles	number of turns of wire in the armature coil	strength of the magnets used	output voltage
4058	Which of the following physical characteristics does a wound- rotor induction motor possess that a squirrel cage motor has none?	End rings	Slip rings	A centrifugal switch	End plates
4059	Protection against sustained overloads occurring in molded-case circuit breakers is provided by a/an_____.	current overload relay	thermal overload relay	thermal acting trip	overvoltage release
4060	The rated temperature rise of an electric motor is the _____. .	average temperature at any given latitude	average temperature rise due to resistance at 10% overload	permissible difference in the ambient temperature of the motor due to existing weather conditions	normal temperature rise above the standard ambient temperature at rated load
4061	On AC vessels, which of the following statements represents the most difficult problem involved in obtaining a DC potential suitable for use by computer components?	A stepdown transformer is always required.	The voltage must be rectified and made ripple free.	Rectifiers cannot operate with voltage regulators.	Vessel vibrations affect the voltage source.
4062	On AC vessels, which of the following statements represents the most	The voltage must be rectified and	A stepdown transformer is always required.	Vessel vibrations affect the voltage source.	Rectifiers cannot operate with voltage

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	difficult problem involved in obtaining a DC potential suitable for use by computer components?	made ripple free.			regulators.
4063	Line losses in a distribution circuit are kept to a minimum by _____.	adding rubber insulation conductors to the circuit	using higher voltage and lower current	increasing the number of thermal relays in the circuit	using higher current and lower voltage
4064	The use of four diodes, in a full -wave bridge rectifier circuit, will_____.	convert direct current to alternating current	allow a very high leakage current from the load	provide unidirectional current to the load	offer high opposition to current in two directions
4065	A change in field excitation of an alternator operating in parallel will cause change in its _____.	active power	phase sequence	alternator frequency	reactive power
4066	Which of the following statements describes the significance of ambient temperature in relation to the service life of electronic components?	Ambient temperature should be as high as possible to drive off moisture.	A reduced ambient temperature causes a corresponding reduced service life.	Ambient temperature is not significant as long as the relative humidity is kept low.	Increased ambient temperature decreases the service life of electronic components.
4067	Electric circuits are protected against overloads and short circuits by means of a/an _____.	circuit breaker	amplifier	diode	capacitor
4068	Two AC generators of the same capacity are operating in parallel. One with zero speed droop setting and the other with a 5% speed droop. If its capacity is not exceeded, the unit whose governor has a zero speed droop setting will ____.	have poor response	maintain the frequency of the system	have poor sensitivity characteristics	assume the smaller share of the load
4069	The rated temperature and rise of an electric motor is the _____.	average temperature at any given latitude	average temperature rise due to resistance at 10% overload	normal temperature rise above the standard ambient temperature at rated load	permissible difference in the ambient temperature of the motor due to existing weather conditions
4070	An adjustable resistor, whose resistance can be changed without opening the circuit in which it is connected, is called a ____.	bleeder resistor	rheostat	bridge	variable shunt strip

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4071	Motor controllers are seldom troubled by grounds because ___.	shock mounts on controller panels greatly reduce vibration	special insulation is used on wire for vital circuits	cabinet heaters always keep internal components dry	ontactors and relays are mounted on non-conducting panels
4072	A ground in an electrical circuit outside the engine room ___.	is indicated by the ground detecting lamps on the main switchboard	cannot be detected under normal conditions	is of no consequence to engineering personnel	is indicated at the branch circuit breaker panel
4073	Which of the listed conditions describes the effect on intrinsic semiconductor operation as a result of a temperature increase?	Capacitive reactance will decrease	Inductive reactance will decrease	Conductivity will increase	Resistivity will increase
4074	Transformers are used onboard ships with AC generators to _____.	change frequency	increase power output to modulating frequency controllers	decrease power output to modulating frequency controllers	permit higher voltage for electric motor operation and low voltage for lighting circuits
4075	You can determine if a circuit breaker is tripped by ___.	checking for the warm breaker	looking for a burned-out link	examining the position of the handle	looking for the tripped breaker light
4076	As an armature revolves within a magnetic field, friction is developed between the rotated magnetized particles as they pass though each magnetization cycle. This results in ____.	eddy-current loss	copper loss	capacitive reaction	hysteresis loss
4077	A device used in an electrical circuit to change alternating current to direct current, is known as a_____.	rectifier	current transformer	condenser	shunt
4078	A silicon controlled rectifier (SCR) is a solid state device used to change_____.	DC to AC and control relatively low load current	AC to DC and control relatively high load current	AC to DC and control relatively low load current	DC to AC and control relatively high load current
4079	Which of the following actions must be carried out prior to closing the alternator circuit breaker?	Decrease the line voltage	increase the line voltage	Increase the alternator voltage	Decrease the line frequency
4080	A hydrometer indicates specific gravity by comparing the ____.	mass of substance measured with the density of the same substance	buoyancy of the indicator in the liquid being measured as compared to water	density of a substance in water with the density of the same substance in air	difference in weight between water and the mass of the liquid being measured

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4081	The arc resulting from the tripping of a circuit breaker is prevented from damaging the contacts by _____.	instantaneous magnetic trip for over load currents	an inverse timed thermal trip for short circuit currents	directing the arc into an arc chute	designing the contacts to open slowly
4082	Which of the following represents a characteristic of an ungrounded electrical distribution system?	Accidental contact between one line and ground does not cause an outage	Double ground faults on different phases will not cause an outage	Ground detection systems are unnecessary	Accidental contact between one line and ground will always cause an outage
4083	When two generators are operating in parallel, what will first occur if the engine driving generator #1 suddenly loses power?	Generator #1 circuit breaker will trip on overload	Generator #2 will motorize	Generator #2 engine will automatically shut down	Generator #1 circuit breaker will trip on reverse power
4084	Regarding and AC generator connected to the main electrical bus; as the electric load and power factor vary, a corresponding change is reflected in the generator armature reaction. These changes in armature reaction are compensated for by the ____.	phase-balance relay	balance coil	voltage regulator	governor speed droop setting
4085	For practical purposes, in a simple series circuit employing two resistors, a drop of one half the source voltage will occur across one resistor if it has _____.	at least ten times the resistance of the other	half the resistance value of the other resistor	a partial short circuit	a resistance equal to the other
4086	A switchboard for a AC electrical distribution system, will be provided with which of the following components? I. Frequency meter II. Ammeter III. Voltmeter	I & II	II & III	I only	I, II & III
4087	The mandatory operating characteristic of a pure amplifiers the_____. I. form of the input and output energy must be the same II. ratio of the output change to input change must be a value greater than 1(one)	I only	II only	Both I and II	Neither I nor II
4088	An alternator is being paralleled with one on the	be exactly 60 hertz	decrease	increase	not change

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	line. At the INSTANT the circuit breaker is closed, the frequency of the incoming alternator will normally ____.				
4089	As load is added to an AC generator provided with constant field excitation, the prime mover slows down with the effect of ___.	Increasing frequency and increasing generated voltage	lowering frequency and increasing generated voltage	lowering frequency and lowering generated voltage	Increasing frequency and lowering generated voltage
4090	The existing resistance of conductor is dependent upon its length, cross-sectional area ____.	inductive reactance and insulation	capacitive and reactance and material	material and insulation	material and temperature
4091	Although saturable reactors are extremely useful in some applications, their gain is low because of _____.	IR drop throughout the load winding	all of the above	core hysteresis losses	inductive resistance in the control winding
4092	The final step in testing a circuit for a ground involves the use of a megohmmeter. A grounded switch or cable will be indicated by a megohmmeter reading of ___.	zero	infinity	steady in the high range	unsteady in the low range
4093	The resistance of a conductor varies _____.	inversely as its length and inversely as its cross-sectional area	directly as its length and directly as its cross-sectional area	inversely as the length and directly as it cross-sectional area	directly as its length and inversely as its cross-sectional area
4094	A resistor placed in parallel to the output of a power supply_____.	corrects power factor	aids in output voltage regulation	prevents excessive currents	is a temperature compensator
4095	You have installed a Zener diode in parallel with a load. While measuring the voltage across the Zener diode it is found that it does not change as the current through the load increases. This means that the Zener diode_____.	is open	does not regulate as it should	is working as it should	is shorted
4096	The heating conductors as a result of resistance in a distribution circuit causes a power loss expressed as _____.	line droop	IR drop	line loss	hysteresis
4097	The timer element found in a reverse power relay	a separate battery source	line voltage	the main bus	electromagnets

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	obtains it operating torque via ___				
4098	Materials that retain a large part of their magnetization, after the magnetizing force is removed, are said to have _____.	low hysteresis loss	high flux density	high ductility	high permanence
4099	A current-carrying conductor makes accidental contact with a wiring conduit. This will be indicated by a ___.	high switchboard wattmeter reading	darkened switchboard ground detecting lamp	darkened switchboard synchronizing lamps	low switchboard wattmeter reading
4100	AC generator are protected against malfunctions due to prime mover power loss by the use of ____.	a separate battery backup	main bus disconnect links	reverse power relays	reverse current relays
4101	A signal derived from a controlled function and returned to the initiating point is called a/an_____.	inverse signal	reverse signal	monitoring signal	feedback signal
4102	Nickel-cadmium batteries are superior to lead-acid batteries at high discharge rates because they ____.	deliver a large amount of power and can be recharged in a shorter time	need fewer cells in connected series and less mounting space	have higher output voltages and require no maintenance	all of the above
4103	An AC generator operating in parallel loses its excitation without tripping the circuit breaker. This will ____.	cause the slip rings to melt	increase the output amperage between the armature and the bus	not affect the faulty generator due to the compensation of the other generators	cause high currents to be induced in the field windings
4104	A switchboard for an AC electrical system requires the use of which of the following devices?	Ohmmeter	Induction voltage regulator	Current transformer governor	Frequency meter
4105	Alternating current circuits develop resistance, inductance and capacitance. The inductance of a coil is expressed in _____.	ohms	henrys	farads	mhos
4106	The timer element of a reverse power relay cannot be energized unless ___.	the power flow is the opposite to the tripping direction	the movement of the disk is dampened by a permanent magnet	one generator is fully motorized	the power flow is the same as the tripping direction
4107	The purpose of a magnetic relay is to _____.	open a circuit only in the event of overload	relay voltages at increased power	remotely open and close contacts	provide overcurrent protection during starting

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4108	Inductance is the property of an electric circuit that _____.	opposes any charge in the current flow through the circuit	opposes any charge in the applied voltage	aids any changes in the applied voltage	aids any changes in the current through the circuit
4109	On an engine throttle control system, the auxiliary control circuits are provided with devices to prevent excessive over travel of the actuating valve by the control motor.	analog relays	overlap sensors	differential relays	limit switches
4110	Protection against sustained overloads occurring in molded-case circuit breakers is provided by a/an ____.	reverse current relay	overvoltage release	thermal acting trip	low voltage relay
4111	To minimize magnetic field interaction between electrical conductors in physical proximity, it is best to keep them _____.	at right angles and as close as possible to each other	at right angles and as far as practicable from each other	parallel and as close as possible to each other	parallel to and as far as practicable from each other
4112	The number of cycles per second occurring in AC voltage is know as the _____.	wave form	half mode	phase angel	frequency
4113	Capacitors are commonly used on power supply circuits for engine room automation consoles to_____.	filter out ripple from rectification	prevent overloads	act as a permanent load	decrease the average value of the output voltage
4114	The main purpose of an electric space heater installed in a large AC generator is to ____.	prevent acidic pitting of the slip rings	prevent moisture from condensing in the wind rings during shutdown	prevent the windings from becoming brittle	keep the lube oil warm for quick starting
4115	A magnetic relay is most commonly used to ____.	provide transformer secondary winding over-current protection	provide capacitance to a circuit	provide inductive power of a circuit	remotely open and close contacts
4116	Nickel-cadmium storage batteries are superior to lead-acid batteries because they ____.	need fewer cells in series and use less mounting space	all of them above	can remain idle and keep a full charge for a long time	put out higher voltages and require no maintenance
4117	The combined effect of inductive reactance, capacitive reactance, and resistance in an AC series	total reactance	impedance	resonance	reactance

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	circuit is known as _____.				
4118	Large cable sizes are formed as individual conductors that may be comprised of several smaller strands to ____.	A. obtain the flexibility required for easy handling	reduce the overall weight of the wire run	reduce the number of supports needed for a horizontal overhead run	all of the above
4119	Which of the listed devices is used to measure pressure and convert it to an electrical signal?	Reducer	Rectifier	Transformer	Transducer
4120	The current at which a magnetic-type overload relay tends to trip may be decreased by raising the plunger further into the magnetic circuit of the relay. This action ___.	reduces magnetic pull ion the plunger and requires more current to trip the relay	increases magnetic pull on the plunger and requires more current to trip the relay	increases magnetic pull on the plunger and requires less current to trip the relay	reduces magnetic pull on the plunger and requires less current to trip the relay
4121	The force that causes free electrons to flow in a conductor producing electric current is called _____.	resistance force	electromotive force	dietetic force	inductive force
4122	A DC generator which is used to supply direct current in order to maintain an AC generator field is commonly known as a/an _____.	armature	stator	rotor	exciter
4123	A result of an overloaded circuit _____.	The breaker will trip again if immediately reset	The breaker handle will lock in the OFF position	The breaker handle will lock in the tripped position until the thermal element cools down	The thermal element must be replaced after an overload trip has occurred before it can be restored into service
4124	While on watch in the engine room, you are setting up to parallel alternators. The switchboard has a synchroscope and synchronizing lamps. If the synchroscope is broken, which of the steps listed is the most essential before an alternator can be parallel with the bus?	The breaker should be closed when both synchronizing lamps are bright	The breaker should be closed when open synchronizing lamp is dark and the other is bright	The frequency meter should be used to determine that the incoming alternator frequency is slightly higher than the bus	A portable phase sequence indicator must be used to verify the information form the lamps
4125	If a shipboard AC generator experiences	excessive locked-rotor	a rotating slip ring	the brushes shifting out of	an open in the rotor field

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	voltage failure, the cause may be due to ____.	current		the neutral plane	circuit
4126	Motorization of an AC generator is undesirable because ____.	all of the above	high voltage pulses may damage the commutator	it puts an excessive load on the bus	the generator will be damaged when it reverses its rotation
4127	An AC generator panel is fitted with two synchronizing lamps and a synchroscope. When paralleling, if the synchroscope pointer is at the noon position and one synchronizing lamp is bright while the other remains dark, this indicates that ___.	the incoming generator voltage is too low	the generators are out of phase and one lamp is burned out	the generators are in phase but one lamp is burned out	the generator breaker may be closed
4128	An autotransformer is equipped with a 50% tap, a 65% tap and an 80% tap. Which of the following statements is true concerning a load connected to 50% tap?	The load is receiving minimum voltage and maximum current	The load is receiving minimum voltage and minimum current	The load is receiving maximum voltage and minimum current	The load is receiving maximum voltage and maximum current
4129	The operating torque of the upper induction disc-type element, or timer element, of an AC reverse power relay is obtained from ___	the main bus	electromagnets	line voltage	a separate battery source
4130	The amount of voltage induced in the stator windings of a modern AC generator depend mainly on ____.	all of the above	the strength of the magnetic field	the number of fields poles energized	the number of slip rings connected to the commutator
4131	In a three-phase electrical system. Three ground detecting lamps are provided. If all three lamps REMAIN at half brilliance when the ground detecting test switch is operated ___.	there is a short ground on all three phases	the switch must be replaced	the light bulbs are improper voltage	there are no grounds present
4132	Undervoltage trips are frequently installed on switchboard circuit breakers to ___.	trip out generators in the event of severe arcing or sparking	trip out generators when there is reversal of power in the main circuit	trip out the generator when there is insufficient voltage being delivered to distribution circuits	trip out the breaker if the generator overspeeds by 5% but continues to run
4133	Silicon diodes which are	Zener diodes	tunnel diodes	hot -carrier	compensating

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	designed for a specific reverse breakdown voltage, and are most often used in electronic power supply voltage regulators, are called_____.			diodes	diodes
4134	Which of the following statements represents an application of a silicon controlled rectifier?	Used in photo cell sensor circuits for boiler burners.	Used to eliminate AC power supply hum.	Used as a voltage reference diode.	Provides DC power for a main propulsion motor.
4135	The specific gravity of the electrolyte solution in a lead acid battery ____.	is not affected during charging	would read approximately 1,830 when discharged	remains the same during discharging	provides an indication to the state of charge of the battery
4136	The charge of a lead-acid battery is checked with a ____.	Manometer	Hydrometer	ohmmeter	viscosimeter
4137	The specific gravity of the electrolyte solution in a lead acid battery ____.	remains the same during discharge	is not effected during charging	gives an indication of the state of charge of the battery	would read close to 1.830 when discharged
4138	A hydrometer is used to measure the ____.	specific gravity of a battery electrolyte	water pressure in a deck pipeline	amount of potable water a vessel is taking on	power developed by a salt water service pump
4139	A molded-case breaker provides protection against short circuits by using a/an ____.	burn away strip	electromagnet	arc quencher	shading coil
4140	A circuit breaker differs from a fuse in that a circuit breaker ____.	gives no indication of having opened the circuit	melts and must be replaced	is enclosed in a tube of insulating material with metal ferrules at each end	trip to break the circuit and may be reset.
4141	You can determine if a circuit breaker has tripped by ____	examining the position of the handle	checking for which of the breakers is warm	looking for a burned-out link	checking if it is hot
4142	When the operating handle of a molded-case circuit breaker is in the mid-position, the circuit breaker is indicated as being ___.	in the closed position	reset	tripped	in the opened position
4143	The purpose of the automatic bus transfer is to ____.	Step-down voltage to the lighting distribution panel	provide over-current protection to the lighting distribution panel	provide emergency power to the lighting distribution panel	energize the emergency switchboard from the main switchboard

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4144	The part of the shipboard electrical system used to control the distribution of power to the branch circuits, is the ___.	governor relay box	bridge control panel	disconnect links	main switchboard
4145	A bus disconnect link is used to isolate ___.	different bus phases form the equalizer connection	one bus bar from the ground detection system	the generator circuit breaker from the bus	positive and negative buses from the neutral
4146	An Ac generator is prevented from becoming motorized by the use of a/an ___	reverse power relay	overspeed trip	governor controls	back pressure trip[
4147	A generator is prevented from becoming motorized by the use of a/an ___	governor controls	overspeed trip	reverse power relay	back pressure trip
4148	The operating torque of the disk or timer element in an AC reverse power relay is obtained from _____.	line voltage	the main bus	a separate battery source	electromagnets
4149	The timer element of a reverse power relay will activate when ___	the movement if the disk is damped by a permanent magnet	the power flow is the same as the tripping direction	the power flow is the opposite to the tripping direction	the load difference generators is more than 10 percent
4150	A reverse-power relay will prevent AC generator motorization by ___.	tripping the generator circuit breaker	tripping the panel board main switch	automatically redirecting the load	automatically speeding up the prime mover
4151	Which of the following devices are protected from being motorized by a reverse-power relay?	Exciters	Amplidynes	Wave guides	Alternators
4152	Part of the insulation of practically all electrical machinery is in the form of organic compounds which contain some amount of ____.	asbestos	water	fibre	plastic
4153	Electrical machinery insulation will break down more rapidly to ___.	low loading of motors and generators	frequent megger testing	high operating frequencies	high temperatures and vibration
4154	The dielectric constant of dry air or a vacuum is ___.	100	1000	1	10
4155	Which of the following materials is a good electrical insulator?	copper	wood	gold	silver
4156	A ground can be determined as an electrical connection between the wiring of a	circuit beaker	shunt field	metal framework	interpole

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	motor and its ____.				
4157	A grounded switch or cables will be indicated by a megohmmeter reading of ___.	zero	infinity	being unsteady in the low range	being unsteady in the high range
4158	Motor controllers are seldom troubled with grounds because ___.	the auxiliary contacts have a high resistance connection	these are separate switches for the motor and the control	the resistor banks are composed of individual series connected units	the contactor and relays are mounted on a non-conducting panel
4159	When a low input voltage is imparted to a device which then delivers a high output voltage, the device is known as a ____.	secondary transformer	step-up transformer	step-down transformer	primary transformer
4160	Which of the following statements is true concerning step-down transformer operation?	The resistance on the primary side is lower than the secondary side	The current to the primary side is the same as the current from the secondary side	The voltage to the primary side is the same as the voltage from the secondary side	The voltage to the primary side is greater than the voltage from the secondary side
4161	Power transformers are rated in _____.	kilowatt-amps	kilowatt-volts	kilovoltamperes	ampere-turns
4162	Relative to the secondary winding of a step-up transformer, the primary winding will have ____.	fewer turns	more turns	twice as many turns	same number of turns but smaller wires
4163	The function of a step-down potential transformer is to reduce the load ____.	power	current and increase line voltage	voltage and increase line circuit	voltage and current
4164	Heat sinks are most frequently used with_____.	LEDs	power transistors	LCDs	vacuum tubes
4165	On a digital numerical display readout, what would be the minimum number of LED segments required to form and display any digit 0 through 9?	9	8	7	6
4166	The schematic symbol for an operational amplifier in an analog circuit is a_____.	circle	square	trapezoid	triangle
4167	Which of the following statements correctly applies to transistors?	The three terminals are called the emitter, base, and collector.	LED and LCD are the two basic types of transistors.	The collector separates the emitter and base.	The emitter separates the base and collector.
4168	A carbon resistor which is	0.01	0.05	0.1	0.2

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	color coded as red, violet, brown,and silver in bands A thru D respectfully, would indicate a tolerance of_____.				
4169	A carbon resistor has a resistance of 50 ohms, and a tolerance of 5 percent. What would be the respective colors indicated for bands A, B, C and D for this resistor?	green, black, black, and silver.	gray, black, brown, and gold.	gray, black, brown, and silver.	green, black, black, and gold.
4170	A carbon resistor has the following color bands; Band A is yellow, followed by violet, gold, and silver. What is the ohmic value of the resistor?	4700 ohms + or - 10%	4.7 K ohms + or - 5%	4.7 ohms + or - 10%	47 ohms + or - 5%
4171	What would be the ohmic value of a carbon resistor if the color bands A, B, C, and D were yellow, green, orange, and gold respectively.	427,500 to 472,500 ohms	42,750 to 47,250 ohms	42.75 to 47.25 ohms	4,275 to 4,725 ohms
4172	A carbon resistor operating in electrical equipment that is NOT properly cooled will_____.	decrease its reliability factor	change its value inversely proportional to the amount of heat generated and time in service	increase its reliability factor	always operate at the same ohmic value
4173	Germanium semiconductor diodes are commonly used as_____.	power sources	potentiometers	photocells	rectifiers
4174	A cycloconverter (CCV) is a static power converter that_____.	converts dc power to ac power in an ac propulsion motor	provides adjustable frequency to power an ac propulsion drive motor	converts ac power to dc power in a dc propulsion drivesystem	provides constant frequency output power to an acpropulsion drive motor
4175	The conversion of constant frequency power into adjustable frequency power in a modern AC propulsion drive system is commonly achieved through the use of_____.	transformers and resistors	rheostats and resistors	rectifiers and thyristors	potentiometers and diodes
4176	A saturable reactor uses relatively small DC currents to control_____.	low frequency low power loads	high frequency high power loads	high frequency low power loads	low frequency high power loads

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4177	In the flow of one cycle of single phase AC current past any given point in a circuit, the maximum current peak occurs ____.	two time	one time	four times	three time
4178	In an AC circuit, the inductive reactance of a coil varies with the ____.	current of the circuit	voltage of the circuit	resistance of the circuit	frequency of the circuit
4179	Capacitance in an AC circuit will ____.	rectify the current	oppose any change in circuit voltage	stop current flow once the capacitor is fully charged	allow current flow in only one direction
4180	An AC circuit has capacitance arranged in series. If the line voltage remains constant, the capacitive reactance value can be varied by changing the _____.	number of commulating poles	resistance	line frequency	number of interpoles
4181	Decreasing frequency in a capacitive circuit while maintaining a constant circuit voltage, will result in a/an _____	decrease in total impedance	decrease in circuit current	increase in apparent power	decrease in capacitive reactance
4182	Voltage generated by modern revolving field AC generators is fed to the bus by means of _____.	brushed on a commutator	slip rings on a commutator	brushes on slip rings	direct connections from the stator
4183	AC and DC generators are similar in that they ____.	both initially generates alternating voltages	both rectify the voltage before delivery	both operate at 60 cycles	both supply three-phase power
4184	The frequency output of an operating alternator is controlled by the ____.	strength of the magnets used	number of turns of wire in the armature coil	relative speed of the rotor poles	output voltage
4185	The cycle per second developed by the alternator aboard your vessel is determined by ____.	the adjustment made to the voltage regulator	the resistance applied to the field rheostat	the synchronous speed of induction	the speed of the engine driving the alternator
4186	The KW is evenly distributed between two alternators just placed in parallel by adjusting ____.	the engine governor settings	the rotor field excitation	a balance coil	a interpole field rheostat
4187	If the excitation of an alternator operating in parallel is decreased below normal, its ____.	ampere load will be greatly increased	power factor will change in the leading direction	power factor will change in the lagging direction	kilowatt load will be greatly decreased
4188	The most common source of excitation for synchronous motors is a /an_____.	AC supply	Low voltage battery	Motor alternator set	DC exciter generator

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4189	In process control terminology values which can change without distinct increments such as temperature pressure or level are called_____.	Bumpless values	Analog values	Digital values	Binary values
4190	The apparent power in a purely inductive circuit is also known as_____.	True power	Lead power	Induced power	Reactive power
4191	What is the maximum allowable primary current of a 2KVA step-down transformer with a four to one turns ratio if connected across a 440 volt line?	27.7 amps	18.1 amps	4.5 amps	1.1 amps
4192	A saturable-core reactor operates on the principle of controlling a load windings inductance by varying the core s_____.	dielectric	reactance	inductance	permeability
4193	Which of the following types of DC motors has its field connected in parallel with its armature?	Shunt	Counter EMF	Salient pole	Series
4194	Basic electrical motor action depends on_____.	The relative force of the commutator and community poles	A conductor rotated within a magnetic field	The relative force of the armature and interpoles	A current carrying conductor placed in a magnetic field
4195	As load is added to a shunt motor the motor will_____.	Speed up	Slow down slightly	Continue to operate at the same speed	Speed up slightly
4196	Why are electric cables are composed of stranded wire?	To increase the current carrying capability for a given size wire	To assure good conductivity at junction points	To increase their flexibility	To decrease the weight for a given size wire
4197	One function of the movable cams in a drum-type motor controller is to_____.	regulate the speed of the motor	maintain resistance contacts in clean condition	insulate the operating handle	limit the amount of load put on the motor
4198	The ideal in-service temperature of a running electric motor bearing is_____.	45-60 degrees centigrade	15-30 degrees centigrade	30-45 degrees centigrade	10-15 degrees centigrade
4199	Fresh grease is introduced into an electric motor ball bearing through a_____.	Grease cup	Grease nipple	Grease can	Grease gun
4200	What is the worst enemy of an idle electric motor aboard ship?	Temperature variations	Rotor stucked by salty environment	Moisture in the insulation	Insulation varnish flaking

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4201	The ideal frequency of an incoming generator synchroscope pointer for closing the ACB is_____.	Slightly higher than bus frequency	Lower than the bus frequency	10 percent higher than bus frequency	20 percent higher than bus frequency
4202	When the feeder system has no ground fault what does the pointer of the insulation resistance indicator show?	Zero ohm resistance	100 ohm resistance	500 ohm resistance	Infinity ohm
4203	When the non-essential load has been removed from the feeder system but the service generator remains overloaded this device automatically activates the_____.	ACB trip device	Overcurrent tripping device	Time delay trip device	Preferential tripping device
4204	The RMS value of a sine-wave current may also be expressed as the_____.	instantaneous value	maximum value	effective value	average value
4205	From the following choices what is the total power used up in series circuit?	Never more than the power used in the largest load	The sum of the powers used in each load	Always less than the power used in the smallest load	The sum of the power factor used in each load (resistor) divided by the number of loads
4206	The unit of apparent power in a purely inductive circuit is called_____.	VAR	KVA	EMF	WATT
4207	Armature cores in a DC generator are made of laminated steel sheets to_____.	Allow for easy assembly	reduce eddy current losses	Increase the hysteresis effect	Fit the curvature of the fame
4208	What would happen if there is insufficient brush pressure on a DC motor?	Excess residual magnetism	Water vapor absorption	Sparking of the brushes	Generator overload
4209	Direct current produced from generator windings is converted from alternating current by which of the following components?	Exciter and armature	Rotor and interpoles	Transformer and rectifier	Commutator and brushes
4210	What do you call the process of reversing the current through individual armature coils and then conducting the direct current to the external circuit during the brief interval of time each commutator segment is passing under a brush?	Commutation	Slip	Armature reaction	Dynamic excitation

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4211	Ammeters and voltmeters used in sinusoidal AC power systems indicate which of the following values?	Peak value	Average value	Maximum value	Root-mean-square value
4212	A component generator has a no-load voltage of 250 volts and a full-load voltage of 220 volts and therefore is considered to be_____.	Over compound	Flat compound	Under compound	Terminal compound
4213	Which solid AWG wire size has the smallest physical cross-sectional area?	16	12	14	18
4214	An across-the-line starter is typically used for which of the following applications?	Full-voltage starting of motors	Reduced current starting of large motors	Low torque starting of small motors	Low resistance starting of DC motor
4215	A variable shunt connected across the series field coils of a DC compound wound generator to permit a adjustment of the degree of compounding is called_____.	Converter	Rheostat	Diverter	Divider
4216	In a series circuit which value will remain unchanged at all places in the circuit?	Resistance	Inductance	Voltage	Current
4217	One feature of the operational amplifier is that it can have_____.	binary coded decimal outputs	up to ten outputs	binary coded decimal inputs	inverting and non-inverting inputs
4218	Universal motors will operate on AC or DC current and are generally found in_____.	portable pools	large pump motors	turbo-electric main motors	forced draft fans
4219	What is the most practical method of controlling the RPM of a step-speed AC motor?	Change input voltage	Change the number of brushes	Vary the power factor	Vary the number of poles
4220	What determines the speed of a squirrel-cage induction motor?	Diameter of the stator	Rotor conducting bars resistance	Number of stator poles	Rotor winding resistance
4221	Electrostatic forces in the high voltage circuits cause indicating instruments to give _____.	highly accurate readings	parallax readings	highly intuitive readings	inaccurate readings
4222	The rated temperature rise of an electric motor is the _____.	temperature rise above ambient temperature at	average temperature at any given latitude	permissible difference in the ambient temperature of	temperature rise to resistance above 10

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		rated load		the motor due to existing weather conditions	overload
4223	For the sake of economical operation the dual electro-hydraulic steering unit should be operated with _____.	both pumps on line at the same time	only when the rudder is moved amidship	one pump on standby	follow-up gear disconnected
4224	The part of a fuse that melts and opens the circuit is made of _____.	Steel and babbit	Aluminum or berryllium alloy	Copper and antimony	Zinc or an alloy of tin and lead
4225	Why is it a poor practice to use a high wattage soldering iron when soldering or desoldering components on a printed circuit board?	The circuit board will blister and warp	The solder is kept to a dull heat dissipating finish	The foil wire bonded to the board may come loosened from the board	The circuit board has a low melting temperature
4226	The timer element found in a reverse power relay obtains its operating torque via _____.	Electromagnets	Line voltage	The main bus	A separate battery source
4227	On a switchboard if all these round detection lamps remain burning at half intensity when the test buttons depressed which of the listed condition is indicated?	The current transformers are shorted	All these phases are grounded	The test switch is grounded	No grounds exist
4228	What is the function of the interpoles installed in DC motors?	To limit the starting surge current	To limit the production of counter-electromotive force	To provide sparkles commutation without having to shift brushes	To provide greater torque by strengthening the main field
4229	The freezing point of electrolyte in a fully charged lead-acid battery will be _____.	The same as in a discharged battery	Higher than in a discharged battery	Higher than in a discharged battery but the specific gravity will be less	Lower than in a discharged battery
4230	When charging lead-acid batteries you should reduce the charging rate as the battery nears its full charge capacity to _____.	Prevent excessive gassing or over heating	Allow equalization of cell voltages	Apply the tape in one non-overlapping layer only	Heat the tape with a soldering iron for good bonding
4231	The insulation resistance of electric equipment and machinery should be tested for lowest normal insulation valves _____.	Every time the brush rigging is adjusted	Immediately after shutting down of the machine	Every 30 days whether the machine is in use or not	Immediately after starting up the machine

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4232	A grounded switch or cable will be indicated by a mega ohmmeter reading of _____.	Being unsteady in the high range	Zero	Being unsteady in the low range	Infinity
4233	Which of the following devices should be used to measure the temperature of a battery electrolyte ?	Mercury thermometer	Thermocouple pyrometer	potentionmeter	Alcohol thermometer
4234	To determine if a starter coil is grounded you should use a/an _____.	Megger	Ammeter	Ground detection lamp	Magnet
4235	The charging of lead-acid storage battery will always result in _____.	The danger of lead poisoning	Dangerous acid burns	All of these choices	A dangerously explosive gas being liberated
4236	Violent gassing from a lead-acid battery while it is being charged indicates that the _____.	Electrolyte specific gravity is low	Charging rate is too high	Battery compartment ventilation is inadequate	Plate separators are grounded
4237	Which of the listed forms of water should be added to a lead-acid battery?	Saltwater	Brackish water	Distilled water	Light water
4238	A megohmeter is connected to each end of an individual motor winding. A low ohm reading indicates _____.	Good continuity	An open coil	A loose coil	A dirty coil
4239	What device is a low voltage circuit protective device that automatically opens (trips) in case of malfunction in the system?	Over current relay	No fuse circuit breaker	Overload relay	Thermal relay
4240	MCCB-type circuit breakers are called	Mechanical contact circuit breaker	Monoblock-case circuit breaker	Mounted-case circuit breaker	Molded-case circuit breaker
4241	In a cartridge type fuse the metal element is contained in _____.	Porcelain case	Fiber tube	Thermal case	Flash cube
4242	A tubular fuse should always be removed from a fuse holder with _____.	Fuse puller	Screw driver	Two insulated pliers	Electrician s plier
4243	Circuits are protected from overheating by means of a/an _____	Diode	Amplifier	Transformer	Circuit breaker

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4244	A ground can be defined as an electrical connection between the wiring of a motor and its _____.	Shunt field	Interpoles	Metal framework	Circuit breaker
4245	In a three-phase electrical system three ground detecting lamps are provided. One lamp goes dark and the others increase in brightness. When the test button is pushed all lamps have equal illumination. You should conclude that _____.	The dark lamp must be replaced	There is a ground on the line with the dark lamp	There are grounds on the lines with the bright lamps	All of these choices
4246	The ground indicating light on the main electrical switchboard is indicating a ground. The best procedure for locating grounded circuit is to _____.	Open the circuit breakers on the distribution panel one at a time until the light no longer indicate a ground	Trace the circuit paths while looking for burned spots	Check circuit resistance with a megohmmeter	Check all circuits for continuity
4247	In order to increase its range of measurement a resistance would be placed in series with which of the following instruments?	DC ammeter	Frequency meter	Power factor meter	DC voltmeter
4248	Electric strip heaters are used in motor controllers to _____.	Keep the components at their design ambient temperature	Prevent freezing of movable contacts	Prevent condensation of moisture	Minimize resistance in internal circuits
4249	Reversing the current flow through a coil will _____.	Reduce the amount of flux produced	Reverse its two-pole field	Reduce the power consumed	Have no effect on the eddy currents produced
4250	Voltage generated by most AC generators is fed from machine to the bus by means of _____.	Direct connections from the starter	Brushes on a commutator	Brushes on slip rings	Slip rings on a commutator
4251	A hydrometer indicates specific gravity by comparing the _____.	Differences in weight between water and the liquid measured	Density of a substance in water with the density of the same substance in air	Buoyancy of an object in water with the buoyancy of the same object in the liquid being measured	Mass of substance measured with the density of the same substance
4252	Line losses in a distribution circuit are	Increasing the number of	Adding a rubber insulation	Using higher current and	Using higher voltage and

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	kept to a minimum by _____.	thermal relays in the circuit	conductors to the circuit	lower voltage	lower current
4253	When a console indicating lamp burns out attempts to renew it should not be made while maneuvering because _____.	Removing a faulty lamp may cause an alarm to sound on the bridge	A socket/wiring fault may cause a vital function to shut down	A new lamp may have higher wattage and may cause heat damage to the lens	Attention should be paid on engine orders
4254	To test fuses in an unenergized circuit you should use a _____.	Voltmeter	Megger	Ampere meter	Resistance meter
4255	A fuse will blow if _____.	Unequal resistance was introduced to the circuit	The flow of current is reversed	A load is suddenly removed from the circuit	The current exceeds the rated value of the fuse
4256	A fuse will blow as per below EXCEPT _____.	Excessive vibration	Low resistance in the fuse	Loose fuse clips	Extremely hot temperature
4257	If a fuse of correct size and type blows frequently look for _____.	Next higher fuse rating	Next lower ampere rating	Trouble in the circuit	Reduce the applied voltage by 10%
4258	Using a fuse whose rating is higher than necessary _____.	Reduce the possibility of fuse getting blown	Waste money because they are more expensive	Increase the efficiency of the apparatus	Endangers the apparatus it is supposed to protect
4259	A megohmmeter can be used to test for _____.	An open field coil	Speed of the motor	Insulation varnish condition	Reversed polarity
4260	Grease coatings on electrical contact surfaces increase contact resistance and should be removed with a/an _____.	Compressed air jet	Small wire brush	Clean dry cloth	10% solution of carbon solvent and water
4261	A lead-acid battery may become hotter than normal during a charge if the _____.	Battery room door is secured	Charging voltage is too low	Specific gravity is too high	Battery has a shorted cell
4262	Prior to using an analog type ohmmeter the leads are purposely shorted together. Which of the following actions should be taken if when adjusting to zero ohms the indicating needle cannot be returned to zero on the scale?	The lead clips should be replaced	The batteries should be replaced	The test reading should be subtracted from each final reading	The test reading should be added to each final reading
4263	Time delayed or delayed action fuses are designed	Permit momentary	Prevent grounds in branch	Prevent an open in motor circuit	Guard lighting and electric

	to _____.	overloads without melting	circuits		circuits
4264	An insulation resistance is performed on a particular piece of electric equipment. In addition to resistance readings what information listed below should be entered in the electrical log?	The complete name plate data from the resistance test instrument used to obtain the reading	The maximum allowable operating temperature of the machines	The normal temperature rise of the machine	The temperature of the machine at the time the resistance reading was taken
4265	An adjustable resistor whose resistance can be changed without opening the circuit in which it is connected is called a _____.	Variable shunt ship	Bridge	Rheostat	Bleeder resistor
4266	Magnetic controller contacts may become welded together curing operation due to _____.	An open coil	Low contact pressure	Excessive magnetic gap	Excessive ambient temperature
4267	A DC ammeter is always connected _____.	In series with a circuit	With internal shunts only	In parallel with a circuit	Without regard to polarity
4268	To avoid damage in pulling out a defective PC board connector inside the group starter panel circuit board it should be kept at _____.	None of these choices	Parallel with the circuit board	An angle with the circuit board	In line with the circuit board
4269	In a cartridge-type fuse the metal element is contained in a _____.	Thermal cut-out	Porcelain window	Fiber tube	Flasher device
4270	When using an ohmmeter to test a semiconductor diode you find a low resistance in both forward and reverse bias direction. This indicates that the diode is _____.	Good resistive quality	Good capacitive quality	Open	Short
4271	Which of the listed conditons describes the effect on intrinsic semiconductor operation as a result of a temperature increase?	Conductivity will increase	Additional heat sink will be required	Conductivity will decrease	Resistivity will increase
4272	In electronic industry the abbreviation PCB commonly means _____.	Pulse coded board	Positive conduction board	Printed circuit board	Polysaturated braid

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4273	If two alternators are operating in parallel with a load greater that either one is capable of carrying one of them has to be cut out. What should you do?	increase the voltage of the machine that is stay on the line	eliminate some branch circuit to reduce the load	speed up the machine that is to stay on the line	increase excitation
4274	What does the output voltage of a three-phase alternator regulates ?	AC voltage to the armature	AC voltage to the field	DC voltage to the armature	DC voltage to the field
4275	Fuse elements are made of zinc or any alloy of tin and lead. What must be the melting point of the fuse element?	lower than that of copper	higher than that of copper	equal to that of copper	reached when the conductor it is protecting becomes white hot
4276	Which of the following statement is true concerning all three-phase alternators?	The three phases always provide power to the load through three sets of slip rings and brushes	Each has three separate but identical armature windings acted on by one system of rotating magnets	All three-phase alternators are designed to operate with a 0.8 leading power factor	Each has one armature winding acted on by three identical but separate systems of rotating magnets
4277	How can a local action in the nickel-cadmium battery is being offset?	by separating the positive and negative plates with resin impregnated spacers	by adding a small amount of lithium hydroxide to the electrolyte	by trickle charging	by separating the positive and negative plates with plastic spacers
4278	Hysteresis in a direct current generator is indicated by_____.	Arcing at the brushes	Pulsating terminal current	Hunting and over	Heating of the armature core
4279	What is the phase angle of a six-pole, three-phase, rotating field generator?	120 degress	180 degrees	360 degrees	60 degrees
4280	What will happen if the excitation is increased to one of two alternators operating in parallel?	Power factor will change in the leading direction	Power factor will change in the lagging direction	Ampere load will be greatly decreased	Kilowatt load will be greatly increased
4281	Which switch to press in order to activate the three earth lamps in testing the feeder system for grounding?	micro switch	governor switch	push button switch	change-over switch
4282	What is the function of damper windings in a synchronous motor?	Increases efficiency	Provides excitation	Eliminates slippage	Provides starting torque
4283	How should you usually adjust the power factors at which a parallel AC generator is operating?	by using a field excitation	by using a prime mover speed		by using a connected load

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4284	What automatic power devices maintains equal power factors on parallel AC generators?	governor control switch	voltage regulator	reverse power relay	reverse current relay
4285	How can you start a full voltage, low horsepower, polyphase induction motors?	using auto transformer starters	using primary-resistor starters	using compensator starters	using across-the-line-starters
4286	In a cartridge fuse, point-out where the fuse metal is contained in a_____?	porcelain window	thermal cut out	flasher device	fiber tube
4287	What is the purpose of squirrel cage windings in a synchronous motor?	It provides a means of starting	it eliminates arcing between the stator and the frame	it produces a higher power factor	it makes balancing more precise
4288	How can the resistance value of a resistor in a circuit can be best determined?	Single solid body color of the resistor	Band markings on the resistor	Physical size of the resistor	Amperage value written on the resistor
4289	Heating of conductors as a result of resistance in a distribution circuit causes a power loss is demonstrate as___	IR drop	Hysteresis	line loss	line drop
4290	What do you call a signal derived from a controlled function and returned to the initiating point?	Reverse signal	Feedback signal	Monitoring signal	Inverse signal
4291	The rotor slots of a repulsion-type motor are generally skewed (placed none parallel to the rotor axis) to _____.	produce a constant starting torque	permit a greater air gap with the starter	permit a smaller air gap with the starte	reduce eddy current losses
4292	Shading coils are installed on AC full-voltage starters to_____.	dissipate opening contact arcs	protect the motor windings from momentary starting current overload	delay current build up in the holding coil	eliminate contact chatter
4293	When a megohmmeter is used to test insulation, the gradual rise of the point reading as a result of continued cranking is caused by_____.	The leakage of current along the surface of dirty insulation	The inductive reactance of the windings	The dielectric absorption effect of the insulation	Good conductor resistance
4294	Which of the following components are used to convert alternating current produced in the generator windings to direct current?	Rotor and interpoles	Commutator and brushes	Armature and equalizer	Field and exciter

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4295	From the following choices which is the synchronous speed of an induction motor?	Speed of which the rotor turns	Frequency of the rotor current	Slip in percent of rotor RPM	Speed of the rotating field
4296	In a three-phase, open-delta connected transformer, the line current is equal to_____.	three times the phase current	the phase current	three times the phase current the sum of any two phase currents	the difference of any two phase currents
4297	In a 440 volt and 220 volt or 100 volt feeder panel, what do you call a component that monitor the wiring condition of the feeder?	Earth lamp	Shorting monitor	Grounding monitor	Insulation resistance monitor
4298	Which of the following is NOT considered part of an electric motor?	Valve	Coil	Stator	Rotor
4299	Which of the spaces listed is defined as a location requiring an exceptional degree of protection when considering the installation of shipboard electrical equipment?	accommodation space	Machinery space	Chart room	Console room
4300	In the flow of cycle of single AC current past any given point in a circuit, the maximum current peak occurs_____.	3 times	1 time	2 times	4 times
4301	What is the functions of a shading coil in an AC magnetic controller?	Produce more noise and vibration	Eliminate arcing when the contacts close	Prevent flux build-up in the operating coil	Reduce vibration and noise in the contactor
4302	What do you call these values which can change continuously, such as temperature, pressure, or level?	Analog	Binary	Digital	Bumpless
4303	In a throttle control system, the auxiliary control circuits are provided with devices to prevent excessive overtravel of the pilot valve by the motor these devices called_____.	proximity switches	overtravel relays	overlap sensors	limit switches
4304	The main difference between a circuit containing low voltage protection and low voltage release is that the	Thermal overload protection	A momentary contact start button	Normally open line contacts	A magnetic operating coil

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	former contains_____.				
4305	The RMS of a sine-wave current may also be expressed as the_____ values	instantaneous	average	effective	maximum
4306	The opposition offered to the establishment of magnetic lines of force in a magnetic circuit_____.	reluctance	resistance	impedance	Inductance
4307	Which of the following statements is true concerning the operating characteristics of a squirrel-cage motor?	A decrease in rotor speed results in less generated current	A decrease in rotor speed produces a weaker magnetic field	Rotor slip is dependent upon the motor load	An increase in motor load results in less slip
4308	Magnet chatter or pumping occuring in a magnetic contactor can be caused by_____.	magnetic lock out of the contacts	mechanical interference in the contacts	dirt or grease on pole faces	chattering contacts on the control relay
4309	Which of the following could be lamina-proximately the thickness of laminations of a D.C. machine?	5m	0.05 mm	0.005 mm	0.5 m
4310	Out of the following which is not a poor conductor?	Cast iron	Copper	Carbon	Tungsten
4311	The property of a conductor due to which it passes current is called	conductance	resistance	inductance	reluctance
4312	With rise in temperature the resistance of semi conductors	increases	decreases	first increases and then decreases	remains constant
4313	An instrument which detects electric current is known as	rheostat	voltmeter	galvanometer	wattmeter
4314	Two resistors are said to be connected in series when	both carry the same value of current	same current passes in turn through both	sum of IR drops equals the applied e.m.f.	total current equals the sum of branch currents
4315	Which of the following does not have negative temperature co-efficient?	Aluminium	Paper	Rubber	Mica
4316	The filament of an electric bulb is made of	aluminium	carbon	tungsten	nickel
4317	The insulation on a current carrying conductor is provided	to prevent leakage of current	both the other two factors	none of the choices	to prevent shock
4318	For testing appliances, the wattage of test lamp should be	low	very low	any value	high
4319	A substance whose molecules consist of	compound	semi-conductor	super-conducto	insulator

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	dissimilar atoms is called				
4320	The ability of charged bodies to exert force on one another is attributed to the existence of	protons	electrons	electric field	neutrons
4321	For making a capacitor, it is better to select a dielectric having	permittivity slightly more than that of air	high permittivity	permittivity same as that of air	low permittivity
4322	A dielectric capacitor can be used for	both are not	both D.C. and A.C.	A.C. only	D.C. only
4323	Which of the following materials has the highest value of dielectric constant	Ceramics	Glass	Vacuum	Oil
4324	In the case of a lossy capacitor, its series equivalent resistance value will be	small	large	zero	very small
4325	Which of the following capacitors is marked for polarity?	Paper	Mica	Air	Electrolytic
4326	The unit of magnetic flux is	ampere / metre	weber	ampereturn / weber	henry
4327	Permanent magnets are normally made of	wrought iron	alnico alloys	aluminium	cast iron
4328	Conductivity is analogous to	Permeability	retentivity	resistivity	inductance
4329	If the area of hysteresis loop of a material is large, the hysteresis loss in this material will be	none of the choices	zero	large	small
4330	Conductance is analogous to	reluctance	inductance	flux	permeance
4331	No-load on a transformer is carried out to determine	copper loss	magnetising current	magnetising current and loss	efficiency of the transformer
4332	Which of the following is not a part of transformer installation?	Breather	Buchholz relay	Exciter	Conservator
4333	A transformer transforms	voltage	frequency	current	Power
4334	A common method of cooling a power transformer is	air blast cooling	natural air cooling	oil cooling	any of the choices
4335	The power transformer is a constant	main flux device	voltage device	current device	power device
4336	In a transformer the tappings are generally provided on	high volatge side	low voltage side	primary side	secondary side
4337	For open control system which of the following statements is incorrect ?	Errors are caused by disturbances	Less expensive	Construction is simple and maintenance easy	Recalibration is not required for maintaining the requiredquality

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					of the output
4338	A control system in which the control action is somehow dependent on the output is known as	None of the above	Semiclosed loop system	Closed loop system	Open system
4339	In open loop system	the control action depends on the input signal	the control action depends on system variables	the control action depends on the size of the system	the control action is independent of the output
4340	The initial response when tne output is not equal to input is called	Either of the above	Dynamic response	Transient response	Error response
4341	An automatic toaster is a _____ loop control system.	open	closed	partially closed	any of the above
4342	Which of the following devices are commonly used as error detectors in instruments ?	Resolvers	Vernistats	Any of the above	Microsyns
4343	As a result of introduction of negative feedback which of the following will not decrease ?	Instability	Distortion	Band width	Overall gain
4344	A control system with excessive noise, is likely to suffer from	oscillations	vibrations	loss of gain	saturation in amplifying stages
4345	In a stable control system backlash can cause which of the following ?	Low-level oscillations	Underdamping	Overdamping	Poor stability at reduced values of open loop gain
4346	In a control system the output of the controller is given to	sensor	comparator	amplifier	final control element
4347	The capacitance, in force-current analogy, is analogous to	displacement	mass	velocity	momentum
4348	The temperature, under thermal and electrical system analogy, is considered analogous to	charge	capacitance	voltage	current
4349	In thermal-electrical analogy charge is considered analogous to:	heat flow	reciprocal of temperature	reciprocal of heat flow	temperature
4350	The property of coil by which a counter e.m.f. is induced in it when the current through the coil changes is known as	series aiding inductance	capacitance	self-inductance	mutual inductance
4351	Which of the following circuit element stores energy in the	Inductance	Condenser	Variable resistor	Resistance

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	electromagnetic field ?				
4352	The inductance of a coil will increase under all the following conditions except:	when more area for each turn is provided	when permeability of the core increases	when the number of turns of the coil increase	when more length for the same number of turns is provided
4353	Higher the self-inductance of a coil,	greater the flux produced by it	lesser its weber-turns	longer the delay in establishing steady current through it	lower the e.m.f. induced
4354	In an iron cored coil the iron core is removed so that the coil becomes an air cored coil. The inductance of the coil will	initially increase and then decrease	decrease	remains the same	increase
4355	An open coil has	infinite resistance and normal inductance	zero resistance and high inductance	infinite resistance and zero inductance	zero resistance and inductance
4356	Both the number of turns and the core length of an inductive coil are doubled. Its self-inductance will be	doubled	halved	unaffected	tripled
4357	The magnitude of the induced e.m.f. in a conductor depends on the	flux density of the magnetic field	amount of flux cut	amount of flux linkages	rate of change of flux linkages
4358	A laminated iron core has reduced eddy-current losses because	the laminations are stacked vertfcally	the magnetic flux is concentrated in the air gap of the core	the laminations are insulated from each other	more wire can be used with less D.C. resistance in coil
4359	The law that the induced e.m.f. and current always oppose the cause producing them is due to	Faraday	Coulomb	Lenz	Newton
4360	Which of the following is not a unit of inductance ?	Volt second per ampere	Henry	Ampere second per Volt	Coulomb/volt ampere
4361	Which of the following circuit elements will oppose the change in circuit current ?	Inductance	Resistance	Capacitance	All of the choices
4362	Which of the following is unit of inductance ?	Ohms	ampereturn / weber	Webers / Meter	Henry
4363	The co-efficient of coupling between two air core coils depends on	self-capacitance of two coils only	mutual inductance and self inductance of two coils	self-inductance of two coils only	mutual inductance between two coils only
4364	Which of the following inductor will have the least eddy current losses ?	Air Core	Laminated iron core	Iron core	Aired Iron core
4365	Which circuit element(s)	Inductance and	Resistance only	Inductance only	Capacitance

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	will oppose the change in circuit current ?	capacitance			only

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