



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.

These questions have been reviewed and validated by our Board of Examiners.

You may access these guide questionnaires with your smart gadgets anywhere and anytime at your convenience. Please consider the environment before printing.

Thank you.

**A Publication of the MARINA STCW Office**

# MANAGEMENT ENGINE

Nr	Questions	Choice1	Choice2	Choice3	Choice4
1	Which of the following terms represents the form of heat removed from the refrigerant in the condenser of a refrigeration system?	Thermodynamics	Vaporization	Vaporization and compression	Latent heat of vaporization, Heat of compression, Superheat
2	Heat which brings about a change in the physical state of a substance without a change in temperature, is called ____.	ambient heat	sensible heat	latent heat	specific heat
3	The degree to which the viscosity of an oil will change with a change in temperature is indicated by the ____.	thermal change value	pour point	viscosity index	weight designation
4	Latent heat can be defined as the heat which must be added to a substance in order to change its ____.	physical state	temperature	volume	pressure
5	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.	First Law of Thermodynamics	Kinetic energy	Heat	Potential energy
6	Heat may be transferred by ____.	transmission, conduction, and convection	conduction, convection, and radiation	transmission, conduction, and convection	transmission, conduction, and radiation
7	The principle which states that "energy cannot be created nor be destroyed", is known as the law of ____.	conservation of energy	impulse and momentum	action and reaction	Dalton's law
8	The purpose of end clearance on a diesel engine piston ring is to ____.	allow the combustion gases to press the ring down on the land	allow the combustion gases to get behind the ring and press it against the cylinder liner	prevent buckling and breaking of the ring as it expands	aid in protecting the oil film

# MANAGEMENT ENGINE

9	An impulse-reaction turbine is characterized by which of the following arrangements?	Reaction blading followed by impulse diaphragms.	Stationary nozzles with impulse blading stages.	Reaction stages followed by velocity-compounded blading.	Velocity-compounded stages followed by reaction blading.
10	An increase in clearance between reaction blade tips and the turbine casing will result to _____.	increase in rotor vibration	an increase in rotor thrust load	a decrease in rotor torque	an increase pressure drop across the blades
11	Which of the following terms represents the form of heat removed from the refrigerant in the condenser of a refrigeration system?	Latent heat of vaporization, Heat of compression, Superheat	Vaporization	Vaporization and compression	Thermodynamics
12	Heat which brings about a change in the physical state of a substance without a change in temperature, is called ____.	sensible heat	specific heat	latent heat	ambient heat
13	The degree to which the viscosity of an oil will change with a change in temperature is indicated by the_____.	thermal change value	viscosity index	pour point	weight designation
14	Latent heat can be defined as the heat which must be added to a substance in order to change its_____.	pressure	physical state	temperature	volume
15	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.	Potential energy	Kinetic energy	First Law of Thermodynamics	Heat
16	Heat may be transferred by _____.	conduction, convection, and radiation	transmission, conduction, and convection	transmission, conduction, and radiation	transmission, conduction, and convection
17	The principle which states that "energy cannot be created nor be destroyed", is known as the law of _____.	Dalton's law	conservation of energy	impulse and momentum	action and reaction

# MANAGEMENT ENGINE

18	The purpose of end clearance on a diesel engine piston ring is to _____.	allow the combustion gases to press the ring down on the land	aid in protecting the oil film	prevent buckling and breaking of the ring as it expands	allow the combustion gases to get behind the ring and press it against the cylinder liner
19	An impulse-reaction turbine is characterized by which of the following arrangements?	Reaction stages followed by velocity-compounded blading.	Velocity-compounded stages followed by reaction blading.	Reaction blading followed by impulse diaphragms.	Stationary nozzles with impulse blading stages.
20	An increase in clearance between reaction blade tips and the turbine casing will result to _____.	an increase pressure drop across the blades	increase in rotor vibration	an increase in rotor thrust load	a decrease in rotor torque
21	What is carried out whenever any repairs or renewals are made which could materially affect the safety and condition of the ship?	Investigations	Inspections	Surveys	Audit and inspection
22	Classification society ship surveyors perform which of the following surveys?	Ships registration surveys	Enforcement of ship safety standards	Examines accident damage	Surveys of foreign-going ships and local craft
23	How long is the survey cycle for all CMS items?	Every five years	Once every two years	Once every four years	Once a year
24	What kind of survey is to be carried out after the vessel had been delivered to an owner?	Special survey	Intermediate survey	Confirmatory Survey	Annual survey
25	In reference to air conditioning, when air attains the maximum amount of moisture it can hold at a specific temperature, it is said to be _____.	superheated	saturated	condensed	convected
26	Which of the following problems may be encountered when using an oil having a viscosity higher than that specified for an operating a hydraulic system?	Hydraulic film breakdown	Increased power consumption	Hunting due to fast response	External leakage
27	The unbalanced force, which is directed toward the center of the circular path is called _____.	Centripetal Force	Torque	Centrifugal Force	Force

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

28	As steam accomplishes work in an engine or turbine, the pressure of the steam is reduced because it _____.	becomes saturated again	diminishes in volume	expands in volume	becomes superheated again
29	Which of the listed operational checks should be continuously made on the main propulsion reduction gears?	Check radial bearing wear	Check lube oil bearing temperatures	Inspect alignment between gears and turbine	Check teeth for pitting and scuffing
30	In the distribution of heat balance in a four-stroke diesel engine, which of the following has the least part?	Radiation	Cooling Water	Indicated Power	Exhaust Gases
31	What could cause a failure of the fuel oil service pump to maintain fuel oil flow to the burner?	High relief valve setting	Excessive return line oil pressure	Excessive fuel pump speed	Dirty fuel oil strainers
32	In running on fuel with bad ignition quality and long ignition delay, what is the best method to reduce this delay?	Increase Jacket-cooling Temperature	Increase scavenging Temperature	Increase Engine Load	Lower Scavenging Temperature
33	What is the best way to recondition a defective fuel injector?	Lap the needle to its seat with metal polish	Overhaul and clean each parts	Send to the nearest authorized repair provider	Overhaul, clean and lap with grinding compound
34	Which of the following clearance readings should be taken and recorded in drydock?	The clearances between the propeller blade tips and the hull	The rudder bearing clearances	The clearances between the propeller hub and the fair water cone	The clearances between the stern tube packing gland and the retaining ring
35	When the tailshaft is drawn from a vessel in drydock, which of the following inspections listed below is required to be carried out?	The propeller hub taper and shaft keyway should be inspected for cracks or corrosion	The shaft liner should be removed and inspected for cracks	The interior of the stern tube should be inspected for leaks	The stern bearing alignment with the stern frame should be checked
36	After a long period of operation, a wear ridge, caused by piston ring action, will develop near the top of the cylinder liner. Why is it necessary to removed this ridge when piston rings are renewed?	To prevent excessive wear during the seating period	To prevent excessive lubrication of the top ring	To prevent improper spreading of lubrication on the cylinder wall	To prevent breaking of the top ring, ring land, or both

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

37	What is the maximum time interval for hydrostatically testing boilers on a cargo vessel having water-tube boilers as required by regulation?	8 years	2 years	5 years	1 year
38	The studs and bolts on marine boiler mountings must be removed for examination at least every _____.	10 years	3 years	5 years	4 years
39	Which of the following item is NOT being checked by the surveyor during the Annual Survey of the Planned Maintenance System?	Whether the Chief Engineer is familiar with the system	Previous training of the Chief Engineer regarding Planned Maintenance System	All jobs had been carried out at their due dates, and no overdue jobs are present	Function test and random check of the system
40	What is the survey cycle of all the CMS items?	Five years	Two years	Annually	Four years
41	When reconditioning fuel injector nozzle, the needle and its seat should _____.	be lapped	not be lapped	be ground	be replaced
42	Which of the following equipment is covered by CMS?	Boiler water separator and pump	Propellers and propeller shaft	Boiler	Cooling water pumps
43	Which of the following items of machinery can be surveyed by the Chief Engineer?	Fuel injection pumps and fuel booster pumps	Manoeuvring valves and bulkhead stop valves	Boiler fuel oil heaters	Steam pipes
44	During the CMS, when any defect or damage is found, similar machinery or equipment are required to be opened and repaired to the satisfaction of whom?	Chief engineer	Surveyor	Marine superintendent	C. Owner
45	Who among the following surveyors is tasked to examine ship cargoes, investigate accident at sea and prepare accident reports for insurance purposes?	None of these choices	Government ship surveyors	Private ship surveyors	Classification society ship surveyor
46	What kind of survey is carried out by the Surveyor within one year from the date of approval for application of the PMS?	Continuous machinery survey	Classification survey	Initial survey	Annual survey

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

47	The steering gear and all working parts should be inspected and lubricated by engine room watch keepers. What will happen if this routine neglected?	Need more oil to operate	Accumulate dust and rust	Eventually seize and put the gear out of action	Continue to operate efficiently
48	Who has the access to update the maintenance documentation and the maintenance program on board ship?	Duty Engineer	Engine cadet	Second Engineer	Chief Engineer
49	What particular machinery item on main propulsion diesel engines is NOT to be surveyed by the Chief Engineer?	Crankshaft and bearing	Fuel injection pumps and fuel booster pumps.	Camshaft and camshaft drive.	Turbocharger.
50	Classification societies recognize survey performed by the Chief Engineer under which of the following conditions? I. Must have held that position for at least one year on ship with same type of propelling machinery. II. Must hold a valid license required for the machinery issued by respective authorities. III. Surveys done on pressureless service tanks which do not form part of all hull structure.	I, II and III	I and II	II only	I only
51	What are the areas usually covered during Safety Equipment Inspection? I. Firefighting and distress equipment II. Navigational equipment III. Details of required navigational lights and sound signals	I and II	II only	I only	I, II and III

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

52	On the following list, what is/are the important documentation that is/are included in the Planned Maintenance System? I. Maintenance documentation and history II. Reference documentation III. Signing instruction	I only	I, II and III	I and II	II only
53	What kind of the survey system which alleviates the problem caused by survey dates and interval between surveys that does not coincide?	Classification survey	Special survey	Harmonizing survey	Implementation survey
54	By what means the vessel can effectively be monitored of its sea worthiness by the classification society in order for classed continuity?	Audit and inspection	Investigations	Inspections	Surveys
55	Which of the following list of machinery cannot be surveyed by the Chief Engineer?	Intermediate shafts	Main engine fresh water and lubricating oil coolers	Forced or induced draught fans	Screwshafts
56	What survey ensures that the necessary repairs or renewals have been effectively made and that the ship is fit to proceed to sea without presenting an unreasonable threat of harm to safety or marine environment?	Intermediate survey	Periodical survey	Additional survey	Renewal survey
57	Which of the following is NOT included in the Planned Maintenance System documentation?	Inventory control	Maintenance objectives	Maintenance instructions	Maintenance time interval
58	When is the best time to give a boiler a bottom blow?	Just after taking it off the line	Just before placing it on the line	Just after placing it on the line	When the boiler pressure has dropped to zero

# MANAGEMENT ENGINE

59	A diesel engine fails to start due to excessive water in the fuel. Before the engine can be started, where could water be removed from?	Crank case pump	Lube oil filter	Fuel lines	Rocker arm reservoir
60	Which of the following is NOT part of the survey arrangement base on planned maintenance and therefore, excluded in the Continuous machinery Survey scheme?	Safety equipment	Automatic equipment	None of these	Machinery
61	What are the surveys performed by a government ship surveyor?	Examines accident damage	Make sure that ships components and machinery are built and maintained according to standards required for their class	Surveys of foreign-going ships and local craft	None of these choices
62	If a ship does not operate an approved PMS, who is responsible to arrange the attendance of a Surveyor on the first port?	Ship operator	Master of the vessel	Ship superintendent	None of these choices
63	Which of the listed substances is used as an absorbing agent in the shipboard dehydration of refrigeration system?	Ethylene glycol	Methyl	Sodium bromide	Silica gel
64	What other chemical test is conducted daily in a boiler water aside from the Alkalinity Test?	Nitrogen content test	Dissolve CO2 test	Soap hardness Test	Chloride content test
65	How many In-water Surveys (IWS) is being required by Classification Societies in each five-year survey cycle?	One	Two	Five	Three
66	What kind of maintenance system is adopted when records indicate that it is necessary and not at arbitrary chosen intervals?	Annual machinery audit	Planned Maintenance System	Reliability-centered maintenance	Condition-based maintenance
67	The oil separator trap is located between the/or	near accumulator	receiver and expansion valve	in between evaporator	condenser & receiver

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	_____.	drum			
68	On a diesel engine jacket cooling water system, the low pressure alarm should be set...	Slightly lower than normal pressure, with the pump working.	Slightly higher than the static system pressure, with the pump stopped.	Slightly lower than the static system pressure, with the pump stopped.	Exactly equal to the static system pressure, with the pump stopped.
69	What kind of survey is to be carried out at each anniversary after the vessel delivery?	Special survey	Annual survey	Intermediate survey	Initial survey
70	Which of the following items of machinery can be surveyed by the Chief Engineer?	Starting air pipes	Manoeuvring valves	Bulkhead stop valves	Reciprocating refrigerant compressors
71	Which admits air to the piston of a cylinder relay valves in a correct sequence for engine starting?	Starting Air Distributor	Starting Air Valve	Reversing Air Valve	Brake-Air Valve
72	Which of the following items of machinery can be surveyed by the Chief Engineer?	Sea connections	Starting air pipes	Brine pumps	Stern bearings
73	In an auxiliary diesel engine, after a major overhaul and survey, which of the following would the classification surveyor wish to check before returning it into service?	That all of the covers have been replaced.	That the over speed trip operates at the correct setting.	That the engine can be started and stopped from the control room.	That the lubricating oil charge has been renewed.
74	Which of the following listed construction details of internal combustion engines is required?	All engines shall be provided with an exhaust gas pressure monitoring system	The use of end block construction for engines development over 1000 brake horsepower	Removable cylinder liners must be used for engines developing over 1000 brake horsepower	A warning notice to caution against the opening of a hot crankcase for a specified period of time after shut down
75	What is the reason why replacement of piping for diesel engine high pressure fuel systems must be of the same length and diameter as the original piping?	To avoid unnecessary parts inventory	To maintain specified injection characteristics	To use existing supports and braces	To keep torsional vibration constant
76	What is the purpose of the expansion tank in a closed type jacket cooling water system of a diesel engine?	To increase the pressure of the jacket cooling	To have reserve cooling water	To maintain pressure in the system	To accommodate for an increase in water volume

# MANAGEMENT ENGINE

77	Why is it necessary to blow down a gage glass periodically?	To maintain the proper water level in the steam drum	To test the feedwater stop-check valve	To remove any sediment from the glass	To provide water samples for the second assistant
78	What is the purpose of the heater module in the jacket-cooling water system?	To keep the lube oil warm.	To keep the jacket-cooling water temperature high enough when the engine has stopped, to ensure a warm start up can be performed	To keep the jacket-cooling water temperature charge air cooler during low load operation.	To prevent freezing of jacket cooling water
79	What causes carbon to adhere to the inside surfaces of a fuel oil heater?	Deteriorated zinc strips	Too much carbon in the fuel	Excessive fuel oil temperature	Vanadium in the fuel
80	When should you blow down the boiler water gage glasses?	When you are in doubt about the water level	When the boiler water level changes in a steaming boiler	Every 12 hours of steady boiler steaming operation	Twice each day on the midnight and afternoon watches

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

81	An interlock in the remote operating valve line of air starting system, stops the valve opening in what condition?	When the engine turning gear is engaged	When the Clutch Lever is engaged	When shifting lever is engaged	When starting air valve is open
82	A boiler with a water capacity of 10 tons generates steam at the rate of 30 tons per hour. If the feedwater concentration of solids was initially 0.5 PPM and will increase at a rate of 1.5 ppm every hour what would be the increase in the feedwater concentration of solids after 24 hours?	48 ppm	12 ppm	36 ppm	24 ppm
83	A common gas dissolved in water contributing to the greatest amount of corrosion in a condensate system is _____.	hydrogen	nitrogen	carbon dioxide	carbon monoxide
84	A continuous blow is used to_____.	regulate the density or salinity of boiler water	permit air to escape while raising steam in a cold boiler	remove scum from the surface of boiler water	remove sludge from the bottom of the water drum

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

85	A marine inspector may require a boiler to be drilled or gaged to determine actual thickness ____.	at the first inspection for certification	to preclude nondestructive testing methods	at any time its safety is in doubt	when boiler drum thickness has decreased by 5%
86	Although accurate tests of boiler water for dissolved oxygen are difficult to obtain on board ship you can be fairly certain of proper oxygen removal by ____.	maintaining low boiler water pH	testing frequently for total dissolved solids	giving the boiler frequent surface blows	maintaining a normal level of scavenging agents
87	An accumulation test is performed on the boiler to determine the suitability of the safety valves and the set points _____. I. If the boiler normal operating pressure is permanently reduced II. When the steam generating capacity is increased	II only	Both I and II	I only	Neither I nor II
88	As the pH of the boiler water approaches zero the water becomes increasingly ____.	soft	acidic	neutral	alkaline

# MANAGEMENT ENGINE

89	Before commencing a surface blow the boiler_____.	water level should be lowered to the surface blow line	water level should be raised 2 to 3 inches (5 to 7.6 cm) above normal	water drum should be checked for sludge	should be cold
90	Before giving a boiler a bottom blow it should be taken off the line and then the_____.	water level initially raise above normal	boiler air cock should be cracked	water level initially lowered below normal	boiler steam pressure should be increased
91	Before giving a boiler a surface blow when underway at sea you should_____.	temporarily secure all burners on that boiler	lower the water level 2 to 3 inches below normal	increase forced draft air pressure to maximum	raise the water level 2 or 3 inches above normal
92	Boiler water hardness is increased by_____.	improper operation of the DC heater	scale forming salts in the feedwater	zero alkalinity in the water	dissolved gases in the water
93	Carbon dioxide dissolved in boiler water is dangerous in a modern power boiler because the gas_____.	combines with sulfates to cause severe waterside pitting	breaks the magnetic iron oxide film inside boiler tubes	combines with oxygen to cause severe waterside scaling	forms carbonic acid which attacks the watersides

# MANAGEMENT ENGINE

94	Dissolved oxygen entrained in the feedwater entering a boiler can cause_____.	acid corrosion	erosion	localized pitting	caustic embrittlement
95	Dissolved oxygen in the condensate can result from_____.	improper operation of the gland exhauster	steam leaks into the gland leakoff	vapor lock in the condensate pump	air leaks through the turbine glands
96	Excessive carbon dioxide formed by improper chemical treatment in the boiler may cause corrosion in the_____.	condensate lines	boiler desuperheater lines	superheater tubes	boiler tubes
97	Excessive priming in a propulsion boiler can cause severe damage to the_____.	main steam turbine	both B and C	neither A nor B	integral superheater
98	Failure to remove calcium and magnesium from feedwater before it reaches the boiler can result in tube_____.	sludging	erosion	pitting	scaling
99	Ferrous sulfate tends to go into solution in boiler water when the value of the hydrogen ion concentration increases. Consequently the water in a 60 bar boiler should be_____.	pure and treated to a pH value of 10.5 to 11.0	maintained at a pH value of 7.0	pure with zero pH value	pure and treated to a pH value of 4.0 to 4.5

# MANAGEMENT ENGINE

100	If a boiler is being steamed at a high firing rate what would be the result if blowing down a water wall header without taking any other precaution?	Erratic operation of the automatic feedwater regulating valve	Interruption of water circulation	Load imbalance between other boilers on the line	Excessive strain on boiler blowdown lines
101	Which of the following is a measure of amount of heat released during complete combustion of a unit mass of the fuel?	Pour point	Flash point	Viscosity	Calorific value
102	A block of mass 5kg. is lifted 2m in 3s. What is the work done?	103 J	150 J	30 J	98 J
103	A 2kg mass falls 4m. What is the potential energy lost?	78.5 J	80 J	79.5 J	75.5 J
104	A 10kg body moves with a velocity of 8 m/s. Find the kinetic energy?	78.5 J	80 J	75 J	10 J
105	If a pressure gauge registers 37 psi in a region where the parameter is 42.25 psig. Which of the following is the absolute pressure in Pa? (Note 1 psi = 6894.8 Pa)	51.25 Pa	98 Pa 250.9 Pa	353 Pa 358.5 Pa	98 Pa 250.9 Pa
106	Ferrous metals are metals containing_____.	a large percentage of iron	no iron	a large percentage of aluminum	a large percentage of copper

# MANAGEMENT ENGINE

107	What is the major source of chemical contaminants in hydraulic fluid?	Microscopic steel shavings	Abrasive waste	Oxidation by-products	Anti-oxidant compounds
108	The ratio of the weight of moisture contained in a given volume of air to the weight of moisture that the same would hold if saturated is called _____ humidity.	absolute	relative	total	specific
109	What is the device used to keep moisture from passing through the system?	Aerator	Trap	Humidifier	Dehydrator
110	Which of the following is the product of the destructive distillation of bituminous coal carried out at high temperature?	Alcohol	Coal tar and tar oil	Kerosene	Gasoline
111	Which of the following operations listed below will have a direct impact on the rate of wear in a cylinder liner?	Viscosity of the lube oil	Compression ratio of the piston	Amount of scavenge air to the cylinder	Quality of fuel injected
112	Treatment of materials that relieve the stresses and restore ductility without loss of hardness or toughness is called _____.	tempering	annealing	hardening	normalizing
113	What is the process of heating the material to a predetermined temperature and cooling it in still air out of the furnace?	Annealing	Hardening	Normalizing	Tempering

# MANAGEMENT ENGINE

114	What is the main criterion for fluid lubricants operating under hydrodynamic condition?	Viscosity	Flow of lubricant	Temperature of bearing	Anti-wear agents
115	What is the single most important element for gear oil?	Anti-wear performance	Viscosity	Shear stability	Corrosion prevention
116	Fuels such as kerosene or gas oil or solvents like white spirit should never be used to wash the skin as they themselves may cause _____.	Dermatitis	Tonsillitis	Bronchitis	Arthritis
117	Which has no influence on combustion but high content of this can be dangerous because of acid formation?	Cetane number	Calorific value	Sulphur content	Ash content
118	As determined by a bomb calorimeter the gross or higher value which includes the latent heat of water vapour formed by the combustion of the hydrogen is called _____.	Centestokes	Calorific value	Viscosity	Ash content
119	Which of the items below has no influence on combustion but high content of this can be dangerous due to acid formation?	Ash content	Sulphur content	Calorific value	Cetane number

# MANAGEMENT ENGINE

120	Which of the following characteristics of lube oil are the most important to the engineer from an operational standpoint?	Auto-ignition point viscosity index and film strength	Ash content carbon residue and gravity	Pour point flash point and precipitation number	Viscosity Acidity and demulsibility
121	In which kind of crude petroleum does the residue after distillation contain more than 5% paraffin wax?	Distillation	Asphalt base	Paraffin base	Mixed base
122	A diesel fuel may contain small amount of residual fuel in dark or black color is known as _____.	bunker oil	automotive diesel oil	gas oil	kerosene oil
123	Once a diesel fuel may contain a small amount of residual fuel and be dark or black in color it is known as _____.	Marine Diesel Oil	Bunker Oil	Gas Oil	Automotive Diesel Oil
124	A kind of material used extensively for electrical fittings and has good electrical conduction properties is called _____.	copper	aluminum	brass	bronze

# MANAGEMENT ENGINE

125	Which of following material is an alloy of copper and tin and has a resistance to wear in the corrosive effect of seawater?	Bronze	Nickel	Brass	Aluminum
126	Which of the following material is basically an alloy of copper and zinc but when this is in contact with corrosive conditions such as atmospheric or in saltwater they may dezintify (removal of zinc phase) leaving a porous spongy mass of copper?	Aluminum	Bronze	Brass	Nickel
127	Most marine heat exchangers are of the shell-and-tube type. Which of the following materials listed below do the cylindrical shell are made of?	Pure stainless steel to prevent corrosion	Pure aluminum material	Bronze material	Fabricated steel cast iron or occasionally aluminum bronze
128	What instrument is used to measure the calorific value of any fuel?	pressure gauge	bomb calorimeter	thermometer	calorific barometer
129	Which these can seriously damage fuel injection equipment caused by poor combustion and leads to excessive cylinder liner wear?	Carbon	Viscosity	Density	Water
130	What is the substance that is primarily responsible for heat loss in the combustion process?	Nitrogen	Sulfur	Hydrogen	Carbon

# MANAGEMENT ENGINE

131	Which of these catalytic fines are particles arising from the catalytic cracking process in the refinery ?	Sulphur and vanadium	Carbon and asphaltenes	Silicon and aluminum	Water and ash
132	If two different fuel oil are mixed in one tank during bunkering which of the following substance will be produced?	Hydrocarbon water	Carbon residue	Sulphur sludge	Asphaltenic sludge
133	Operational experience has shown that excessive high piston ring and liner wear is caused by which of the following?	Catalytic Fines	Water	Sulphur	Vanadium
134	Carbon deposits on the diffuser and register throat ring of a burner _____.	interfere with air flow around the burner	allow heat loss to the boiler casing	cause pre-ignition of the atomized fuel	are of no consequence and may be left in place until a fireside inspection allows time for removal
135	What do you call a measure of the acidity or alkalinity of oil?	Cetane number	Neutralization number	Demulsibility	End point
136	What is an indication of the tendency to deposit carbon on fuel injection nozzles?	Cetane number	Ash content	Sulphur content	Conradson value

# MANAGEMENT ENGINE

137	Increased strength especially employed for increasing strength at high temperature which is one reason why it is used for superheater tubes turbine rotors and others is called _____.	nickel	titanium	chromium	molybdenum
138	Which of the following characteristics and conditions will have the greatest effect on increasing a hydraulic oil viscosity?	Pressure	Cloud point	Vacuum	Pour point
139	What is the lowest temperature at which the marine fuel oil can be handled without excessive amount of wax crystal forming out or solutions?	Pour Point	Ignition Point	Cloud Point	Flash Point
140	In the distribution of heat balance in a four-stroke diesel engine which of the following has the least part?	Radiation	Exhaust Gases	Indicated Power	Cooling Water
141	To minimize corrosion fuel oil strainer disks spacers and scraper blades are made of _____.	iron	copper	brass	monel metal or stainless steel
142	Tin bases are sometimes referred to as Babbitt Metals after Sir Isaac Babbitt who patented them and are called _____.	copper	aluminum	copper-nickel	white-metal
143	Which of the following material that is said to be soft and ductile with considerable strength where carbon is added to form a hard brittle compound?	Copper	Iron	Manganese	Aluminum

# MANAGEMENT ENGINE

144	What causes carbon to adhere to the inside surfaces of a fuel oil heater?	Vanadium in the fuel	Deteriorated zinc strips	Too much carbon in the fuel	Excessive fuel oil temperature
145	An additive used to improve the ability of a lube oil to reduce friction is known as a/an _____.	dispersant additives	extreme pressure additive	viscosity improver additive	suppressant additive
146	The effectiveness of a force in producing rotation about an axis is called _____.	displacement	torque	weight	pressure
147	A kind of fuel which is topped crude petroleum obtained in refinery operations is called _____.	crude petroleum	blended fuel	residual oil	distillate fuel oil
148	Which indicator is used to determine the hardness of a grease?	Stability-consistency number	Pour point	Drop point	Penetration number
149	The ability of a metal to be hammered or rolled out is called _____.	elasticity	ductility	malleability	fusibility
150	The property of a material which enables it to be drawn easily into wire form is called _____.	Plasticity	Malleability	Elasticity	Ductility

# MANAGEMENT ENGINE

151	Which of the following additives is used to reduce the foaming tendency of lube oils?	Extreme pressure	Suppressants	Depressants	Emulsifiers
152	What is the product of magnitude of the displacement times the components of the force parallel to the displacement?	Power	Momentum	Energy	Work
153	What term refers to the advance distance made by the propeller through the water in one revolution? It is equal to its pitch minus a slippage is called _____.	Engine Speed	Slip	Ship Speed	Pitch
154	Which of the following is a measure of amount of heat released during complete combustion of a unit mass of the fuel?	Viscosity	Calorific value	Pour point	Flash point
155	Which of the following fuel oil characteristic is being used in the calculation / computations of quantity?	Density	Water content	Viscosity	Flash point
156	Which of the following quantities listed below is a scalar?	Velocity	Force	Momentum	Pressure
157	Using an oil temperature-viscosity chart you can determine the recommended _____.	oil pressure for smokeless operation	fuel/air ration for efficient combustion	fuel oil flash point for best combustion	oil temperature for proper atomization

# MANAGEMENT ENGINE

158	Oils contain _____ but these will tend to deteriorate with age and becomes acidic in character _____ which promotes corrosion to machinery parts?	additives	minerals	water	grease
159	A special grade make H _____ is used by the classification societies denoting as _____.	higher tensile steel	hot rolled steel	hot area/surface	higher value
160	What is the device used to keep moisture from passing through the system?	Trap	Aerator	Dehydrator	Humidifier
161	Which of the following chemical treatment is used to prevent scale formation of boilers?	Sodium Phosphate	Tannins/Starch	Neutralizing Amines	Hydrazing / Sodium Sulphite
162	What does pH stands for which is the symbol of the degree of acidity and alkalinity of a solution?	Hydrogen peroxide	Hardness powder	Hydrogen powder	Public health
163	Fuel oil is heated before atomizing to _____.	lower the flash point	reduce the viscosity	increase the viscosity	raise the fire point
164	The ratio of the brake horsepower to the indicated horsepower is called _____.	Torque	Efficiency	Brake Mean Effective Pressure	Indicated Horse Power

# MANAGEMENT ENGINE

165	The power output of the engine is known as shaft or _____.	Brake Power	Pascal	Indicated Power	Torque
166	The ash content of a fuel oil is significant to the operating engineer because it _____.	is useful for determining proper atomization temperatures	reflects the overall thermal efficiency of the fuel oil service system	is an indication of the amount of non-combustible material present in the oil	indicates the quantity of energy released by burning a unit amount of the fuel
167	The tangential force on a body which opposes any tendency for its surface to move relative to another surface is called _____.	displacement	torque	friction	inertia
168	What is the harmful effect of sulfur in a fuel?	It doesn't readily burn when combined with oxygen	It forms a corrosive acid when mixed with water or water vapor	It clogs fuel oil strainers more often	It causes excessive smoking and soot at low firing rates
169	Which of the following is the reason why the refrigerant in the evaporator absorbs heat from air or brine?	It can boil to a low-pressure gas	It has a lower temperature than the air or brine	It boils to a high pressure gas	It has temperature than the air or brine
170	Which is NOT an example of distillate fuel oil?	Crude Oil	Diesel Oil	Kerosene	Gasoline
171	What displacement of a rotating body is measured in radian?	Linear displacement	Range	Displacement along the x-axis	Angular displacement
172	Which of the following is the rate of doing work?	Power	Mean Effective Pressure	Torque	Brake mean Effective Pressure

# MANAGEMENT ENGINE

173	The flashpoint of a residual fuel oil should be used to determine the_____.	minimum temperature to which the oil should be heated for transferring	highest temperature to which the oil may be heated for atomization	minimum temperature to which the oil should be heated in the fuel oil heater	highest temperature to which the oil should be heated in storage tank
174	Which type of crude oil contains asphalted material but little or no wax?	Mixed base	Naphthenic	Paraffinic	Mixture of Paraffinic and mixed base
175	What kind of lubrication wherein the contact surfaces are completely separated by an oil film?	Hydrodynamic	Forced lubrication	Mixed lubrication	Boundary lubrication
176	The graphite in a bearing lubricant compound of graphite grease acts as a _____.	low temperature sealer	filler to smooth surface irregularities	moisture barrier	coolant to carry away heat
177	Which of the following material resists atmospheric corrosion and its specific gravity is about one-third that of steel?	Monel metal	Tungsten	Aluminum	Nickel
178	In a diesel engine cooling water system a pH of 6.0 indicates a/an_____.	overtreatment of water	slightly alkaline condition	slightly acidic condition	neutral condition of water
179	Which of the following materials increase grain size induces hardness improves resistance to erosion and corrosion?	Copper	Titanium	Nickel	Chromium

# MANAGEMENT ENGINE

180	Which of the listed material below is unaffected by dry steam water oils and a considerable range of chemicals ?	Nitrile	P.T.F.E.	Rubber	Asbestos
181	Which of the following statements is correct regarding an oil with a high viscosity?	Very little change in viscosity occurs with a significant change in temperature	The viscosity of the oil increases with an increase in temperature	No change in viscosity occurs with any change in temperature	A large change of viscosity occurs with a minor change in temperature
182	Treatment of metals that produces interval stresses and also makes the material brittle is called _____.	annealing	hardening	normalizing	tempering
183	A stopper is inserted into the spout of a closed container which contain water heated to a temperature of 100 degrees Celsius. If additional thermal energy is imparted what changes will occur to the pressure and temperature inside the container?	Pressure alone will rise	Only a change of state will occur	Both pressure and temperature will rise	Temperature alone will rise
184	Which of the item below is used in place of rubber unaffected by water paraffin gas oil and mineral lubricating oil?	Epoxy resin	P.T.F.E	Nitrile	Plastic

# MANAGEMENT ENGINE

185	Which material is being used as seals in place of bronze wearing in sea water pumps and is resistant to erosion?	P.T.F.E	Asbestos	Plastic	Silicon
186	Which of these organic synthetic and natural materials does not contain the combinations of carbon with hydrogen oxygen and nitrogen?	P.T.F.E.	Rubber	Nitrile	Plastics
187	Which of the following material is in pour able form that cures at room temperature extremely tough solid and durable and is used for chocking engines winches pumps etc.?	Epoxy resin	Plastic	P.T.F.E.	Asbestos
188	The sodium sulfate test for boiler water will determine_____	the dissolve oxygen is within tolerable limits	pH within the prescribe limit	Hardness factor is maintained	Excess sulfat
189	Which of the following increases strength and fatigue resistance and used in conjunction with molybdenum for boiler tube materials?	Phosphorus	Chromium	Manganese	Vanadium
190	Which of the following materials is unaffected by water and oil and is used as a framework to give strength to rubber and produce rubber insertion jointing?	Cotton	Asbestos	Plastic	P.T.F.E.

# MANAGEMENT ENGINE

191	Which refractory material is preferred for small repairs particularly where standard size brick or tile cannot be used?	Plastic fireclay	Castable clay	Chrome castable	Plastic chrome ore
192	_____ of a distillate fuel oil is the temperature at which wax start to crystallize out and this is seen when the clear fuel becomes opaque.	Flash Point	Ignition Point	Pour Point	Cloud Point
193	What is the capacity for producing an effect or doing work?	Energy	Moment of force or torque	Momentum	Power
194	A partially clogged or scored nozzles in a two stage air ejector unit of flash distilling plant could result in a _____.	malfunctioning check valve in the air ejector discharge	fluctuating vacuum in the flash chamber	flooded seawater feed heater shell	high water level in the air ejector after condenser
195	What is called the process of heating the material to a predetermined temperature and allowing it to soak at this temperature and then cooling it in the furnace at a controlled rate?	Tempering	Hardening	Annealing	Normalizing
196	Starting air receivers require what during the watch.	a close watch on temperature to prevent fluctuation in pressure	frequent cleaning to remove oil and foreign matter	frequent draining of accumulated moisture	frequent testing of relief valves

# MANAGEMENT ENGINE

197	An auxiliary machine used to segregate oil and water accumulated in the engine room before it is being discharge overboard?	fuel oil purifier	oily bilge separator	fine mesh filter	foam type filter
198	Too much wear on a centrifugal pump stuffing box shaft sleeve will led to-----.	Allow inter-stage leakage in the pump casing glands	Cause severe vibration when the pump is operating	Cause excessive leakage through the packing gland	Cause damage in the packing gland stuffing box
199	Sweating of an R-12 compressor crankcase is because of.	Liquid refrigerant is returning to the compressor	Shortage of refrigerant	Compressor short cycling	Compressor running continuously
200	Feedwater which does not flash to vapor in the first stage of a flash evaporator to flow in the second stage is due to-----.	higher vacuum in the second stage	Difference in brine density between first and second stage	gravity syphon effect	low pressure in first stage
201	What causes the possibility of non-atomized fuel dripping from the fuel injection nozzles after injection of the fine fuel mist has finished?	momentary increase in the pressure of the oil confined with the pressure piping	cut-off of fuel supply too late after injection	adjustment of injection pressure too early	thermal expansion of the volume of fuel in the pressure piping

# MANAGEMENT ENGINE

202	What causes the possibility of non-atomized fuel dripping from the fuel injection nozzles after injection of the fine fuel mist has finished?	momentary increase in the pressure of the oil confined with the pressure piping	thermal expansion of the volume of fuel in the pressure piping	cut-off of fuel supply too late after injection	adjustment of injection pressure too early
203	What causes the possibility of non-atomized fuel dripping from the fuel injection nozzles after injection of the fine fuel mist has finished?	adjustment of injection pressure too early	cut-off of fuel supply too late after injection	thermal expansion of the volume of fuel in the pressure piping	momentary increase in the pressure of the oil confined with the pressure piping
204	What changes in valve timing will tend to increase the cooling effect on the exhaust valve in a four-stroke cycle turbocharged diesel engine?	Retard the intake valve opening and advance the exhaust valve closing period.	Advance the intake and exhaust valve opening period.	Advance the intake valve opening and retard the exhaust valve closing periods.	Retard the intake and exhaust valve closing period.
205	What characteristic can be applied to Refrigerant 134a when compared to R-12?	It is not compatible with mineral based lubricants.	It has a distinctive taste.	It is visible as a blue fog.	It is corrosive.
206	What characteristic in lube oil, helps to reduce the amount of deposits formed in the piston ring belt during the combustion process in a diesel engine?	High noncorrosive qualities	Low viscosity index	High film strength	Low carbon forming tendencies

# MANAGEMENT ENGINE

207	What color exhaust will be exhibited when a slow speed two-stroke/cycle main propulsion diesel engine, designed to operate on light and heavy fuel oil, is operated on insufficiently preheated heavy fuel oil?	White	Clear	Black	Blue
208	What color is the flame produced by a halide torch without any refrigerant present?	Blue	Green	Red	Orange
209	What combustion of the main shaft segments located furthest from the main engine are connected by the in-board stern tube shaft coupling?	line shaft and stern tube shaft	line thrust and shaft thrust	stern tube and tail shaft	thrust shaft and stern tube shaft
210	What condition listed below would specifically indicate that a pump overhaul was necessary for a centrifugal saltwater service pump.	Salt water heat exchangers running hot.	Observed operational speed has decreased.	Pump coupling requires constant maintenance.	Indicated head pressure does not change when discharge valve is closed.
211	What condition may cause excessive superheat to occur at the evaporator outlet of an air conditioning system?	A dirty condenser	High head pressure	Insufficient air flow	Low refrigerant charge
212	What condition would cause panting in a steaming auxiliary boiler?	flame failure	insufficient combustion air	faulty flame scanner	low water level

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

213	What constituent of the fuel oil determines the specific heat	sulphur	nitrogen	hydrocarbons	oxygen
214	What contaminants found in engine lube oil will cause an increase in wear rate of metal components in a diesel engine.	corrosive acids	any or all of the above	metallic oxides	abrasive particles
215	What control procedures must be done before putting in operation a steam driven cargo pumps?	warping heads to be closed	steam lines to be thoroughly drained	steam lines to be thoroughly drained	clutch to be engaged
216	What immediate action should you take if you are on watch and note zero lube oil pressure for the operating main turbine?	Shift strainers and gravity tanks.	Immediately increase cooling water flow to lube oil cooler.	Slow the turbine to minimum speed and watch the bearing temperatures.	Stop the shafts.
217	What instrument is being used to automatically start the oil firing of an auxiliary boiler if the combustion chamber reaches the excessive temperature?	Magnetic Valve	Thermostatic Valve	Thermocouple	Pyrometer
218	What is the absorber in the aqua-ammonia absorption system of refrigeration?	water	lithium	ammonia	bromide
219	What is the absorption system of refrigeration	it is the system which uses mechanical energy to make a change in condition	it is the absorption within the system	it is system which uses heat surgery to make a change in the condition required in the ref. system	both A and B

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

220	What is the average piston speed of a 4 cycle diesel engine with a 12 inch stroke, operating at 900 RPM?	450 ft/min	1800 ft/min	900 ft/min	1500 ft/min
221	What is the average piston speed of a five cylinder low- speed engine with a bore of 29.5 inches (75 cm), a stroke of 63 inches (160 cm), and a rated speed of 123 RPM?	645 ft/min (196 m/min)	2582 ft/min (787 m/min)	1291 ft/min (393 m/min)	7749 ft/min (2362 m/min)
222	What is the average piston speed of a seven-cylinder, two-stroke/cycle diesel engine with a 580 mm bore and a 1700 mm stroke operating at 100 RPM?	5.7 m/sec	4.5 m/sec	2.8 m/sec	9.0 m/sec
223	What is the cause of laning in a boiler tube bank?	Excessive slag accumulation on the tubes	5.7 m/sec	Reduced furnace volume	Low fuel oil pressure
224	What is the chemical in CFC refrigerant that destroys stratospheric ozone?	hydrogen	chlorine	carbon	fluorine
225	What is the color coding for a storage container of R-134A refrigerant?	green	grey	purple	light blue
226	What is the color of the flame produced by a halide torch when there is no refrigerant present?	Green	Blue	Red	Orange

# MANAGEMENT ENGINE

227	What is the composition of the pure hydrocarbon?	15%C and 85%H	30% and 70%H	85%C and 15%H	70% and 30%H
228	What is the compression system of refrigeration?	both A and B	it is the system which uses heat to make a change in the cond. Req. in the ref. cycle	it is the absorption of heat under temp. compression, pressure and expansion	it is the system which uses mechanical energy to make a change in the cond. Req. in the ref. cycle
229	What is the cooling medium used for most portable recovery unit condensers aboard ship?	potable water	air conditioner drains	condenser water vapor at the outlet	chiller water taken at inlet
230	What is the crank angle between cylinder firing of a four-stroke/cycle, in line, eight cylinder diesel engine?	120	60	45	90
231	What is the device where the temperature of the refrigerated space is transmitted and likewise controls the start of the compressor of a R-22 refrigeration system?	Thermostat Value	Solenoid Value	Expansion Value	Magnetic Value
232	What is the diameter of a cylinder whose cross-sectional area is 706.86 square inches?	30 inches	24 inches	15 inches	36 inches
233	What is the effect of excess frost on the evaporator coils?	keeps the refrigerated space cooler	reduces the efficiency of the pump	takes the load off the compressor	has no effect on the system

# MANAGEMENT ENGINE

234	What is the equivalent tonnage of a refrigeration system rated at 48,000 BTU per hour?	5	3	4	2.5
235	What is the factor that measures the flow rate of fuel oils and lubricating oils?	Calorific Value	density	Pour Point	Viscosity
236	What is the main cause in a R - 22 mechanical compression refrigerating system onboard if the discharge pressure is very low?	excessive opening of expansion valve	valve breakage inside the compressor	insufficient condenser water cooling	air inclusion refrigerating system
237	What is the main constituent in fuel oil which determines its heat value?	Nitrogen	Hydrocarbons	Oxygen	Sulphur
238	What is the maximum volume to which refillable refrigeration cylinders should be filled?	70% full	60% full	80% full	90% full
239	What is the metric brake horse power developed per cylinder by an 83% efficient, six cylinder, two-stroke/cycle diesel engine with a cylinder constant of 0.998 and a mean effective pressure of 15 kg/cm <sup>2</sup> at 100 RPM?	1,243 MBHP	1,497 MBHP	1,116 MBHP	621 MBHP

# MANAGEMENT ENGINE

240	What is the most common type of valving element used in directional control valves in hydraulic systems?	Nutating disk	Elongated ball or cone	Sliding pool	Restricted orifice poppet
241	What is the most important thing to do after declaring that all large tank are already empty?	ask fuel sample	take ships draft	close all valve	take out hose
242	What is the other name of the brine-circulating system of the refrigeration?	both A and B	none of these	direct system	indirect system
243	What is the pH value to be maintained of the F.W jacket cooling of a large diesel main propulsion engine to avoid corrosion and scale formation?	8 - 11	15-Dec	3-Jan	7-Apr
244	What is the physical state of refrigerant as it enters the condenser of a typical refrigeration system.	subcooled vapor	subcooled liquid	superheated liquid	superheated vapor

# MANAGEMENT ENGINE

245	What is the physical state of refrigerant as it leaves a receiver in a typical refrigeration system ?	subcooled vapor	superheated vapor	superheated liquid	subcooled liquid
246	What is the physical state of refrigerant entering the receiver of a refrigeration system?	subcooled high pressure liquid	superheated low pressure vapor	subcooled low pressure liquid	superheated high pressure vapor
247	What is the physical state of refrigerant leaving the condenser of a R-22 refrigeration system?	low pressure vapor	high pressure liquid	low pressure liquid	high pressure vapor
248	what is the purpose of jacketing steam cylinder?	to facilitate engine maneuvers, especially astern rotation	for easy engine starting	to reduce condensation by keeping them hot at all types	standard operation procedure
249	What is the purpose of low pressure cut out switch in refrigeration system?	start and stop the compressor upon system demands	protect the compressor from high discharge pressure	protect the compressor from liquid flood back	start the compressor after the drop in the evaporator pressure

# MANAGEMENT ENGINE

250	What is the purpose of removable sleeves on shaft of centrifugal pump?	to remove it when it becomes necessary to lighten the weight of the pump	to increase the strength of the shaft	for making it easier to replace the pump shaft packing	to replace it economically as they wear out
251	What is the purpose of running a refrigeration compressor in short intermittent spurts when the system is being started after a long idle period?	to allow time for refrigerant vapor cycling	to let proper circulating of oil in the crankcase	to ensure gradual cooling of refrigerant compartment	to ensure proper operation of the compressor
252	What is the purpose of stationary blades in a reaction turbine?	to give more steam power	to give more flexibility on steam flow	to direct steam flow to the next set of moving blades	to improve steam flow inside the turbine
253	What is the purpose of the expansion tank in a closed type jacket cooling water system of a diesel engine?	To accommodate for an increase in water volume	To increase the pressure of the jacket cooling	none of the above	all of these
254	What is the reason why it is very necessary to drain the air tanks and the air pipes before moving the main and generator engine?	Avoid sticking of the starting valve spindle	Avoid sticking of exhaust valve spindle	Avoid sticking of relief valve spindle	Avoid sticking of intake valve spindle
255	What is the reason why there is water inside the main reservoir air tank onboard ship?	Compressor water cooling low temperature	Air moist content	Leaky compressor air cooling	Low air temperature
256	What is the recommended heating temperature of fuel oils before changing over:	85C	85C	95C	100C
257	What is the refrigerant in the lithium bromide cycle absorption system ?	water	ammonia	bromide salt	lithium bromide

# MANAGEMENT ENGINE

258	What is the short term replacement for R-11 refrigerant, used in low pressure chillers?	R-123	R-22	R-134A	R-500
259	What is the significance of pinion deflection in the operation of reduction gears?	Pinion deflection causes unequal tooth loading.	Deflection causes excessive wear at both ends of the pinion	Deflection causes excessive wear at the center of the pinion.	Deflection is minimal because a longer pinion is more rigid
260	What is the space where the ventilation is NOT functioning on around the clock basis?	Machinery space	Accommodation space	Enclosed space	Provision space
261	What is the speed of the crankshaft in a four-stroke/cycle engine when the camshaft is turning at 750 rpm?	375 RPM	1500 RPM	750 RPM	500 RPM
262	What is the swept volume per cylinder per revolution of a six-cylinder, two-stroke/cycle diesel engine with a 580 mm bore and a 1700 mm stroke operating at 100 RPM?	2.7 cubic meters (2700 L)	5.4 cubic meters (5400 L)	0.90 cubic meters (900 L)	0.45 cubic meters (450 L)
263	What is the term given to the process of breaking up fuel oil into very fine particles for better combustion?	Straining	Spraying	Atomizing	Settling
264	What is the term used to express the ignition quality of a fuel oil?	Ignition index number	cetane number	Volatility point	Octane number
265	What is the theoretical time necessary to reduce the temperature of 40,000 pounds of onions (placed in a refrigerated container) from 75F to a set point temperature of 46F? The specific heat of onions is 0.90 BTU/LB/F. The trailer heat gain is 6,500 B	52 hours 12 minutes	13 hours 16 minutes	26 hours 48 minutes	6 hours 5 minutes
266	What is the theoretical lift of a pump handling fresh water at atmospheric pressure?	26 ft.	24 ft.	40 ft.	33.9 ft.

# MANAGEMENT ENGINE

267	What is to be installed on an internal combustion engine if its cylinder bore exceeds eight inches?	Explosion relief valves	Crankcase vapor monitors	Engine exhaust silencers	Constant pressure type turbochargers
268	What is used to compensate for the increased possibility of blade vibration occurring with impulse turbine blading?	Tuned vibration dampers.	Securing the blade tips with shrouding.	Seal stripping the groove within the turbine casing.	The decreased pressure drop across the blade due to the thin tip design.
269	what kind of spare part for the hydro electric steering gear do you often store on the steering room on board?	solenoid valve	steering wheel	pump motor	ram shaft
270	What occurs in the combustion space of a diesel engine cylinder shortly after ignition and before the piston reaches TDC?	Rapid increase in volume and decrease in pressure.	Rapid increase in pressure and temperature.	Rapid increase in temperature with constant pressure.	Rapid increase in pressure with constant temperature.
271	What part of a kingsbury thrust bearing tilts to permit the formation of a wedge shaped film of oil?	shoes	tilting plates	dowel disk	lower leveling plates
272	What part of the ammonia system must the charge connection be hooked up?	between the evaporator and compressor	between the dehydrator and expansion valve	between the king valve and expansion valve	between the compressor discharge and the condenser
273	what part of the ammonia vapor compression system must the charging connection be hooked up?	between king valve and evaporator	between condenser and condenser	between solenoid valve and drier	between compressor and condenser
274	What part of the mainfeed and water cycle separates the condensate system from the feed water system?	boiler drum	atmospheric drain tank	main condenser	deaerating feed tank
275	What part of the turbine assembly is used to relieve strain on the turbine caused by thermal stress?	Babbitt lined bearings	Curved steam lines	Rigid mountings	Flexible I-beam supports

# MANAGEMENT ENGINE

276	Before any work is done on a burner what should you check in an automatically fired auxiliary boiler?	Allow the boiler to cool completely	Lock all safety interlock switches closed	Close all manually operated fuel valve	Block all control valves
277	What should you do before starting a reciprocating steam driven pump that has been idled for a period of time?	Drain the steam cylinder	Open the liquid cylinder drains	Close the steam cylinder drains	Open the steam line root valve
278	What should you do if you detect an abnormal vibration in the operating main propulsion turbine?	Immediately slow the turbine until the vibration ceases.	Notify the chief engineer and stand by the throttles.	Immediately stop the turbine.	Open the turbine drains until the vibration ceases.
279	What should you do if you discover localized scoring in a pump shaft sleeve during a routine maintenance inspection?	Reassemble the pump and set the governor to obtain a slower speed	Reassemble the pump and provide more water leak-off for lubrication	Check for parallel alignment of the sleeve radial face to the sleeve bore	Correct the cause of scoring and install a new shaft sleeve
280	What should you do immediately after securing the fires in one boiler ship?	open the air registers wide to cool the furnace	secure the main feed pump	relieve all fuel oil service pressure to that boiler	drain and refill the boiler with cold water
281	What should you do to re-establish the air ejector loop seal?	momentarily close the valve in the loop seal line re-open slowly	increase the condensate flow through the air ejector	decrease the steam pressure to the air ejector jets	shut-off the steam to the second-stage air ejector
282	What steps should be taken if excessive steaming and vigorous bubbling occurs in the first section of the drain inspection tank?	Secure the fuel oil heater currently in use.	Systematically locate and isolate any faulty traps in the contaminated steam system piping.	Locate and open any unnecessarily closed steam trap bypass valves.	All of the above are correct and should be performed in the order as shown.
283	What steps should be taken if large quantities of fuel oil are found in the drain inspection tank?	Change over to the standby fuel oil heater.	Open steam trap bypass of the fuel oil heater that is on line.	Secure the lube oil purifier and its associated heater.	All of the above
284	What takes place of the compression stroke of the compressor in an absorption system?	condenser pump	absorber	evaporator pump	generator
285	What takes the place of the suction stroke of the compressor in an absorption system of refrigeration?	generator	liquifier	absorber	refrigerant pump

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

286	What three (3) types of drilling fluids can be transported by an OSV?	salt water mud, fresh water mud and correction fluids	offshore mud, inland mud and dry chemicals	water based mud, oil based mud and completion fluids	barite, oil and zinc bromide
287	What type of compressor in a mechanical compression system can have short, large diameter suction lines?	screw	reciprocating	centrifugal	rotary
288	What type of engine lubrication oil filter system sends filtered oil directly back to the high pressure discharge manifold?	centrifugal purifier system	bypass system	batch system	shunt system
289	What is the minimum number of fire pumps required on a cargo vessel of 2,000 GT?	3	4	1	2
290	What is the minimum number of fire pumps required on a cargo vessel of 900 GT?	3	4	1	2
291	MARINA was created and geared towards the following objectives except_____.	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 create sub-agencies for the safe transport of goods and passengers	To provide for economical, safe, adequate and efficient shipment of raw materials, products, commodities and people
292	The Oil Record Book on a vessel not engaged on a foreign voyage shall be maintained on board for not less than _____.	12 months	36 months	24 months	48 months
293	Watchkeepers should have a mandatory minimum rest periods of _____ in any one week.	70 hours	72 hours	56 hours	48 hours

# MANAGEMENT ENGINE

294	Oily mixtures according to Marpol means:	a mixture with oil content above 100 ppm	a mixture with oil content above 50 ppm	a mixture with any oil content	a mixture with oil content above 15 ppm
295	The ABC-rules are an important part of the First Aiders know how. What does the First Aid ABC-rules stands for?	A Better Control	Airway Breathing Circulation	Adults Behind Children	Anything But Continuation
296	Who countersigns any completed pages of the Oil Record Book?	Master and Chief Engineer	Designated Officer	Master	Chief Engineer
297	Sludge are to be disposed off at sea.	during darkness only	25 miles offshore	50 miles offshore	disposal prohibited
298	When oil is discharged overboard, an entry is required in the _____.	engine rough log	Official Logbook	deck rough log	Oil Record Book
299	When installing a new independent fuel tank for the emergency lighting unit, which of the following statements must be strictly adhered to in accordance with Coast Guard Regulations?	The tank must be located on an open deck or in an adequately ventilated	Iron or steel tanks shall be galvanized on the interior to prevent the formation of	The fuel tank should be adequately supported and braced to prevent	All of the above.

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

300	A shipmate suffers a heart attack and stops breathing. You must:	Let him lie on his side	Check his pulse and start CPR	Make the victim as comfortable as he could be	Administer oxygen immediately
301	This is the most effective management development technique.	Modeling	Coaching	Irritation	Training
302	In accordance with SOLAS convention, how long shall the auxilliary steering gear be capable of turning 15 degrees on one side to 15 degrees on the other side?	not more than 60 seconds	not more than 30 seconds	not more than 20 seconds	not more than 40 seconds
303	The routes, zones or areas of operations of domestic ship operators are prescribed by which government agency?	Office of the President of the Philippines	PCG	DOTC	MARINA
304	When oily ballast has been pumped overboard, an entry must be made in the _____.	Oil Record Book	Official Logbook	deck rough log	engine rough log
305	_____ is contained in Annex II of MARPOL 73/78?	Regulations for the Prevention of Pollution by Oil	Regulations for the Prevention of Pollution by Harmful Substances in a Packaged Form	Regulations for the Control of Pollution by Noxious Liquid Substances	Regulations for the Prevention of Pollution by Sewage
306	Annex V of MARPOL 73/78 contains requirements pertaining to the discharge into the marine environment of _____.	Sewage	Garbage	Noxious liquid substances	Oil

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

307	Which of the following would fit MOST on motivation?	efforts at keeping employees "cheered up" at all times	factor that cause, channel and sustain people's behavior	that special inner desire to excel	managerial strategies to inspire the working force
308	The Safety Management Certificate should be issued to a ship for a period of how many years?	4 years	1 year	5 years	2 years
309	Which one is NOT correct if you are asked by to differentiate a leader and a manager?	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.	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.
310	Which of the following behaviours best describes charismatic leadership style?	Matches his leadership style to the situation at hand	Acts as he does because he expects that his behavior will yield positive results	Possesses inspirational quality that makes followers gets attracted of him and regards him with reverence	Uses visioning as the core of his leadership
311	Which of these would be the best thing to do, if you know that one of the staff is experiencing burnout?	Remind to show loyalty to the company	Let the staff ventilate the feelings and ask how staff can be of help	Ignore observation, it will be resolve without intervention	Advise the staff to go on vacation
312	Which type of conflict management technique is described as cooperating and that one side gives in to the other?	Avoiding	Competing	Accommodating	Compromising
313	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
314	As a young Senior officer, you know that conflict occurs in the engine department, which of the following statements regarding conflict is NOT true?	Is not beneficial, hence it should be prevented at all times	Can be destructive if the level is too high	May result in poor performance	May create leaders

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

315	What is the skill or ability of a manager to be self-control and regulation of own behaviour?	Fantasy	Persistence	Discipline	Cautiousness
316	What is the skill or ability of a manager that tenacity needed to overcome barrier when achieving goals?	Cautiousness	Persistence	Fantasy	Fantasy
317	What is the skill or ability of a manager that creation of visions and imaginations about future?	Persistence	Cautiousness	Discipline	Fantasy
318	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?	Proactive and caring with one another	Competitive and perfectionist	Powerful and oppositional	Obedient and uncomplaining
319	What is the skill or ability of a manager to use specific methods and techniques in doing the managerial work?	Technical	Conceptual	Interpersonal	Communication
320	Which type of leadership theories consider people inherit certain qualities that make them better suited to leadership?	Contingency theories	Behavioural theories	Situational theories	Trait theories
321	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?	Authority-obedience management	Organization man management	Country club management	Team management
322	Company managers know that performance appraisal consists of all the following activities EXCEPT_____.	Determine areas of strength and weaknesses	Using agency standards as a guide.	Focusing activity on the correction of identified behavior.	Setting specific standards and activities for individual performance.
323	What action is a priority when there is an increasing unrest of the staff due to fatigue brought about by shortage of staff?	Develop a plan and implement it	Initiate a group interaction	Evaluate the overall result of the unrest	Identify external and internal forces

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

324	What is the skill or ability of a manager that an effort to look for new possibilities and solutions for reaching set goals?	Initiative	Goal oriented	Self confidence	Independence
325	What is the skill or ability of a manager that belief in own strength and ability to achieve goals?	Goal oriented	Independence	Initiative	Self confidence
326	What is the skill or ability of a manager that has the courage to make decision based on own judgment?	Goal oriented	Self confidence	Initiative	Independence
327	Behavior of a leader that deals with long range plan, broad relationship and ideas _____.	goal oriented	conceptual	human	bureaucrat
328	In order to manage and implement the International Management system, the senior officer must have an outstanding traits such as : I. conversant II. Initiative III. Knowledgeable	I,II & III	I & III	II and III	I & II
329	The Safety Management Certificate should be issued to a ship for a period of how many years?	4 years	1 year	2 years	5 years
330	Which one is NOT correct if you are asked by to differentiate a leader and a manager?	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.	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.
331	Which of the following behaviours best describes charismatic leadership style?	Uses visioning as the core of his leadership	Matches his leadership style to the situation at hand	Possesses inspirational quality that makes followers gets attracted of him and regards him with reverence	Acts as he does because he expects that his behavior will yield positive results
332	Which of these would be the best thing to do, if you know that one of the staff is experiencing burnout?	Remind to show loyalty to the company	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

# MANAGEMENT ENGINE

333	Which type of conflict management technique is described as cooperating and that one side gives in to the other?	Avoiding	Accommodating	Compromising	Competing
334	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?	Bureaucrat	By example	Behavioural	Dependable
335	As a young Senior officer, you know that conflict occurs in the engine department, which of the following statements regarding conflict is NOT true?	Is not beneficial, hence it should be prevented at all times	Can be destructive if the level is too high	May result in poor performance	May create leaders
336	What is the skill or ability of a manager to be self-control and regulation of own behaviour?	Fantasy	Discipline	Persistence	Cautiousness
337	What is the skill or ability of a manager that tenacity needed to overcome barrier when achieving goals?	Fantasy	Fantasy	Cautiousness	Persistence
338	What is the skill or ability of a manager that creation of visions and imaginations about future?	Cautiousness	Persistence	Fantasy	Discipline
339	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	Competitive and perfectionist	Powerful and oppositional
340	What is the skill or ability of a manager to use specific methods and techniques in doing the managerial work?	Technical	Conceptual	Interpersonal	Communication
341	Which type of leadership theories consider people inherit certain qualities that make them better suited to leadership?	Behavioural theories	Trait theories	Situational theories	Contingency theories

# MANAGEMENT ENGINE

342	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?	Team management	Authority-obedience management	Organization man management	Country club management
343	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.
344	What action is a priority when there is an increasing unrest of the staff due to fatigue brought about by shortage of staff?	Evaluate the overall result of the unrest	Initiate a group interaction	Develop a plan and implement it	Identify external and internal forces
345	What is the skill or ability of a manager that an effort to look for new possibilities and solutions for reaching set goals?	Initiative	Goal oriented	Self confidence	Independence
346	What is the skill or ability of a manager that belief in own strength and ability to achieve goals?	Initiative	Goal oriented	Independence	Self confidence
347	What is the skill or ability of a manager that has the courage to make decision based on own judgment?	Self confidence	Independence	Initiative	Goal oriented
348	Behavior of a leader that deals with long range plan, broad relationship and ideas _____.	bureaucrat	conceptual	goal oriented	human
349	In order to manage and implement the International Management system, the senior officer must have an outstanding traits such as : I. conversant II. Initiative III. Knowledgeable	I,II & III	II and III	I & III	I & II

# MANAGEMENT ENGINE

350	Why is good communication important in managing personnel? I. It motivates personnel to do their jobs well II. It promotes independence and collaboration III. It fosters influence and power	I, II and III	I only	II only	III only
351	Centralized organizations have some advantages. Which of the following statements are TRUE? I. Highly cost-effective II. Makes management easier III. Reflects the interest of the worker	II and III	I, II and III	I and III	I and II
352	What is conceptual skill?	It is an ability to work on people.	It is the ability to influence human behaviour.	It is the ability to perform given task or job.	It is the ability to visualise the organisation as the whole.
353	What is human relation skill?	It is the ability to influence human behaviour.	It is the ability to visualise the organisation as the whole.	It is an ability to work on people.	It is the ability to perform given task or job.
354	What is technical skill?	It is the ability to perform given task or job.	It is an ability to work on people.	It is the ability to visualise the organisation as the whole.	It is the ability to influence human behaviour.
355	What is leadership skill?	It is the ability to influence human behaviour.	It is the ability to perform given task or job.	It is an ability to work on people.	It is the ability to visualise the organisation as the whole.
356	What is not a characteristic of an organizational chart?	It shows the workload of each department	It reflects the type of work of each staff	It shows division of work	It delineates the groupings according to type of work

# MANAGEMENT ENGINE

357	What leadership style utilized to maintain a strong control in the department?	Laizzes faire	Democratic	Autocratic	Collegial
358	Which of the following elements is NOT included to illustrate the organizational structure?	Span of control	Unity of direction	Lines of communication	Level of authority
359	The following are basic steps in the controlling process of the department. Which of the following is NOT included?	Measure actual performance	Set standards and criteria	Compare results of performance to standards and objectives	Identify possible courses of action
360	Which of the following is evidence that the controlling process is effective?	The things that were planned are done	Employees are contended	Nobody complain.	There is an increase in customer satisfaction rate.
361	Which of the following terms refer to when wanting to influence the customary way of thinking and behaving that is shared by the members of the department?	Organizational culture	Organizational chart	Cultural network	Organizational structure
362	Supervision and delegation fall to what phase of the management process?	Controlling	Planning	Organizing	Directing
363	Which phase of the employment process includes getting on the payroll and completing documentary requirements?	Recruitment	Orientation	Selection	Induction
364	When presenting the operational procedures to be followed, one refers to what type of standards?	Structure	Criteria	Process	Outcome

# MANAGEMENT ENGINE

365	What are the qualities that define a leader who uses Laissez- faire?	Oversees everything to come up with good quantity and quality of output but provides little autonomy and self- motivation to her members	Involves the group in planning and in decision making	Tends to be passive and puts the responsibility of decision making to others.	Would foster independence in your team by promoting motivation and creativity.
366	What do you call a person/s ashore having a direct access to the highest level of management?	Designated person	Person in charge	Safety and Quality Management Officer	Owners representative
367	What is the skill or ability of a manager to be able to make decision under stress and unsure conditions?	Cautiousness	Persistence	Fantasy	Discipline
368	What is a common trait of a leader which is defined as his ability to possess honesty, responsibility and maturity in the working area?	Intelligence	Flexibility	Personality	Integrity
369	It is a managerial function that indicates leading the staff in the most effective method.	Controlling	Organizing	Directing	Planning
370	The manager wants to ensure that every task is carried out as planned. Which of the following tasks is NOT included in the controlling process?	Reviewing the existing policies of the company	Instructing the members of the standards committee to prepare policies	Evaluating the credentials of all staff	Checking if activities conform to schedule
371	Which of the following is the most ideal in maintaining behavioral working group?	Same perspective	Same gender	Same age bracket	Same nationality
372	Which of the following principles apply, if Senior Officer likewise stresses the need for all crew to follow orders and instructions from him and not from anyone else?	Unity of command	Scalar chain	Discipline	Order

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

373	The management plans of assigning competent people to fill the roles designed in the hierarchy. Which process refers to this?	Recruitment	Staffing	Induction	Scheduling
374	Which of the following statements best describes transformational leadership?	Uses visioning as the essence of leadership.	Maintains full trust and confidence in the subordinates	Serves the followers rather than being served.	Possesses natural charisma that makes others feel good in his presence.
375	What is that needed in the Filipino Hierarchy of Need wherein in a Filipino gives weight to what other people would say about him or his behaviour?	Familism	Reciprocity	Social mobility	Social acceptance
376	Which is the primary reason why all lifting appliances be tested and certified by competent person before putting into service?	To ensure it is functioning	for return basis	Good design and construction of adequate strength	Safe to use
377	As per the ISM Code, in matters of safety and pollution prevention, whose commitment, competence, attitudes and motivation determines the end result?	Individuals at all levels	Top management	Management level officers	Designated person ashore
378	An applicant for certification as Chief Engineer Officer under Regulation III/2, must have served a total of 36 months of approved sea service (mandatory) while acting as Second Engineer Officer for at least _____.	Thirty-six months	Twenty-four months	Forty-eight months	Twelve months
379	What are the conditions wherein an interim Safety Management Certificate may be issued? I. The company has new ship on delivery ; II. When the company takes on responsibility for the operation of the ship	II only	I and II	&nbsp; I II and III	I only

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	which is previously managed by other company ; III.When the ship has been on dry dock for quite sometime				
380	The Safety Management Certificate should be issued to a ship for a period of how many years?	1 year	4 years	2 years	5 years
381	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.
382	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	Acts as he does because he expects that his behavior will yield positive results	Uses visioning as the core of his leadership	Matches his leadership style to the situation at hand
383	As a result of improper adjustment the fuel injection timing of your engine was greatly retarded. What will be the immediate effect on the engine performance?	Smoother operation	Advance fuel injection	Reduce engine power	Increase fuel efficiency
384	Which of these would be the best thing to do if you know that one of the staff is experiencing burnout?	Remind to show loyalty to the company	Ignore observation it will be resolve without intervention	Let the staff ventilate the feelings and ask how staff can be of help	Advise the staff to go on vacation
385	The assessment of a trainee s practical demonstration of skills should be conducted_____.	within the normal routine of vessel s operation	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	at any time of the day particularly outside normal operations

# MANAGEMENT ENGINE

386	Which type of conflict management technique is described as cooperating and that one side gives in to the other?	Competing	Accommodating	Compromising	Avoiding
387	Fire protection regulations for towing vessels require that drills be conducted onboard the vessel as if there were an actual emergency. Drills include all of the following EXCEPT_____.	Participation by selected crew members	Breaking out and using the vessel's emergency equipment	Testing all alarm and detection system	One person putting on protective clothing if the vessel is so equipped
388	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?	Bureaucrat	By example	Dependable	Behavioural
389	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	Is not beneficial hence it should be prevented at all times	May result in poor performance
390	What is the skill or ability of a manager to be self-control and regulation of own behaviour?	Cautiousness	Discipline	Fantasy	Persistence
391	What is the skill or ability of a manager that tenacity needed to overcome barrier when achieving goals?	Fantasy	Cautiousness	Persistence	Fantasy
392	What is the skill or ability of a manager that creation of visions and imaginations about future?	Fantasy	Cautiousness	Persistence	Discipline
393	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?	Powerful and oppositional	Obedient and uncomplaining	Competitive and perfectionist	Proactive and caring with one another

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

394	What is the skill or ability of a manager to use specific methods and techniques in doing the managerial work?	Interpersonal	Conceptual	Communication	Technical
395	One function of the model checklists provided for the conduct of a practical demonstration is to promote_____.	a methodology by which elements of the missed practical demonstration can pointed out to the trainee	all of the above	consistent standard in the assessment of the task to be demonstrated	repeatability in observing the assessment of the task to be demonstrated
396	Which type of leadership theories consider people inherit certain qualities that make them better suited to leadership?	Contingency theories	Trait theories	Situational theories	Behavioural theories
397	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?	Team management	Country club management	Organization man management	Authority-obedience management
398	Company managers know that performance appraisal consists of all the following activities EXCEPT_____.	Using agency standards as a guide.	Determine areas of strength and weaknesses	Focusing activity on the correction of identified behavior.	Setting specific standards and activities for individual performance.
399	What action is a priority when there is an increasing unrest of the staff due to fatigue brought about by shortage of staff?	Identify external and internal forces	Initiate a group interaction	Evaluate the overall result of the unrest	Develop a plan and implement it
400	Which of the following personnel reports to the chief officer but directs the deck seaman pumpman and multipurpose crew assigned to deck service?	OS	3rd officer	Boatswain	AB
401	What refers to establishing objectives and processes necessary to deliver results in accordance with customer requirements and the organization's policies?	Checking	Planning	Doing	Acting

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

402	The technical superintendent or its equivalent shall compile all the jobs done during dry dock make it in report form and submit to the managing director or its equivalent. The technical superintendent or its equivalent shall give remarks with respects to the overall performance of the dockyard. The report will be used to guide whether the shipyard can be considered for future docking or not is called _____.	execution	analysis	verification	reporting
403	Who will sign on each completed pages of Oil Record Book?	Chief Engineer	Engineer on watch	Chief Mate	Master
404	A program that has been created out of a wish from the serious ship owners to documents the quality of their vessels beyond the scope of classification is called the_____.	class rules	condition assessment	machinery survey	confirmatory survey
405	The management of the system involves continuous review of the system and practice employed to improve the way jobs are carried out and to improve maintenance control so that the ship performance is also improve it is called_____.	analysis	verification	cost cuttling	reporting
406	Which of the following document is used to verify lowest number of crew that can safely run a vessel?	Muster List	Ship master list	Crews competency	Minimum safe manning
407	What is the basis of competence of personnel performing work under QMS?	Experience conformity simulation and environment	Education training skills and experience	Effectiveness training cleanliness and risk management	Mission-orientation dependability certification and efficiency

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

408	Which of the following aims to collate the best available data so as to provide management with statistics on relative advantages and disadvantages of all potential courses of action to allow efficient decision making ?	Operational Research	Execution	Verification	Reporting
409	Limits are set on expenditure in various categories and control kept on actual expenditures in an attempt to keep this within the planned limits is called _____.	planning	specification	financial interest	cost control
410	Which of the following must be eliminated to prevent accidents?	Orderliness	Good work habit	Unsafe actions	Frequent inspection
411	Which of the following main requirement that should exists for any PMS indexing of machinery items through out the fleet?	Uncertainty	Certainty	Doubt	Haziness
412	What is the objective evaluation of all facts opinions statements physical evidence and related information as well as defined action steps to reduce the possibility of recurrence?	Incident Requirements	Incident Conclusion	Incident Recommendation	Incident Investigation
413	The program normally based on the survey cycle length required by the classification societies and would detail the minor overhaul major overhaul and survey jobs to be carried out during the cycle with their corresponding data is called _____.	work planning	job order	specification	spare-parts requirements
414	The ship must be able to carry out its intended functions economically and be available when needed is called _____.	maintenance	components	request	efficiency

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

415	While the vessel was maneuvering with a pilot onboard the vessel accidentally collided with another vessel. Who is to be blamed for damages ?	Master	Pilot association	Ports authority	Stevedores
416	If a SAR aircraft dropped A combination of Red, Blue, Yellow streamers accompanying a package to a surface craft survivor it means this is the content.	miscellaneous equipment such as stoves, utensils, axes, etc.	mixed and various items	medical supplies	food and water
417	If a crew member is suffering from generalized hypothermia, it should be given by this	a dose of alcohol to his body	a brisk rub down	a hot meal and hot water	treatment for shock
418	What can be done as an alternative to suturing to close the wound if a crewmember has a small, gaping laceration of the arm that is not bleeding excessively.	Apply butterfly strips, then a sterile dressing.	Use temporary stitches of sail twin.	Wrap a tight bandage around the wound.	Massage the area to maintain circulation.
419	A faint is a brief loss of consciousness of no more than momentary duration caused by a temporary reduction in the flow of blood to the brain. How to prevent anyone from fainting?	Tell the person to sit down and lean forward with the head between the knees taking deep breaths.	Tell the person to sit down in a sitting position breathing normally.	Try to keep the person in an upstanding position.	If standing in a crowd, flex the leg muscles and toes to aid circulation.
420	A fire discovered in an operating laundry room dryer is considered to be which of the listed classes of fire?	Class B	Class D	Class A	Class C
421	A fire in an oil rig ballast pump room can be brought under control with minimal impact on stability by _____.	cooling the outside bulkheads with water	shutting all sources of air into the compartment	closing the sea chest	flooding the compartment with salt water
422	A flat block placed under the end of a wooden shore for the purpose of distributing pressure against a damaged structure is referred to as a _____.	gusset	joist	strongback	web
423	A gurgling noise is heard from within a cargo tank when discharging cargo,	tank foot valve is partially clogged	tank liquid is too viscous	pump is sucking air	pump discharge pressure is excessive

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	this would indicate that the _____.				
424	A hand portable CO2 fire extinguisher is effective on burning oil only _____.	if applied promptly	if applied in connection with foam	to prevent rekindling	if attempts to extinguish the fire with low velocity fog have failed
425	A hole in the hull above the waterline maybe temporarily patched up with or by _____.	any woods to patch up	calling shore technician for repair	any kind of welding or cementing	any thick cloth like pillow, mattress blanket.
426	A low velocity fog applicator is used in firefighting to _____.	apply large droplets of foam	break up burning embers	cool and smother the fire	extinguish hard to reach electrical fires
427	A man aboard a vessel, signaling by raising and lowering his outstretched arms to each side, is indicating _____.	all is clear, it is safe to pass	all is clear, it is safe to approach	danger, stay away	a distress signal
428	A man has suffered a burn on his arm characterized by reddening of the skin, blistering, and swelling. This is an example of what kind of burn?	Second degree burn	Major burn	Blister burn	Third degree burn
429	A man was signed as he fell overboard. After completing a Williamson turn, the man is not sighted. What type of search should be conducted.?	expanding circle	sector search	datum-drift search	parallel track search
430	A master should file a marine protest if _____.	The vessel encountered heavy weather which might have caused cargo damaged	Long shore labor went on strike in the port causing undue vessel delay	Portions of his vessels cargo were illegally impounded in a foreign port	Cargo was received at a ship which was damaged in land transmit
431	A self-righting survival craft will return to an upright position provided that all personnel _____.	are seated with seatbelts on and doors open	are seated with seatbelts on and doors shut	escape from the craft	are to shift to one side to right it
432	After launching the motor lifeboat when abandoning ship you should _____.	stand by on the side of the vessel	immediately steer away from the sinking ship	wait for the survivors	stay in the immediate area
433	After launching, an inflatable raft should be kept dry inside by _____.	draining the water pockets	using the electric bilge pump	opening the automatic drain plugs	using the bailers and cellulose

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

434	After measuring the length to which a section of shoring should be cut, you should cut the shoring _____	approximately 1/2 inch (1.27cm) shorter than measured length to allow for the use of wedges	approximately 1/2 inch (1.27cm) shorter per foot (304mm) of shoring to allow wet expansion	To the same length as the measured length	approximately 1/2 inch (1.27cm) longer than measured length to allow for trimming
435	An inflatable liferaft has inflated on top of you in an upside down position. What should you do next?	Pull yourself out from under the raft in a face up position to keep your lifejacket clear of the raft.	Dive down to prevent your lifejacket from fouling as you come out.	Wait for others to lift the raft off of you.	You should remove your lifejacket before attempting to right an inflatable raft.
436	An inflatable liferaft is floating in its container, attached to the ship by its painter, as the ship is sinking rapidly. Which of the actions listed should be taken with respect to the liferaft container?	Swim away from the container so you will not be in danger as it goes down.	Manually open the container and inflate the liferaft with the hand pump.	Take no action as the pull on the painter will cause the liferaft to inflate and open the container.	Cut the painter line so it will not pull the liferaft container down.
437	An inflatable liferaft is hand-launched by _____.	cutting the wire restraining bands	pulling a cord	throwing the entire container overboard	removing the rubber packing strip
438	An inflatable liferaft is thrown into the water from a sinking vessel. Which of the following actions occurs automatically after the painter trips the CO2 bottles to inflate the raft?	The painter detaches from the raft.	The sea anchor is deployed.	If upside down, the craft will right itself.	The floor inflates.
439	An inflatable liferaft should be lifted back aboard the ship by using _____.	the towing bridle	the single hook at the top of the raft	two lines passed under the raft	all of the above
440	Before making any welded repairs to the internals of a vessels fuel tank in a U.S. port, the tank must be examined by _____.	a certified marine chemist	the master of the vessel	the chief engineer	the insurance underwriter
441	Control of flooding on a VESSEL should be addressed _____.	only if a threat exists	following control of a fire	following restoration of vital services	first

# MANAGEMENT ENGINE

442	During an abandonment or drill, the first person to arrive at the survival craft should _____.	open the doors and prepare the craft for boarding	open the doors and start the sprinkler system	activate the emergency release handle	pass out food and water to personnel
443	During an emergency drill on a vessel, you hear three (3) short blasts on the whistle and three (3) short rings on the general alarm bells. This is the signal for _____.	abandon ship	man overboard	fire and emergency	dismissal from fire and emergency stations
444	During test and/or maintenance work of the CO2 system affecting the release system, precautions to ensure that the gas is not released into the engine room due to a mistake are to be ensured. What precautions should be taken?	Check the main valve for a potential leakage.	The main supply line to be blanked off prior to the work.	Arrange a watchman in the CO2 central.	No special precautions necessary.
445	Following a grounding, you can best determine that a SLACK fuel oil tank has been holed by _____.	sounding the tank	waiting for the vessel to list	examining tank boundaries	checking fuel oil strainers

# MANAGEMENT ENGINE

446	Following an accident the victim may go into the shock and die. Which of the following action should be taken to help avoid shock?	Keep the person awake	none of the above	Give the person a stimulant to increase blood flow	Keep the person lying down and at the comfortable temperature
447	How should the master ensure that the officer in charge of the watch know the location and operation of all navigational and safety equipment and can take account of the operating limitations of such equipment?	By have him demonstrate his ability.	By asking if he can.	By checking his certificate.	By consulting agent.
448	If a distress signal is received, what would you do?	Post extra look-out.	All of the alternatives together.	Try to make contact with the vessel in distress.	Contact SAR Authorities via nearest coastal Radio station.
449	If a drill required by regulations is not completed, the Master or person in charge must _____.	conduct two of the required drills at the next opportunity	All of the above	log the reason for not completing the drill	report this immediately to the Commandant of the Coast Guard
450	If a receiving station cannot distinguish a signal sent by flag hoist, it should	keep the answering pennant at the dip	hoist ZL	hoist ZQ	raise and lower the answering pennant
451	If for any reason it is necessary to abandon ship while far at sea, it is important for the crew members to _____.	get away from the area because sharks will be attracted to the vessel	separate from each other as this will increase the chances of being rescued	remain together in the area because rescuers will start searching at the vessels last known position	immediately head for the nearest land
452	If help has not arrived in 10 to 12 hours after abandoning a vessel in a rescue boat, you should _____.	shut down the engines if installed, and set the sea anchor	plot course for the nearest land	go in one direction until the fuel runs out	plot a course for the nearest sea lane
453	If more than one life raft is manned after a vessel has been abandoned _____.	reduce the number of rafts by getting as many people as possible into as	each raft should go in a different direction in search of land	the possibility of a search aircraft finding you is increased by spreading out	tie each of the rafts together and try to stay in a single group

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

		few rafts as possible			
454	If some of the officers and crew complained about food preparation, what should the master do?	Reprimand the complainants immediately	Investigate complainants with chief cook	Reprimand the chief cook immediately	Conduct a general meeting immediately
455	If you were put in charge of a fire team what is the minimum number of men wearing BA sets that you would allow to enter a smoke filled compartment?	1 man	4 men	3 men	2 men
456	In beaching a vessel, in order to carry out the operation safely and avoid further damage to the vessel, the Master should adjust the ___ according to the method of approach	trim	rudder angle	displacement	speed
457	What action would you choose as Engineer on Duty In case a fire alarm is sounded from the bridge?	Start the fire pump	Report to the muster station	Stop the engines	Contact the bridge by telephone and ask for instructions
458	In time charter the Master Is particulary concerned with _____.	Demurrage, seniority bonus and characters bonus	Lay time, dispatch money and demurrage	Requisition, provision and drydock	Cash advance, crew list, medical report
459	Is there any conditions that influent on the efforts when organising the fire fighting?	Where the fire break out, the ships mobility, distance to the fire station and the size of the fire brigade	Distance to the fire station and the size of the fire brigade, what is burning, possibility to get water	Where the fire break out, how many squads there is left, what is burning, distance to the fire station	Where the fire break out, how many squads there is left, the strength of the fire, the ships mobility, what is burning and communication

# MANAGEMENT ENGINE

460	No person may serve as the person-in-charge of both the vessel and the facility during oil transfer operation unless _____.	the Captain of the Port authorizes such procedure	there is ready access between the two	the vessel and facility are immediately adjacent	the person in charge has a rapid means of transportation between the two
461	No person may serve as the person-in-charge of oil transfer operations on more than one vessel at a time _____.	unless radio communication is set up between the vessels	unless the vessels are moored clear of all docks	under any circumstances	unless authorized by the Captain of the Port
462	No person may transfer oil to or from a vessel unless the person in charge _____.	is in the immediate vicinity and immediately available to the oil transfer personnel	has notified the captain of the port at least 24 hours before beginning each oil transfer operation	has in his or her possession a valid Certificate of Inspection or Tank Vessel Examination Letter	has in his or her possession a copy of the vessels Oil Record Book
463	The authority in implementing ISM Code on board vessel is the _____.	Master	Technical Superintendent	Chief officer	Designated person
464	The authority to grant an alternate procedure for oil transfer operations rests with the _____.	Area Commander	Officer-in-Charge, Marine Inspection	Captain of the Port	Nearest Coast Guard office
465	The in charged in appointing persons to be in command of the lifeboats and/or liferafts on a vessels is the _____.	Ship superintendent	Designated person-in-charge	none of the above	Company representatives
466	The key to a rapid effective response to a man overboard situation is _____.	good equipment	good communication	a dedicated crew	well conducted drills
467	The one responsible for lowering the survival craft is the _____.	none of the above	Helmsman	Last man aboard	First man aboard
468	The operator of an uninspected vessel MUST assist people affected by an accident if he or she can do so without _____.	serious danger to his or her own vessel	undue delay	creating a panic on either vessel	further damaging the other vessel

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

469	The person on a vessel who is responsible for maintaining the engineering spaces in a clean and sanitary condition is the	master or person-in-charge	none of the above	senior, mechanic, or mechanic on duty if not senior mechanic designated	chief engineer, or engineer-in-charge if no engineer is required
470	The person-in-charge of a vessel is required to submit a casualty report of an international grounding under what condition?	if it creates a hazard to navigation	if the grounding last over 48 hours	at the owners discretion	none of the above
471	The person-in-charge of a VESSEL shall insure that the fuel tank of each motor-propelled lifeboat is emptied, and the fuel is changed at least once every _____.	three months	twelve months	twenty-four months	six months
472	The person-in-charge shall insure that each lifeboat on a VESSEL is lowered to the water, launched, and operated at least once every _____.	three months	month	two months	six months
473	The temperature control system of the crankshaft bearings of the main engine indicates high temperature. What would be the correct action to be taken with regard to opening and checking of the crankcase?	Stop the engine immediately and keep the lubeoil pump running for at least 20 minutes before opening the crankcase?	Stop the engine and open crankcase down immediately for inspection.	Stop the engine immediately, stop the lubeoil pump, and inspect the crankcase after 5 minutes.	Reduce the RPM to a minimum and open the crankcase doors carefully.
474	The thing to do when a number of survivors is in the water after abandoning a vessel is	They should send the strongest swimmer to shore for assistance	none of the above	They should group to form a small circle of survivors to create a warmer pocket	They should form a raft by lashing their lifejackets together
475	The thing to do when maintenance is undertaken at sea, the engine personnel shall take precaution to _____.	Sudden roll of the ship	Empty the bilges	none of the above	Fill fuel service tank
476	The thing you do in order to release CO2 to the machinery spaces is you must physically open the engine room	none of the above	all of these	Control valve, then shut off the engine room ventilation	Control valve, then the CO2 releasing valve

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

477	The thing you will do when a CO2 fire extinguisher provided aboard a vessel has lost 10% of its charge is _____.	all of these	It should be weighed again in one month	It should be recharged	none of the above
478	The three basic elements necessary for any fire are _____.	fuel, heat, and oxygen	heat, gas, and flames	heat, nitrogen, and fuel	fuel oil, nitrogen, and oxygen
479	The three positions of an all-purpose fire nozzle are _____.	forward: solid stream, center: fog, back: off	forward: off, center: solid stream, back: fog	forward: fog, center: solid stream, back: off	forward: off, center: fog, back: solid stream
480	There exists an unqualified obligation to assist persons in distress, but does the Master have an obligation to assist in towing of a vessel?	Yes, but weather permitting.	Master has no obligations to assist in towing of a vessel.	Only if the vessel in distress can supply the insurance wire.	Master has no obligations to assist in towing of a vessel in distress, but may do so when taken necessary precautions in coordination with Chief Engineer and Company Claim Manager.
481	To get the greatest lasting effect on the crew with respect to safety is:	showing video tapes of actual accidents	publishing complete safety rules	incorporating safety practices in daily routine	none of the above
482	To serve as the person in charge of oil cargo transfer operations onboard a self-propelled tank vessel, an individual must _____.	be 30 years old	be a certified tankerman (PIC)	have a letter from the company stating his qualification	be licensed only
483	What condition when the master or person-in-charge of a vessel is required to submit a casualty report of an international grounding?	If it creates a hazard to navigation	If the grounding lasts over 48 hours	Under any condition	none of the above
484	What is included in the main objectives of Ships Management besides the following; service to character, safety matters, and environment on board?	Economy	Maintenance	Training	Accuracy
485	What should you do when abandoning a vessel, after the launching of the survival craft?	Plot a course for the nearest land	none of the above	Stay in the immediate area	Take a vote on which direction you should go

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

486	When flooding occurs in a damaged vessel, reserve buoyancy _____.	remains the same	increases	shifts to the low side	decreases
487	When fuel tanks are being topped off, the person-in-charge of bunkering is directly responsible for the _____.	loading rate	vessel draft readings	temperature of fuel received	quality of fuel received
488	When transferring survivors from a survival craft to a rescue vessel, personnel onboard the craft should _____.	remove their lifejackets to make it easier to climb onboard the rescue vessel	remain seated inside the survival craft and make the transfer one person at a time	enter the water and swim over to the rescue vessel	climb on top of the survival craft while waiting for their turn to transfer to the rescue vessel
489	When using the rainwater collection tubes on a liferaft, the FIRST collection should be:	poured overboard because of the salt washed off the canopy	passed around so all can drink	saved to be used at a later time	used to boil food
490	Which of the actions listed and instituted on your part will have the greatest lasting effect on the crew with respect to safety?	Displaying posters illustrating safety practices	Incorporating safety practices in daily routine	Publishing comprehensive safety rules	Showing video tapes of actual accidents
491	Which of the actions listed should be taken by the engineer on watch when the general alarm is sounded continuously for 10 seconds?	The fixed CO2 system should be activated.	Main engines should be secured.	Engine room ventilation should be started.	The fire pump should be started.
492	Which of the following operations must be personally supervised by the person-in-charge when taking on fuel?	Overboard disposal of all waste oil or slops from drip pans.	Sampling performed periodically during loading to ensure uniformity.	Posting of the Declaration of Inspection in a conspicuous place under glass.	Topping off any tanks being loaded.
493	Which of the following operations should be carried out when launching an inflatable liferaft by hand?	After inflation, detach operating cord from liferaft	Make sure the operating cord is secured to the vessel before throwing it over the side	Turn the valve on the CO2 cylinder to start inflation	Open the liferaft casing
494	Who is charged with appointing persons to be in command of the lifeboats and/or liferafts on a mobile offshore drilling units?	Designated person-in-charge	Tool pusher	Company man	Rig superintendent

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

495	Who is responsible for completing the Muster List (Station Bill) or muster list and posting it in a visible area aboard the vessel?	Chief Engineer	U. S. Coast Guard	Master	None of the above
496	Who is responsible for ensuring that someone is assigned to close the watertight doors in an emergency?	Coast Guard	Chief Engineer	Chief Mate	Master of the vessel
497	Who is responsible for lowering the survival craft?	First man aboard	Roustabout	Helmsman	Last man aboard
498	Who is responsible for reporting a casualty for a mobile offshore drilling unit?	The pilot.	The engineer.	The owner.	The surveyor.
499	Who is the leader of the lifeboat drill (abandon ship drill)?	Sen.Off.Engine.	The appointed lifeboat commander.	The first member of the crew arriving at the survival craft.	Sen.Off.Deck.
500	Who is the responsible person for the safety of the ship and all those onboard?	The Master	Master, Chief Officer and Chief Engineer	The company	The authorities in each different port the ship calls
501	Who shall insure that all records required by regulations are retained onboard a mobile offshore drilling unit involved in a casualty?	Engineer	Pilot	Officer-in-Charge, Marine Inspection	Owner
502	Who should be informed first when receiving a distress signal from an other ship/vessel?	AMVER	Associated Press	Your own company	The nearest coastal radio station
503	Who should be notified first prior carrying out repairs to the hull and machinery of a classed vessel?	Class surveyor	P & amp; I club	Insurance surveyor	Customs
504	Who should inspect and test an inflatable life raft?	Shipyard personnel	A certified lifeboatman	An approved servicing facility	The person in Charge
505	Who will communicate the adopted amendments under ART XII of the STCW Conventions to all parties for acceptance?	IMO Secretary General	ILO Director General	ISF Chairman	Martime Safety Committee
506	You are duty officer on	You did not	The fishing	You should ask	You shall always

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	board a vessel in open sea. The look out is doing work and you are alone on the bridge, presently checking the position in the chartroom. Suddenly you are colliding with a fishing vessel. You will be most to blame for the collision	maintain a proper look - out by all available means.	vessel should have kept away and you will not be blamed.	over VHF if there is any vessels in the surrounding waters before going to the chart room.	give the keep away signal when doing chart work.
507	You are starting to get low on water in the lifeboat. What should you do?	Mix sea water with 50% fresh water	Drink urine	Use sea water	Collect rain water
508	Your course of action if you have to abandon ship and enter a liferaft should be;	remain just a few meters from the vessel	get underway as far as you can	immediately get underway to avoid suction	remain in the vicinity of the sinking ship
509	Your liferaft is to leeward of a fire on the water and riding to its sea anchor. You should FIRST _____.	paddle away from the fire	boat the sea anchor	get out of the raft and swim to safety	splash water over the liferaft to cool it
510	When there is an increase in load on your boiler, what is needed to attain a good combustion?	Decrease fuel rate and air	Increase temperature and turbulence	Increase air and fuel rate	Decrease fuel temperature
511	A knocking sound from one cylinder of an operating air compressor indicates	excessive overload	a defective or broken high pressure unloader	a loose valve plate	
512	The exposed portion of the outboard propeller shaft is protected against seawater corrosion by_____.	A covering of plastic, rubber, or shrunk-on composition sleeve	a layer of oxidation formed when the metal of the shaft is exposed to seawater	a heavy lubricant	
513	A refrigeration system compressor crankcase is sweating or unusually cold. This is an indication of	a shortage of refrigerant in the system	an accumulation of liquid refrigerant in the crankcase.	a shortage of oil in the crankcase	
514	In a low pressure air compressor, the loss of volumetric efficiency normally results from_____.	adiabatic compression in the intercooler	heating of the air leaving the cylinders	constant enlargement of the clearance expansion volume	
515	How is the speed of a radial piston hydraulic motor controlled?	By varying the fluid flow rate discharged to the motor	Amount of cylinder block offset with respect to the rotor	Pintle discharge rate to the suction side of the pump	Length of the motor piston stroke on the power cycle

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

516	How do we maintain constant steam pressure?	By dumping steam from the boiler	By opening deck valves	By adjusting the safety valves	By controlling the amount of heat supplied to the boiler water
517	If the discharge valve is closed before the drive motor is stopped, which of the following types of pumps will most likely be damaged?	Propeller	Gear	Centrifugal	Turbine
518	How is the designed capacity of a centrifugal pump being maintained?	Packing box and packing gland is checked.	Gland seal and packing gland is checked.	Check for the impeller and lantern ring tightness	Ensure that impeller and wear ring clearance should not exceed the limit.
519	Which of the following describes a characteristic of scale forming impurities in boiler water?	Dissolved at low temperature and precipitates at high temperature.	Dissolved at high pressure and precipitates at low temperature.	Dissolved at low pressure and precipitates at high pressure	Dissolved at high temperature and precipitates at low temperature.
520	A good quality oil used in main propulsion engine lubrication systems should be_____.	free from all chemical additives	resistant to permanent emulsification	quickly chemically oxidized	readily saponified with water
521	The conical steel or composition cone installed on a propeller, known as a fairwater cone, provides which of the following benefits?	Protect against electrolytic corrosion	Help with lubrication	All of the above	Reduce turbulence
522	Which of the following statements is true concerning the overall efficiency of air compressors?	High pressure compressors are more	Two stage compressors are generally more efficient	The volumetric efficiency is decreased in multistage	Mechanical efficiency divided by compressor
523	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 so that air flow is not restricted.	use the same wetting oil on the element as is used in the compressor lubrication system
524	When the relief valve opens it discharges high pressure refrigerant vapor to the_____.	suction side of the compressor	liquid strainer	refrigerant inlet of the condenser	inlet side of the evaporator
525	How is dissolved oxygen in boiler feed water minimized?	Phosphate treatment	Surface blowdown	Maintain high feed water temperature	Bottom blow down
526	In a pneumatic automation system, a unit	reset action	proportional action	two position action	rate action

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	producing a signal to govern the position of the controller of the measured variable, relative to the value of the measured variable, is said to have _____.				
527	Why are removable sleeves installed on centrifugal pump shafts?	They increase the strength of the shaft.	They can be removed when it is necessary to lighten the weight of the pump.	They make it easier to replace the pump shaft packing.	They can be economically replaced as they wear out
528	How do lubricating oil and grease gets into the boiler water system?	Through chemical treatment	Through the heaters	Through the feed water circuit	Through the distilling plant
529	What is the function of a hydraulic telemotor transmitter used in an electro-hydraulic steering gear system?	To transmit the rudder angle to the bridge indicator	To send hydraulic signals to the receiving unit	To prevent the control linkage from striking the stops when hard over	To automatically purge all entrained air from the system
530	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 its mechanical efficiency?	0.55	0.83	0.79	0.18
531	When is the highest pressure in a diesel engine cylinder normally occurred?	After TDC	at TDC	before TDC	during air starting
532	Excessive side clearance between a piston ring and its groove will cause the ring to _____.	hammer the piston land above the ring	hammer the piston land below the ring	expand excessively under operating temperatures	scuff the cylinder liner excessively
533	A turbocharger is an air compressor driven by _____.	air delivery	engine exhaust gases	gear or engine chain	compressed air
534	After a normal firing, you should check for a/an _____.	faulty photocell detector	low steam pressure	open air damper	high voltage on the ignition electrode
535	What is the device used to keep moisture from passing through the system?	Trap	Humidifier	Aerator	Dehydrator
536	An air conditioning system with clogged filters will have which one of the following conditions?	Low heat transfer	Increased suction pressure	No head-pressure to the compressor	High suction-pressure to the compressor

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

537	What is the purpose of turning a main propulsion diesel engine with the cylinder test cocks open prior to starting?	Check the compression	Test the starting system	Remove condensation and other liquids from the cylinders	Check for proper lube oil pressure
538	The rate of the fuel injection in a diesel engine cylinder depends primarily on _____.	timing of the pump	the size of the holes in the fuel nozzle	shape of the combustion chamber	supply pressure to the pump
539	Excessive accumulation of carbon deposits on a boiler burner throat ring and diffuser could result in _____.	a decrease in boiler efficiency	too much excess combustion air	a reduced boiler fuel oil pressure	increased heat transfer and overheating
540	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/cm <sup>2</sup> at a speed of 96 RPM?	28,726 kW	1,959 kW	3,906 kW	14,363 kW
541	A diesel engine indicator diagram measures 12.5 cm in length and has a area of 22 cm <sup>2</sup> . What is the cylinder mean effective pressure if the spring used has a scale of 1.25 mm equals 1 kg/cm <sup>2</sup> ?	22.0 kg/cm <sup>2</sup>	34.5 kg/cm <sup>2</sup>	35.75 kg/cm <sup>2</sup>	14.08 kg/cm <sup>2</sup>
542	A diesel engine indicator diagram has an area of 22 cm <sup>2</sup> and a length of 12.5 cm. If the scale of the indicator spring is 1 mm = 1 kg/cm <sup>2</sup> , what is the cylinder mean effective pressure?	27.5 kg/cm <sup>2</sup>	17.6 kg/cm <sup>2</sup>	34.5 kg/cm <sup>2</sup>	36.0 kg/cm <sup>2</sup>
543	Economy and efficiency in the operating of a marine boiler have traditionally been characterized by _____.	maintaining the fuel oil temperature as high as possible	a clear stack (invisible stack gases)	a light brown haze from the stack	a slight wisp of white smoke from the stack
544	How will you operate a centrifugal fire pump at reduced capacity?	Adjust the relief value	Throttle the discharge valve	Open the priming line	Throttle the suction line
545	Blisters developing on boiler tubes can be	Waterside scale deposits	Cold feedwater	Hot feedwater	Air in the feedwater

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	caused by _____.				
546	Why is some main diesel engines vibrating at a certain RPM?	High engine speeds	Propeller unbalance	The engine is operating at critical rpm	An overloaded propeller
547	To obtain the best mixing of air and fuel with a fuel oil atomizer, you need to adjust the _____.	primary and secondary air cones for desired air flow	atomizer position using the distance piece	total air volume admitted to the boiler furnace	diffuser to the desired flow
548	Which of the following factors tends to increase scale formation on the saltwater side of a heat exchanger used in a diesel engine cooling water system?	Operating the engine while maintaining a high sea water outlet temperature	Leak in the cooler tube nest	A punctured sea water strainer supplying cooling water to the heat exchanger	Baffle plates that have been bent during prior removal
549	Where is the charging valve of a refrigeration system located?	Between the king valve and the liquid valve	Between the compressor and the receiver	Between king valve and the expansion valve	Between the suction valve and the discharge valve
550	The most important parameter for a marine diesel engine is the rating figure usually stated as _____.	BMEP	BHP	Efficiency	IHP
551	Compressed air to operate air powered tools is supplied by which of the following ?	Working air compressors	Boilers	Pneupress tanks	Centrifugal pumps
552	In most installations, the firing rate of a boiler using steam atomization is indicated by the _____.	burner register opening	fuel oil return pressure	fuel oil supply pressure	steam atomization temperature
553	What may cause white smoke exhausting from an operating diesel engine?	Insufficient combustion air	Burning lube oil	An overloaded engine	A cracked liner
554	What is the purpose of an exhaust gas bypass installed on a waste heat boiler?	Bypass exhaust gas at high loads to prevent excessive back pressure	Recycle exhaust gas to the turbocharger	Bypass a portion of the exhaust gas at peak loads for better efficiency	Reduce corrosion in gas passages at low loads
555	In a boiler furnace, incomplete combustion due to insufficient air yields an excess amount of _____.	carbon monoxide	carbon dioxide	nitrogen oxide	sulfur dioxide
556	What does the indicator card or pressure-volume diagram show?	Volume of the engine	Relationships between pressure and volume during one cycle of the	Relationships between pressure and temperature during one	Compression ratio of the engine

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

			engine	stroke of the engine	
557	What condition of an inlet manifold pressure does a turbocharged diesel engine have in relation to the load?	Approximately equal to atmospheric pressure at all times	Approximately equal to exhaust manifold pressure at all times	Constantly increasing as the amount of load increases	Constantly decreasing as engine load increases
558	Corrosion and grooving on the blading of an exhaust driven turbocharger is caused by certain components of residual fuel oils. These components are vanadium, sodium, and _____.	hydrogen	copper	carbon	sulfur
559	If crank web deflection readings is positive, what does this indicate?	Worn main bearing journals	Crankpin misalignment	Slack thrust bearings	Bearing shells shim dimension
560	If fuel injection to a four-stroke/cycle diesel engine begins earlier than designed, why is ignition maybe delayed?	Fuel oil injection pressure may not be high enough	Cylinder compression temperature may be too high	Cylinder compression pressure is not high enough	Scavenge and purge process is incomplete
561	When a diesel engine compression pressure is checked, where is the indicator connected?	Cylinder indicator cock	Injection line	Cylinder exhaust ports	Banjo oiler line
562	If the speed of a turbocharged diesel engine is maintained constant, the turbocharger speed will _____.	remain unchanged as the load decreases	increase as the load increases	decrease until the engine speed increases	decrease as the load increases
563	Waterside grooving is usually very difficult to locate in a boiler tube before leakage occurs because _____.	It usually occurs in the tube bends near the water drum	It occurs when only on the interior surfaces of desuperheater tubes	It occurs in narrow bands along the top of horizontal floor tubes exposed to the products of combustion	Detection and confirmation of this type of corrosion requires laboratory examination
564	Which of the following is used for bilge systems, evaporators and gas freeing systems on tanks?	Diverging nozzle	Ejector	Inert gas	Velocity pump
565	What is a low cylinder compression pressure and a high exhaust temperature indicate from among the choices?	Low cooling water temperature	A continuously open scavenge air port	Early fuel injection	Leaking valves

# MANAGEMENT ENGINE

566	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 its mechanical efficiency?	0.55	0.83	0.79	0.18
567	When is the highest pressure in a diesel engine cylinder normally occurred?	After TDC	at TDC	during air starting	before TDC
568	Excessive side clearance between a piston ring and its groove will cause the ring to _____.	scuff the cylinder liner excessively	expand excessively under operating temperatures	hammer the piston land above the ring	hammer the piston land below the ring
569	A turbocharger is an air compressor driven by _____.	air delivery	gear or engine chain	compressed air	engine exhaust gases
570	After a normal firing, you should check for a/an _____.	open air damper	high voltage on the ignition electrode	faulty photocell detector	low steam pressure
571	What is the device used to keep moisture from passing through the system?	Dehydrator	Trap	Humidifier	Aerator
572	An air conditioning system with clogged filters will have which one of the following conditions?	Increased suction pressure	Low heat transfer	High suction-pressure to the compressor	No head-pressure to the compressor
573	What is the purpose of turning a main propulsion diesel engine with the cylinder test cocks open prior to starting?	Check the compression	Test the starting system	Remove condensation and other liquids from the cylinders	Check for proper lube oil pressure
574	The rate of the fuel injection in a diesel engine cylinder depends primarily on _____.	the size of the holes in the fuel nozzle	shape of the combustion chamber	timing of the pump	supply pressure to the pump

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

575	Excessive accumulation of carbon deposits on a boiler burner throat ring and diffuser could result in _____.	increased heat transfer and overheating	a decrease in boiler efficiency	a reduced boiler fuel oil pressure	too much excess combustion air
576	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/cm <sup>2</sup> at a speed of 96 RPM?	3,906 kW	1,959 kW	14,363 kW	28,726 kW
577	A diesel engine indicator diagram measures 12.5 cm in length and has a area of 22 cm <sup>2</sup> . What is the cylinder mean effective pressure if the spring used has a scale of 1.25 mm equals 1 kg/cm <sup>2</sup> ?	22.0 kg/cm <sup>2</sup>	35.75 kg/cm <sup>2</sup>	34.5 kg/cm <sup>2</sup>	14.08 kg/cm <sup>2</sup>
578	A diesel engine indicator diagram has an area of 22 cm <sup>2</sup> and a length of 12.5 cm. If the scale of the indicator spring is 1 mm = 1 kg/cm <sup>2</sup> , what is the cylinder mean effective pressure?	17.6 kg/cm <sup>2</sup>	34.5 kg/cm <sup>2</sup>	36.0 kg/cm <sup>2</sup>	27.5 kg/cm <sup>2</sup>
579	Economy and efficiency in the operating of a marine boiler have traditionally been characterized by _____.	a slight wisp of white smoke from the stack	a clear stack (invisibile stack gases)	a light brown haze from the stack	maintaining the fuel oil temperature as high as possible
580	How will you operate a centrifugal fire pump at reduced capacity?	Throttle the discharge valve	Throttle the suction line	Open the priming line	Adjust the relief value
581	Blisters developing on boiler tubes can be caused by _____.	Air in the feedwater	Waterside scale deposits	Cold feedwater	Hot feedwater
582	Why is some main diesel engines vibrating at a certain RPM?	High engine speeds	An overloaded propeller	Propeller unbalance	The engine is operating at critical rpm
583	To obtain the best mixing of air and fuel with a fuel oil atomizer, you need to adjust the _____.	diffuser to the desired flow	primary and secondary air cones for desired air flow	total air volume admitted to the boiler furnace	atomizer position using the distance piece
584	Which of the following factors tends to increase	Baffle plates that have been bent	Operating the engine while	Leak in the cooler tube nest	A punctured sea water strainer

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	scale formation on the saltwater side of a heat exchanger used in a diesel engine cooling water system?	during prior removal	maintaining a high sea water outlet temperature		supplying cooling water to the heat exchanger
585	Where is the charging valve of a refrigeration system located?	Between the suction valve and the discharge valve	Between the king valve and the liquid valve	Between the compressor and the receiver	Between king valve and the expansion valve
586	The most important parameter for a marine diesel engine is the rating figure usually stated as _____.	BHP	BMEP	IHP	Efficiency
587	Compressed air to operate air powered tools is supplied by which of the following ?	Working air compressors	Pneupress tanks	Boilers	Centrifugal pumps
588	In most installations, the firing rate of a boiler using steam atomization is indicated by the _____.	burner register opening	fuel oil return pressure	steam atomization temperature	fuel oil supply pressure
589	What may cause white smoke exhausting from an operating diesel engine?	Burning lube oil	Insufficient combustion air	An overloaded engine	A cracked liner
590	What is the purpose of an exhaust gas bypass installed on a waste heat boiler?	Bypass exhaust gas at high loads to prevent excessive back pressure	Reduce corrosion in gas passages at low loads	Recycle exhaust gas to the turbocharger	Bypass a portion of the exhaust gas at peak loads for better efficiency
591	In a boiler furnace, incomplete combustion due to insufficient air yields an excess amount of _____.	sulfur dioxide	nitrogen oxide	carbon dioxide	carbon monoxide
592	What does the indicator card or pressure-volume diagram show?	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
593	What condition of an inlet manifold pressure does a turbocharged diesel engine have in relation to the load?	Constantly increasing as the amount of load increases	Approximately equal to atmospheric pressure at all times	Approximately equal to exhaust manifold pressure at all times	Constantly decreasing as engine load increases

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

594	Corrosion and grooving on the blading of an exhaust driven turbocharger is caused by certain components of residual fuel oils. These components are vanadium, sodium, and _____.	hydrogen	copper	carbon	sulfur
595	If crank web deflection readings is positive, what does this indicate?	Bearing shells shim dimension	Worn main bearing journals	Slack thrust bearings	Crankpin misalignment
596	If fuel injection to a four-stroke/cycle diesel engine begins earlier than designed, why is ignition maybe delayed?	Cylinder compression pressure is not high enough	Scavenge and purge process is incomplete	Cylinder compression temperature may be too high	Fuel oil injection pressure may not be high enough
597	When a diesel engine compression pressure is checked, where is the indicator connected?	Banjo oiler line	Injection line	Cylinder exhaust ports	Cylinder indicator cock
598	If the speed of a turbocharged diesel engine is maintained constant, the turbocharger speed will _____.	decrease as the load increases	remain unchanged as the load decreases	decrease until the engine speed increases	increase as the load increases
599	Waterside grooving is usually very difficult to locate in a boiler tube before leakage occurs because _____.	It occurs when only on the interior surfaces of desuperheater tubes	Detection and confirmation of this type of corrosion requires laboratory examination	It usually occurs in the tube bends near the water drum	It occurs in narrow bands along the top of horizontal floor tubes exposed to the products of combustion
600	Which of the following is used for bilge systems, evaporators and gas freeing systems on tanks?	Ejector	Inert gas	Velocity pump	Diverging nozzle
601	What is a low cylinder compression pressure and a high exhaust temperature indicate from among the choices?	Early fuel injection	Leaking valves	Low cooling water temperature	A continuously open scavenge air port
602	The speed of the turbocharger for a four-stroke/cycle diesel engine driving a generator at constant speed depends on the _____.	fuel injection pressure	engine speed	air intake manifold temperature	kilowatt load
603	What statement is correct pertaining to Oily Water Separator, OWS?	Ensure that no oil is pumped overboard.	Ensure that no raw sewage is pumped	Cleans engine scavenges.	Removes the water from the fuel before it is

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

			overboard.		burnt.
604	A diesel engine is warmed up and white vapor is noted in the exhaust, what does this indicate?	Excessive cylinder lubrication	Leaking cylinder liner	Lugging engine	Overloading of a one cylinder
605	What can cause a combustion knock occurring in a diesel engine?	Prolonged ignition lag	Prolonged injection lag	Reduced ignition lag	Excessive fuel penetration
606	What indicates a sudden increase in lube oil pressure to the main turbine?	A leak in the gravity tank	Debris clogging the system	A leaking lube oil cooler	Excessively cool lube oil
607	All of the diesel cylinders firing pressures are normal, yet all of the exhaust temperatures are low. Which of the following situations is responsible for this condition?	Leaking piston rings	Excessively early injection timing	Combustion knock	Light load
608	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
609	Which of the following conditions is responsible for the fuel oil to atomize when using a steam atomizer in an auxiliary boiler?	expansion of the steam in orifice plate	Expansion of the steam in the furnace	all of the above	expansion of the steam in the whirling chamber
610	What is a practical way of checking for excessive fuel injection in one cylinder of an operating diesel engine?	Check the cylinder exhausts for white smoke	Feel the high pressure fuel line	Frequently check the cylinder exhaust temperature	Isolate each cylinder and inspect the injector
611	Which of the listed conditions would indicate a dirty atomizer sprayer plate?	Fluctuating pressure in the windbox.	Carbon deposits on the register doors.	Dazzling white incandescent burner flame.	Dark streaks in the burner flame
612	Excess air must be provoked to an operating boiler to allow for _____.	complete combustion of fuel	heat losses up the stack	fluctuations in boiler steam demand	all of the above
613	The potable water piping systems in ships must be _____.	cadmium lined to prevent internal corrosion	independent of all other piping system	disinfected monthly with a chlorine compound	flush each time potable water is taken on board

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

614	What component of a diesel engine converts the linear motion of a piston into the rotary motion required to drive gears, propeller shafts, and generators?	Flywheel	Journal bearings	Crankshaft	Camshaft
615	If a boiler is smoking a black and increasing the boiler front air box pressure does not reduce the smoke, the cause can be _____.	high ambient air temperature	dirty atomizers	forced draft fan failure	heavy soot on tubes
616	What can cause black smoke exhausting from an operating diesel engine?	Burning fuel with a high vanadium content	Burning fuel with a lower sulphur content	Fuel dribbling from leaking fuel injectors	Burning fuel with high carbon content
617	If fuel injection occurs too early, a diesel engine will lose power for what reason?	Ignition will be delayed due to low compression pressure	Fuel will not be properly atomized in the cylinder	Fuel will ignite after top dead center	Maximum fuel expansion will occur on the compression stroke
618	The development of pinhole leaks where the boiler tubes enter the water drums and headers, may be evidence of _____.	Gas lining	Soot corrosion	Excess hydrazine	Excess alkalinity
619	What do pyrometers commonly found on diesel engine exhaust systems consist of?	Gyrostats and a voltmeter	Ammeters	A gas filled bellows, a tube and a pressure gauge	Thermocouples and its casing
620	Ejectors are simple, reliable, inexpensive, effective and _____.	hard to maintain	maintenance free	heavy	utilizes high grade metal
621	What can cause white smoke exhausting from a diesel engine?	High lube oil temperature	Plugged oil-scraper ring holes	Late injection timing	High compression temperature
622	What is the sign of an early injection timing in a diesel engine?	Low exhaust temperature and high firing pressure	High exhaust temperature and low firing pressure	High exhaust temperature and high firing pressure	Low exhaust temperature and low firing pressure

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

623	Regarding main propulsion boilers, what condition would normally be indicated if the bridge reported that white smoke was observed coming from the stack?	low fuel oil temperature	too much excess air	insufficient steam atomization pressure	high fuel oil viscosity
624	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
625	Poor atomization accompanied by an elongated flame from a stem atomization burner is most likely caused by _____.	improper operation of traps in atomizing steam return	the fuel oil temperature being too low	an improper cetane number	the forced draft fan too slow for the boiler load
626	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 inlet temperature of the lubricating oil	Decreasing the temperature of the jacket water	Increasing the TBN of the lubricating oil	Increasing the quality of the fuel-air mixture
627	If the turbocharger of a four-stroke /cycle diesel engine fails to operate properly, which of the following statements best describes the probable effect?	Exhaust temperatures will be high	Intake the manifold pressure will be high	Exhaust temperatures will be low	Intake manifold pressure will be unaffected
628	What will result in the longer ignition delay period resulting from the use of low cetane fuel?	More complete fuel combustion	Less fuel entering the cylinder	Lower cylinder combustion temperature	Higher cylinder firing pressure
629	Which of the following could result if there is late fuel injection in a diesel engine?	Low compression pressure	High exhaust temperature	Fuel knock	Reduced engine power
630	In a diesel engine, late fuel injection is indicated by black or gray exhaust smoke with _____.	fuel knock in each cylinder	low exhaust temperature	low firing pressure	mechanical knock in each cylinder
631	Late fuel injection in a diesel engine is indicated by low firing pressure. What might be the other indication?	Black or gray exhaust smoke	Low exhaust pressure	Low exhaust temperature	Mechanical knock in each cylinder

# MANAGEMENT ENGINE

632	Late fuel injection in a diesel engine is indicated by low firing pressure. What is the other indication?	Low exhaust temperature	Mechanical knock in each cylinder	Fuel knock in each cylinder	High exhaust temperature
633	White stack smoke from a main propulsion boiler could indicate _____.	excessive amount of combustion air	excessive furnace combustion temperature	insufficient for combustion	low fuel temperature
634	What will be the result of prolonged operation of a diesel engine closed cooling system with temperature lower than that of designated temperature?	Lower lube viscosity	Eliminate fuel detonation	Increased power output	Increase cylinder liner wear
635	On a steering gear system, what does the telemotor receiver unit control?	Hydraulic operating pressure.	Speed of rudder movement.	Hydraulic pump delivery.	Main steering motor control voltage.
636	On a steering gear system, what does the telemotor receiver unit control?	Hydraulic pump delivery.	Speed of rudder movement.	Main steering motor control voltage.	Hydraulic operating pressure.
637	What is the main operating characteristic of diesel engines that distinguishes them from other internal combustion engines?	Method of igniting fuel	Cooling system	Valve operating mechanism	Method of supplying air
638	What is the purpose of the flywheel?	Neutralizes the primary inertia force of the crankshaft	Prevents the engine from operating at critical speed	Reduces the shock of starting loads on the main bearings	Provides energy to operate the engine between power impulses
639	An operating turbocharged diesel engine that suddenly loses power, is due to a/an _____.	oil leak into the turbocharger	low fuel viscosity	restricted turbocharger air intake	dribbling injector
640	What might cause the sweating of the crankcase of a refrigeration compressor?	too much oil in system	overflowing	low cooling water temperature	solenoid valve is defective
641	Diesel engine mufflers or silencers reduce the engine exhaust noise by _____.	Increasing the exhaust gas velocity	Passing the exhaust through long head pipes	Reducing the exhaust gas velocity	Diffusing exhaust vibrations through activated carbon baffles
642	What could influence the ratio of pressure rise during the period following initial fuel ignition in a diesel engine?	Range of inflammability	Rheoretical fuel/air ratio	Length of the ignition delay period	Percent of CO2

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

643	What maintains the crankshaft axial alignment on a large diesel engine installation?	Main shaft flexible coupling	Engine thrust bearing	Crosshead bearing	Piston rod guides
644	When associated with main propulsion diesel engines, shaker, circulation, and spray are the three general methods used in _____.	piston cooling	pre-injection fuel oil treatment	lube oil filtration	lube oil purification
645	A pneumatic pressure tank is installed in a sanitary system to _____.	prevent the sanitary pump from losing suction	reduce pressure fluctuation in the system	provide higher pressure in the system	increase water flow through the system
646	What is the secondary function of a waste heat boiler?	Reduce engine exhaust noise	Reduce engine back pressure	Increase turbocharger efficiency	Increase engine brake horsepower
647	What is the primary function of a waste heat boiler?	Increase turbocharger efficiency	Reduce engine exhaust noise	Reduce engine back pressure	Recover heat which otherwise would be lost
648	Which of the precautions listed should be taken prior to blowing down a boiler water wall header?	Reduce the firing rate of the boiler to its minimum	Raise the water level above the surface blow	Relieve the pressure and cool down the boiler	Take the boiler out of service
649	The most rapid period of fuel combustion and cylinder pressure increase in a diesel engine should begin just before the piston reaches top dead center and completed when?	Shortly after passing top dead center	Shortly before bottom dead center	Shortly after bottom dead center	Immediately after injection lag
650	What is the condition of a crankshaft whose center of gravity coincides with its center line?	Simply unbalanced	Resonantly balanced	Statically balanced	Counter balanced
651	A diesel engine cooling water system with has pH of 3.0? What does this indicates?	Slight alkalinity	Normal	Slight acidity	Excessive alkalinity
652	How can you reduce the formation of carbon monoxide in diesel exhaust gases?	Avoid light load operation	Maintain the proper combustion and scavenging	Spray water into exhaust pipe	Keep the exhaust system free to carbon deposits
653	Which of the listed components is used to protect the boiler superheater against the radiant heat of the furnace?	Screen tubes	Generating tubes	Superheater support tubes	Control desuperheater

# MANAGEMENT ENGINE

654	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?	Completeness in the mixing of the fuel	Temperature of the cooling (sea) water	TBN of the lubricating oil	Temperature of the lube oil
655	Which of the following statement is true concerning the main diesel engine oil cooler?	The oil pressure is less than the cooling water pressure	The oil flow control valve is always installed in the oil input line	The oil pressure is greater than the cooling water pressure	The oil temperature is less than the cooling water temperature
656	What will happen to R-12 refrigerant system when there is an increased in heat load?	Short cycling of the compressor	Suction temperature will increase	The suction pressure will decrease	Increase the formation in the evaporator
657	Under normal operating conditions of constant load and combustion rates, which of the following will occur when the amount of excess air to the furnace is increased?	the superheater inlet temperature will decrease	the superheater inlet temperature will increase	the rate of heat transfer will decrease	the superheater outlet temperature will increase
658	Why should an exhaust gas bypass installed on a waste heat boiler?	To bypass exhaust gas at high loads to prevent excessive back pressure	To bypass a portion of the exhaust gas at peak loads for better efficiency	To recycle exhaust gas to the turbocharger	To minimize moisture condensation in the boiler gas passages at low loads
659	What is the use of engine indicator on a diesel engine?	To take compression and firing readings	To measure exhaust manifold pressure	To measure air intake manifold pressure	To measure turbocharger torque
660	What is the purpose of sacrificial zinc anodes used on the salt water side of diesel engine heat exchangers?	To reduce electrolytic action on heat exchanger metals	To prevent rapid accumulation of marine growth	To provide a protective coating on heat exchanger surfaces	To keep heat transfer surfaces shiny and clean
661	What is the importance of an oil mist detector in a main propulsion diesel engine?	To warn of excessive carbon build up in the lube oil.	To warn of excessively high crankcase vacuum	To warn of excessive mist density	To warn of excessively high lube oil temperature
662	What influenced the rate of pressure rise in a diesel engine cylinder following fuel injection and ignition?	Valve overlap	Fuel quality	Volumetric efficiency	Fuel efficiency
663	The greatest deterrent to heat transfer from the fireside to the waterside of a boiler is _____.	Gas film	Water eddies	Water film	Gas eddies

# MANAGEMENT ENGINE

664	The formation of a pit in a boiler tube is most likely to occur when _____.	Waterside deposits are present	The tube metal acts as a cathode	Dissolved oxygen is present	Sludge is present
665	The most rapid period of fuel combustion occurring in a diesel cylinder should begin just before the piston reaches top dead center and _____.	should be completed after top dead center	should continue through the afterburning period	when fuel injection has been completed	when fuel vaporization has been completed
666	Which of the following statements concerning the operation of a coil type forced circulation auxiliary water-tube boiler is correct?	Steam is generated in the heating coils and is forced fed to an accumulator	Water is continuously circulated through a preheater before it enters the flash counter	Moisture is removed from generated steam in a radiant superheater	Unevaporated boiler water collects in the bottom of the accumulator
667	Why are large steam drums not required in the design of a coil-type auxiliary water-tube boiler?	The heat of combustion is sufficient to remove all moisture from the steam	The volume of steam is small at low pressures	Steam and water are separated in the accumulator (flash chamber)	Automatic burner cycling controls steam volume and quality
668	The purpose of separating nozzle in the accumulator of a water-tube coil type steam generator is to separate _____.	Condensate from feedwater	Sludge accumulations from feedwater	Dry steam from the steam and water mixture	Superheated steam from saturated steam
669	The flash chamber attached to the auxiliary boiler _____.	permits heated boiler water to flash into steam	preheats feedwater entering the boiler.	regulates the eccentricity of the thermostat tube	prevents flashing of feedwater in the system
670	Which of the following statements is true concerning the water level indicating devices used with an auxiliary boiler?	the minimum size of the piping connecting the water column to steam drum is to be 1.5 inches (3.8cm)	the illustrated set up may be used on any steam boiler for any steam pressure up to 300 psig (2170 kPa).	the shut off valves on the boiler drum must be of cast iron	the shut off valves on the boiler drum must be locked sealed or open.
671	Why should the main steam stop valve of an auxiliary boiler be eased off its seat and then gently closed before lighting off?	To check the valve packing	To ensure that the valve will not be seized shut when hot.	To examine the valve stem for scars or nicks	To check for a tight bonnet seal
672	Which of the following procedures should be carried out to permit the continued operation of a crosshead engine with a leaky aftercooler?	Bypass the aftercooler to operate at sea speed	Blank off the cooling water lines and run at reduced speed	Switch to diesel fuel and run at reduced speed	Nothing needs to be done due to the low heating value of heavy fuel

# MANAGEMENT ENGINE

673	What is usually measured in seconds redwood or degrees engler from a measurement using standard apparatus in which a given quantity of the fuel oil is run through a standard orifice at a given temperature ?	Viscosity	Density	Specific weight	Specific gravity
674	Which device maintains systems pressure by compensation and shock absorption?	Actuator	Accumulator	Weight Loaded	Pilot Relief Valve
675	Modern day boiler automation allows bypassing the flame safeguard system to permit a burner to have a trial for ignition period during burner light-off. This period may not exceed _____.	5 seconds	30 seconds	15 seconds	10 seconds
676	To effectively limit the load of diesel engines which of the following components below must governors be equipped with?	A proportional action compensation mechanism	A fixed maximum fuel stop	Pivotless centrifugal flyballs	A variable maximum fuel stop
677	Setting the relief valve opening pressure in a hydraulic system lower than the required operating pressure will result in_____.	lower the operating efficiency of the system	overspeeding of the hydraulic pump	accelerated action of the system component	extended system life
678	The component which is used to thoroughly separate small particulate contamination from hydraulic fluid is a/an_____.	strainer	filter	accumulator	separator
679	Fuel injection systems meter fuel atomize fuel and _____.	inject fuel at the proper time	create turbulence in the combustion chamber	aid in completing cylinder scavenging	minimize fuel penetration into the cylinder

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

680	Where is the degree of fuel oil atomization dependent upon?	Air pressure at the furnace	Atomizer design	Boiler furnace size and shape	Air supply temperature
681	If there is a change in the degree of fuel atomization in a diesel engine what could be greatly affected in the combustion process?	Fuel penetration	Air turbulence	Fuel spray angle	Fuel injection rate
682	New piping and tubing to be installed in a hydraulic system can be safely degreased by using_____.	carbon tetrachloride	alcohol	a water-based detergent	a special petroleum solvent
683	If the fires in a steaming boiler have been extinguished accidentally you should not relight any burner until_____.	the furnace refractory has cooled below ignition temperature	all burning embers in the furnace are extinguished	the boiler furnace has been thoroughly purged	all fuel has been recirculated from the burners
684	What do we call the storage tank for liquid refrigerant?	Charging tank	All of these choices	Condenser	Purging tank
685	Overheating of the oil in a hydraulic system can be caused by _____.	an increase in the number of the hydraulic fluid film layers	fluctuating pump discharge pressure in response to normal load variations	continuous unnecessary and excessive pump discharge pressure	insufficient external pump slippage
686	The bourbon tube-type pressure gage will begin to straighten out when pressure is applied due to the _____.	Total force being the greatest on the outer circumference	Applied pressure being the greatest on the outer circumference	Applied pressure being the greatest on the inner circumference	Total force being the greatest on the inner circumference
687	In normal condition when do you start operation of the fresh water generator?	Within sight of a landmass	At full speed	Within the inland waters	In the open seas
688	At what RPM percentage should the compressor side of the turbo charger be washed?	Decided by the charge air pressure	At 100%	At least 25%	At least 50%
689	A solenoid valve in the boiler fuel oil supply line will close when the _____.	fuel oil temperature exceeds 150 degrees fahrenheit	forced draft fan fails	boiler is operating at low pressures	main turbine throttle valve is closed
690	Which device can be used to secure or hold furnace refractory in position?	Boiler tubes	Anchor strips	All of these choices	Brick bolts
691	Two-element feed water regulators operate by sensing _____.	Boiler water level and steam pressure	Boiler water level and steam flow	Boiler water level and feed water flow	Feed water flow and steam pressure

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

692	What is the most probable cause if the gage glass water level remains constant in a steaming boiler while maneuvering?	Broken feedwater regulator	Properly operating feed pump	High water level	Restricted gage glass
693	Failure of the burner flame in an automatic auxiliary boiler would probably be a result of _____.	full fuel pressure at the nozzle	water in the fuel oil	incorrect electrode setting	broken high tension leads
694	What is the most effective method in removing water from diesel fuel oil?	By using it in the engine	By straining the fuel	By centrifuging the fuel	By heating the fuel tanks
695	How is a vacuum initially created in a flash type distilling plant?	By air ejectors eductors or a separate vacuum pump	By the condensation of the saltwater feed	By the flashing of the feed water	By the condensation of the distillate
696	How is the vessel's steering initially and best maintained if one hydraulic pump of an electro-hydraulic steering unit fails?	By using the trick wheel	By using the standby pump	By using accumulator	By using the telemotor
697	Diesel engine cylinder head test cocks are used to _____.	connect exhaust gas analyzers to determine engine efficiency	pressure test cylinder heads to check for leaks	check cylinder lubrication prior to starting engine	remove moisture accumulations from cylinders prior to starting
698	Which of the listed operational checks should be continuously made on the main propulsion reduction gears?	Check radial bearing wear	Check teeth for pitting and scuffing	Check lube oil bearing temperatures	Inspect alignment between gears and turbine
699	Before starting a diesel engine you should always _____.	clean the air filter	change the fuel oil strainers	check the crankcase oil level	check the pyrometer readings
700	Which of the following actions listed below should be taken if the water gage glass on a steaming boiler breaks?	Close the gage glass cutout valves	Close in on the feed stop-check valve	Reduce the firing rate	No action is necessary since checks in the cutout valves automatically seat to stop loss of steam and water
701	What control procedures must be done before putting into operation a steam driven cargo pumps?	Exhaust valve to be closed	Warping heads to be balanced	Steam lines to be thoroughly drained	Clutch to be engaged
702	As engine RPM is increased from idle speed	Compression ratio	Fuel/air ratio	Compression pressure	Lube oil pressure

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	to full load speed which of the conditions listed will decrease?				
703	In the event of a failure of the pneumatic control system a multi-element feedwater regulator is designed to operate as a _____.	constant-volume feedwater regulator	constant-pressure regulator	thermo-hydraulic feedwater regulator	manually controlled feedwater regulator
704	When there is an increase in load on your boiler what is needed to attain a good combustion?	Decrease fuel rate and air	Increase air and fuel rate	Decrease fuel temperature	Increase temperature and turbulence
705	Operating a propulsion diesel engine at less than 30% of designed normal load for prolonged periods will result in _____.	carbon formation on combustion chamber surfaces	extended valve life	decreased fuel consumption per brake horsepower	more complete cylinder scavenging
706	Before opening any part of refrigeration system for maintenance what precaution must be taken?	Prevent entrance of moisture since positive pressure exists in the system	Defrost line to remove frost on coils to ensure visibility of parts to be maintain	Pump down the system before doing maintenance work	Set high pressure cut-out on manual to prevent automatic starting
707	What do you call a procedure where main systems such as propulsion system electric power generation steering gear cargo handling systems fire systems and auxiliary systems is subjected to a comprehensive testing program to verify the actual condition versus the design condition?	Performance test	Data recording test	Data processing procedure	Diagnostic system procedure
708	One of the main differences between the various types of screw pumps is in the _____.	stuffing box diameter	type of driving gears	direction of rotation of the screws	pitch of the screws
709	Which device converts hydraulic and pneumatic energy into mechanical working energy?	Direction Valve	Vane Compressor	Relief valve	Accumulator

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

710	Oil mist detector is used to detect an oil mist formation in the engine crankcase caused by _____.	overheating of oil	low oil pressure	dirty oil	low oil level
711	Thermostatic steam pressure reducing valves are used in the fuel oil service system to control the _____.	double bottom fuel oil tank temperature	heater supply steam flow	at temperature steam flow in the heater discharge circuit	pressure of the fuel supplied to the burners
712	When fuel oil heaters are required for main engine operation _____.	the system shall be designed to permit series or parallel operation	each heater shall have the capacity to supply the main engine at full power	at least two heaters of approximately equal size are to be installed	none of these choices
713	On tank vessels equipped with power operated cargo tank valves the type of power actuator most commonly used is _____.	hydraulic	steam	electric	diesel
714	Helical gears are preferred over spur gears for reduction gear units due to the fact that they _____.	eliminate pinion deflection	prevent torsional stress	be easier to lubricate at high speed	produce less noise and vibration
715	Which of these is NOT an application of accumulator ?	Emergency Operation	Weight Loaded	Shock Absorption	Volume Compensation
716	When the hydraulic control lever for deck winch is placed in the neutral position the spring set brake on the fluid motor drive shaft is _____.	engaged by spring action and is ensured to be locked in place by hydraulic pressure	opened hydraulically and held open by spring action whenever the electrical supply is secured	released by spring action and hydraulically locks the winch when the drum ceases rotating	engaged by spring action and only released by hydraulic pressure
717	What is the purpose of after coolers in an air compressors?	Reduce the temperature of compressed air	Dampen pressure pulses in the discharge air	Decrease the density of compressed air	Ensure complete expansion of the compressed air
718	Information on the data-logger can be helpful in determining the long term probability of machinery failure if you _____.	evaluate series of readings to obtain operating trends	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	secure the machine under relatively steady state conditions
719	The purging point on some compressors in low pressure refrigeration systems is connected to the _____.	condenser	evaporator	compressor	economizer

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

720	In the vapour compression cycle of a closed system after the liquid refrigerant flows through the condenser it will then pass to _____.	flow control Valve	expansion Valve	evaporator	liquid Receiver
721	A sulfite test is performed on water boiler to determine the amount of _____.	excess nitrate present	excess sulfite present	dissolved iodate present	carbon dioxide present
722	What control procedures must be done before putting into operation a steam driven cargo pumps?	Warping heads to be balanced	Steam lines to be thoroughly drained	Clutch to be engaged	Exhaust valve to be closed
723	Excessive side clearance between a piston ring and its groove will cause the ring to _____.	expand excessively under operating temperatures	hammer the piston land above the ring	hammer the piston land below the ring	scuff the cylinder liner excessively
724	Which of the following conditions listed below is responsible for the fuel oil to atomize when using a steam atomizer in an auxiliary boiler?	Expansion of the steam in the whirling chamber	Expansion of the steam in the boiler	Expansion of the steam in the furnace	Expansion of the steam in the orifice plate
725	For a continuous operation of diesel engine why is it that the use of a duplex filter unit would be the best arrangement?	Clogging will not occur	Filtering occurs twice in each pass of oil through the system	Changing filter elements would not interrupt engine operation	Dropping pressure is half of that through a single filter unit
726	The fuel oil meter in the fuel oil service system should be bypassed when _____.	finished with engines is given by the bridge	conducting programmed routine maintenance of the meter while underway	transferring fuel from storage to settler tank to avoid erroneous fuel consumption readings	warming the oil in the burner headers by recirculation prior to boiler light off
727	Which of these is known as normally open pressure control valve?	Pilot Relief Valve	Pressure Reducing Valve	Slide Spool Directional Valve	Flow Control Valve
728	Excess air must be provided to an operating boiler to allow for _____.	complete combustion of fuel	fluctuations in boiler steam demand	heat losses up the stack	all of these choices
729	In a water cooled stern tube a slight leakage of water across the packing gland is provided to _____.	flush all dirt and grit from the bearing staves	flush all dirt and grit from the gland	keep the stern tube fair water cool	keep the gland packing cool
730	What kind of damage will occur as a result of a	Loss of vacuum	Clogged steam strainers	Fouled nozzles	Faulty steam pressure

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	serious leak in the air ejector condenser assembly?				
731	While attempting to read a tank level indicator the mercury column drops rapidly. What does this indicate?	An improperly calibrated gage	A leak in the gage line	Free surface effect in the tank	Excess air in the balance chamber
732	If a burner were inserted too far into the boiler furnace it would lead to poor combustion and carbon deposits will be created at the _____.	air cone	furnace opening	burner tip	register doors
733	What are the two most common gases used in pneumatic systems?	Compressed air and Nitrogen	Helium and Nitrogen	Oxygen and Acetylene	Oxygen and Hydrogen
734	What is the indication of distortion on the spray pattern of a nozzle or injector?	Cooling water temperature rise	Overload of that particular cylinder	High firing pressure	Smoky exhaust
735	The solenoid valves in the fuel oil supply line to an automatically fired auxiliary boiler are automatically closed by _____.	low steam pressure	high steam pressure	a decrease in feed temperature	high furnace air pressure
736	The liquid refrigerant which is stored in the liquid receiver is at _____.	high pressure	none of these choices	medium pressure	low pressure
737	What is the most important property of lubricating oil for reciprocating air compressor?	Low carbon-forming tendency	High viscosity index	Good corrosion protection	Good anti-wear property
738	After a normal firing you should check for a/an _____.	high voltage on the ignition electrode	open air damper	faulty photocell detector	low steam pressure
739	Which of the following is a kind of over speed trip that is fitted to the engine?	Electro-pneumatic	Pneumatic	Hydraulic	Hydro-pneumatic
740	What is an intense discrete frequency sound radiating from the propeller and is much like a steady bell tone?	Vibration	Humming	Singing	Pounding
741	Which of the following device is used to set the maximum pressure in a	Hydraulic Pump	Actuator	Compressor	Pilot Relief Valve

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	hydraulic system?				
742	What is the indication of a bubble forming in the sight glass in the liquid sight flow indicator of an R-22 refrigeration system?	The system is fully charged	Ice crystals are forming in the refrigerant	The system contains less than a full charge of refrigerant	There is air leakage from the condenser
743	What is the first alarm that will sound before the diesel engine stop due to lube oil pressure? I - high pressure alarm II - cut - out pressure alarm III - Low lube oil pressure	I and III only	I and II only	III only	II only
744	An air conditioning system with clogged filters will have which one of the following conditions?	Low heat transfer	Increased suction pressure	No head-pressure to the compressor	High suction-pressure to the compressor
745	To ensure that a refrigeration unit will not start while undergoing repairs you should _____.	secure and tag the electric starter panel	persons in the area should leave immediately	inform all persons in the area not to start the unit	place a crow bar in the flywheel of the unit
746	Which of the listed operational checks should be continuously made on the main propulsion reduction gears?	Inspect alignment between gears and turbine	Check lube oil bearing temperatures	Check teeth for pitting and scuffing	Check radial bearing wear
747	In order to start a large low-speed main propulsion diesel engine on high viscosity fuel after an extended shutdown the _____.	intake air should be preheated	none of these choices	lube oil outlet temperature should be increased 20 degrees above normal	fuel must be preheated
748	In which of the listed hydraulic systems below will the installation of an oil cooler be necessary?	Constant tension mooring winch system	Internal combustion engine hydraulic starter system	Watertight door system	Hatch cover system
749	If a severe leak develops in the electro-hydraulic steering gear which of the listed conditions could result?	Jamming of the follow-up device	Overheating of the gyrocompass	Loss of vessel steering	Jamming of the six-way valve
750	Which of the following is the most common cause of machinery vibrations when the vessel is maneuvering?	Wrong timing	Critical speed	Checked M/E deflections	Loose foundation bolts
751	After changing out the fuel filters the diesel engine fails to restart. What is the	Low compression	Change in viscosity	Air-bound fuel system	Improper spark

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	probable cause of this condition?				
752	In order for microbiological growths to thrive in fuel tank it is necessary for _____.	small amount of water to be present	high temperature to exist	low temperature to exist	large amount of water to be present
753	How will you avoid acid corrosion of the economizer tubes when blowing tubes?	Lower boiler pressure	Raise boiler pressure	Lower water level	Drain the soot blowers headers
754	Which of the following is operated from the main engine room console on an automated ship?	Fire pump and lube oil pump	Distilling plant and shaft alley door	Lube oil pump and distilling plant	Shaft alley door and fixed CO2 release
755	In preparing the boiler for survey it should be cooled down slowly and when pressure gauge registers zero. Which of the following should be opened to avoid formulation of a vacuum?	Main Steam Valve	Manhole Cover	Air Cock	Drain Valve
756	A hydraulic fluid flow control circuit controlling linear actuator speed during extension with the pump operating at system pressure is known as _____.	bleed-in circuit	metered-in circuit	bleed-off circuit	metered-out circuit
757	Which of the combustion parameters listed below is used in a diesel engine but NOT related to the injection system?	Penetration	Atomization	Effective stroke	Metering
758	Rotation of the steering wheel on the navigation bridge initiates oil pressure being applied to the steering gear rams by _____.	moving the automatic differential valve	varying the angle of a tilting box or eccentricity of a floating ring	moving the follow-up indicator which regulates the six-way valve	regulating the oil flow with the six-way valve
759	The loss of efficiency thus an increase in absorbed power and a lower speed is the result of the accumulation on the propeller by _____.	lignum Vitae	barnacles	copper	nickel
760	With regards to fluid flow control an advantage of pneumatic control systems over electrical control system is _____.	continued control through temporary electrical power losses	low energy input	no transmission losses	practically no limit to the power available for a given system

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	_____.				
761	When there is no movement of the rams on an electro-hydraulic steering gear the tilting box of the running pump is _____.	set to form a maximum torque	rotating backwards	on the purge and vent stroke	in the neutral position
762	In sewage treatment the term maceration refers to the process of _____.	eliminating bacterium coli from the sewage	breaking up solid matter into fine particles	precipitating nondecomposed waste in a collection tank	chemically adjusting the sewage pH to 7.0
763	Before opening any part of refrigeration system for maintenance what precaution must be taken?	Defrost line to remove frost on coils to ensure visibility of parts to be maintain	Set high pressure cut-out on manual to prevent automatic starting	Prevent entrance of moisture since positive pressure exists in the system	Pump down the system before doing maintenance work
764	One function of burner atomization steam is to _____.	impart swirling motion to the oil for efficient combustion	maintain a constantly high fuel temperature	prevent overheating of the atomizer when secured	maintain a constantly high fuel pressure
765	The function of the hydraulic telemotor transmitter used in an electro-hydraulic steering gear system is to _____.	Prevent the control linkage from striking the stops when hard over	Automatically purge all entrained air from the system	Transmit the rudder angle to the bridge indicator	Send hydraulic signals to the receiving unit
766	What is the purpose of a restrictor valve as it is used in a hydraulic hatch cover system?	Prevent the hydraulic pump from overheating	Restrict the oil supply to the hatch covers not in use	Control the speed of the hatch cover movement while closing	Prevent oil backflow to the actuators
767	A pneumatic pressure tank is installed in a sanitary system to _____.	reduce excessive cycling of the sanitary pump	provide a higher pressure in the system then the pump can deliver	increase water flow through the system	prevent the sanitary pump from losing suction
768	The fins on the tubes of a fin type fuel oil heater are provided to _____.	decrease fuel flow	clean the fuel oil	increase heater efficiency	prevent tube erosion
769	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?	All of the above.	Open all indicator valves.	Ensure proper cylinder lube oil flow.	Open all air space drain cocks.
770	If the boiler trip due to water contamination in _____.	secure the settler tank	secure the burner valves	purge the boiler furnace	reduce the load on the boiler

# MANAGEMENT ENGINE

	the fuel oil, what is your first preventive action.	suctions			
771	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.	white on the detachable link and red 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	white on the detachable link and white 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
772	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	red for two links on either side of the detachable link	white on the detachable link	white for two links on either side of the detachable link
773	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	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	three turns of wire wrapped around the detachable link
774	Underway on watch in the fireroom, the bridge reports black smoke coming from the stack. This is an indication of _____.	excessive steam atomization pressure	fuel oil temperature too low	All of the above	excessive air-fuel turbulence
775	Underway on watch in the fireroom, the bridge reports white smoke coming from the stack. This is an indication of _____.	high fuel oil viscosity	excessive excess air	insufficient steam atomization pressure	low fuel oil temperature
776	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 _____.	Stay with the relieving engine officer	Notify the Master	stop the main engine immediately	notify the chief engineer officer
777	Which of the conditions listed should be immediately reported to the engineering officer on watch?	Water trickling in through the stern gland.	Oil in the drain inspection tank.	Steam leaving the vent of the gland exhaust condenser.	Lube oil passing through the bulls eye of the gravity tank overflow line.
778	The watch stander in the engine room reported that a high temperature alarm for a main engine	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

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	bearing has just sounded. Your next instruction to the watch stander should be to _____.				
779	A polarization of a radio wave is determined by a:	height of the aerial	width of the aerial	position of the aerial	length of the aerial
780	A radio-wave travels in the air at a speed of:	300.000 meters per second	300.000 per kilometers per hour	300.000 meters per minute	300.000 kilometers per second
781	A VHF transmission range is mainly determined by:	the height of the aerial	length of the aerial	the moment of propagation	the right position of the squelch-adjustment
782	A VHF transmission range is mainly restricted by:	the length of the aerial	atmospheric condition	the curvature of the surface of the earth	reflection by the ionosphere
783	Acoustic feedback can arise:	because the loudspeaker works as a microphone	because the volume adjustment of the speaker is too high	because the battery is strong	because outside noise is amplified by the loudspeaker in the microphone
784	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 :	accommodation space communication system	personnel alarm	engineers assistance-needed alarm	All of the above
785	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	with weak incoming signals distortion is reduced	All of the above
786	Automatic amplifier regulation is used to:	reduce distortion of the strong incoming signal	reduce noise if there is no signal	increase incoming signal	reduce distortion of weak incoming signals
787	Before a mariphone is installed on board:	contribution must be paid	the ship must pass the port state control inspection	a license must be issued	a letter of registration must be applied for
788	By DUAL WATCH in maritime VHF-communication is understood:	the possibility to keep radio-contact with two or more stations simultaneously	automatic reduction of transmitting power	to keep a listening watch on two channels more or less simultaneously	None of the above
789	By frequency is meant:	number of vibrations	Any of the above	number of vibrations per unit of time	time lapse of vibrations.
790	By the degree of	ability to	ability to make	ability to make	ability to

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	selectivity of a receiver is meant:	distinguish weak stations from adjacent stronger stations	strong station audible	weak stations audible	distinguish strong stations from weak stations
791	By wave length is understood:	the propagation direction of a radio vibration	the distance travelled by a radio vibration in a period	the propagation of wave signal	the propagation speed of a radio vibration in free space
792	Calls, announcement and conversations from one station to another on board should be as brief as possible and consistent with _____.	clarity	Intelligibility	understandability	loudness
793	Channel 70 for digital selective calling for Distress, Safety and Calling frequency operate at:	158.526 MHz	157.526 MHz	156.526 MHz	159.526 MHz
794	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 Charlie Quebec Mayday	Key the microphone three times in quick succession	Broadcast Seelonce immediately
795	For the connection between VHF and antenna must be used:	a coax cable of proper impedance	an arbitrary coax cable	a three vein cable with earth-connection	a copper wire of sufficient diameter to minimize loses
796	For the VHF-antenna connection is used:	a properly insulated copper wire of sufficient diameter	an arbitrary coax cable	a coax cable of proper impedance	a 50-ohm resistance coax cable
797	How should the letter D be pronounced when spoken on the radiotelephone?	DONKEY	DUKE	DELL TAH	DA VID
798	In daytime, as a result of sunlight, the number of layers of ionization will:	not change	increase	vanish	decrease
799	In making VHF communication or test transmission you must:	with DSC use, first broadcast the carrier wave for at least three seconds	All of the above	first tap on the mike several times, but not more than ten times	identify yourself with your call sign and /or ships name
800	In maritime communication two international treaties are primarily involved. They are:	Solas and its rules	Both international and local rules	Solas and the international treaty of far messaging	The IMO at London and the ITU at Geneva
801	In radiotelephone communications, the	the message following is a	a calling station has an urgent	a ship is threatened by	the message following the

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	prefix PAN indicates:	meteorological warning	message about the safety of a person	grave and imminent danger and requests assistance	prefix will be about the safety of navigation
802	In shore-ship use, what is useful range of VHF?	About 40-70 miles Line of sight	About 50-70 miles Line of sight	About 30-70 miles Line of sight	About 30-70 miles Line of sight
803	In subjecting a metal to an axial pull, its _____ can be found.	main haul	elasticity	breaking strength	strength
804	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 MHz	500 MHz	2182 KHz	518 KHz
805	Long distance communication in the HF-bands depends on:	satellites	dimmer setting	ionization layers	ground wave
806	Modulation is _____:	blending LF & HF signals	to enhance the side bands in relation to the carrier wave	controlling the wave signal	detecting frequencies
807	Moored in a harbour, transmitting with a mariphone is _____.	not allowed	allowed in consultation with the harbour-master	always allowed	sometimes allowed
808	What does MUF stand for?	mega/ultra high frequency	highest possible frequency that can be made with an HF-transmitter on board	most effective frequency, to make a connection with an HF-transmitter	highest possible frequency that will be reflected by the ionosphere
809	Of the AM-signal _____.	both amplitude and frequency of the carrier wave are variable	amplitude modulation	amplitude and frequency of the carrier wave are constant	amplitude is variable and frequency of carrier wave is constant
810	On board an accident happened. Urgent radio-medical advice is needed. We choose the category _____.	urgency	safety	security	routine
811	On which frequency are navigational and meteorological messages normally sent on the	2182KHz	518KHz	214KHz	216KHz

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	NAVTEX system?				
812	One wishes to have a telephone conversation with a person whose name is known. This is what is called _____.	a private call	a collect call	a direct call	a personal call
813	Pledge of secrecy applies _____:	only to certificate holders	only for those who want to send and/or receive a message	for Management Level officers only	for everybody
814	Polarization of a radio wave means _____:	the direction of the electrical field	the beam-angle of a transmitting aerial	the propagation speed of the signal	transmission of radio wave
815	Radio signals in the HF channels propagate mainly:	along the curvature of the earth	between the earth and satellites	in the ionosphere	through hops between the ionized layers and the earth
816	Radio waves used in satellite communication are not affected by ionosphere because _____.	TDM-signals are used	the frequency of the radio waves is to very high	the frequency of the radio waves is to high	a disc aerial is used
817	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	means of communication between the bridge and engine room	fire pump relief valve	emergency lighting system
818	Squelch mode serves to suppress:	noise in transmission	noise in speech-breaks in an SSB-signal	noise in absence of an FM-signal	background noise in receiving a weak FM-signal
819	The legal type VHF-antenna has a length of:	3.5 meters	10 meters	7 meters	1 meter
820	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
821	The carrier frequency is also given as _____.	suppressed frequency	assigned frequency	carrier frequency	frequency identity
822	Following an overhaul of a crosshead type diesel engine, the engine is jacked over with the	All of the above.	Open all indicator valves.	Ensure proper cylinder lube oil flow.	Open all air space drain cocks.

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	turning gear as part of the pre-start procedure. Which of the listed pre-start procedures should be carried out?				
823	If the boiler fires are extinguished by water contamination in the fuel oil, you should FIRST _____.	secure the settler tank suction	purge the boiler furnace	secure the burner valves	reduce the load on the boiler
824	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 _____.	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	white on the detachable link and white 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
825	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	red for two links on either side of the detachable link	white on the detachable link	red on the detachable link
826	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
827	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 a series of readings to obtain operating trends	secure the machine under relatively steady state conditions	evaluate only the latest logged data as this is the best indication of plant status
828	Underway on watch in the fire room, the bridge reports black smoke coming from the stack. This would indicate _____.	fuel oil temperature too low	excessive air-fuel turbulence	excessive steam atomization pressure	All of the above
829	Underway on watch in the fireroom, the bridge reports black smoke coming from the stack. This would indicate _____.	excessive air-fuel turbulence	All of the above	excessive steam atomization pressure	fuel oil temperature too low

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

830	Underway on watch in the fireroom, the bridge reports white smoke coming from the stack. This would indicate _____.	high fuel oil viscosity	low fuel oil temperature	insufficient steam atomization pressure	excessive excess air
831	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 error signal	the reset signal	feedback	proportional band
832	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	notify the chief engineer officer	stop the main engine immediately	all of these
833	Which of the conditions listed should be immediately reported to the engineering officer on watch?	Oil in the drain inspection tank.	Steam leaving the vent of the gland exhaust condenser.	Water trickling in through the stern gland.	Lube oil passing through the bulls eye of the gravity tank overflow line.
834	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	secure the fuel manifold	shut off the power to the pump
835	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 _____.	increase the speed of the lube oil supply pump	bring the main engine speed to idle	check the status of the lube oil coolers	immediately notify the bridge
836	The HF-band is in the frequency range _____:	3 - 30 MHz	3 - 30 kHz	3 - 30 THz	3 - 30 GHz
837	The holder of ship low power radiotelephone operators permit is authorized to operate equipment or station using:	A3 of F2 emissions	A3 or F3 emissions	F4 emissions	A1 emissions

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

838	The ID of an Inmarsat M station on board starts with:	3	1	7	5
839	The maritime radio system consisting of a series of coast stations transmitting coastal warnings is called:	NAVTEX	HYDROLANT/HYDROPAC	SAFESEA	NAVAREA
840	The maximum range of a VHF radio-set from ship to ship at sea is _____:	20 Nautical Miles	2 Nautical Miles	100 Nautical Miles	200 Nautical Miles
841	The MF-band is in the frequency range _____:	3 - 30 THz	300 - 3000 kHz	3 - 30 MHz	30 - 300 kHz
842	The obligation to identify oneself when using VHF is _____:	always	only when navigating by radar	only when navigating in a heavily congested areas	only when sailing in a block area
843	The portable walkie talkies required to be carried by GMDSS regulations should have which channels as a minimum?	Channels 6, 13 & 16	Channels 6 & 16	Channels 13 & 16	Channel 16 only
844	The prescribed test of an approved portable VHF radio set (portophone) must be done once a _____.	month	day	year	week
845	The presence of a VHF-installation is primarily intended to:	take part in public traffic	enhance the safety of lives at sea	take part in harbour traffic	take part in all traffic
846	The propagation of radio-signals in the VHF-band is:	dependent on the hour of transmission (day or night)	dependent on the weather condition	dependent on the power emitted and the temperature of the atmosphere	almost rectilinear
847	The recommended connection between antenna and VHF is:	coax cable	three vein cable	band cable	cable connection
848	The responsibility for the transmitting equipment lies with the:	master	ship owner	user of the installation	charterer
849	The rule for having a radio transmitter license is internationally laid down in _____:	Association of Radio Users	Radio Regulations	Search and rescue treaty of Hamburg	SOLAS
850	The sound-level of the speaker on e.g. an MF/HF radiotelephony installation is adjusted	AF-Gain	RF-Gain	can not be adjusted	AM-Gain

# MANAGEMENT ENGINE

	with _____.				
851	The squelch on a mariphone serves _____:	to suppress background noise in the wheelhouse when transmitting	to suppress noise	to increase or decrease the transmission range	to adjust volume
852	The squelch on the control panel of a VHF-sat serves to:	to suppress noise	to suppress background noise in the wheelhouse when transmitting	adjust the threshold level for admitting signals and refusing noise	adjust the sound level of the signal received
853	The transmitting power of the mariphone is adjusted by setting _____:	high/low power	dual watch	squelch	volume
854	The transmitting range of an HF transmitter is mainly determined by _____:	the height of the transmitting antenna	the time of day in relation to propagation	the transmitting power	atmospheric condition
855	The type-indication of the radio set is mentioned in _____:	the safety certificate	radio license	the survey of equipment	the equipment appendix
856	The VHF radiotelephone calling/safety/distress frequency is:	156.7 MHz (channel 14)	156.8 MHz (channel 16)	156.65 MHz (channel 13)	156.6 MHz (channel 12)
857	The VHF radiotelephone frequency for Channel 13 is:	156.65 MHz	156.70 MHz	156.75 MHz	156.80 MHz
858	The VHF radiotelephone frequency for Channel 14 is:	156.75 MHz	156.7 MHz	156.8 MHz	156.80 MHz
859	The VHF radiotelephone frequency for Channel 15 is:	156.7 MHz	156.0 MHz	156.75 MHz	156.8 MHz
860	The VHF radiotelephone frequency for Channel 16 is:	156.8 MHz	156.85 MHz	156.75 MHz	156.0 MHz
861	The VHF-band is in the frequency range _____:	30 - 300 GHz	3 - 30 THz	30 - 300 kHz	30 - 300 MHz
862	The volume button of a mariphone controls _____:	the transmitting power	the squelch	the volume	the clarity of transmission
863	A one ton air conditioning system has which of the listed operating characteristics?	produce 1,000 lbs. of refrigerant through the evaporator coil per day.	can pump 1 ton of refrigerant per day	It has the cooling capacity equivalent to melting 2,000 lbs. of ice per hour.	can produce equivalent to one ton of Ice.
864	what is the reason if the	excessive	lack of	clogged	dirty condenser

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	compressor in the refrigeration system is continuously running.	refrigerant in the system	refrigerant in the system	evaporator coil	
865	in case the refrigeration system is overcharged, what will be the result?	will result in low cooling effect	the expansion valve over feeding the evaporator	an incorrectly adjusted high pressure cu	Clogged expansion valve
866	A tank with 90% of seawater content and has 400 tons of Sea water. If SG is 0.93, how many tons will it contains?	343.2	390.2	326.6	377.6
867	What will be the indicated horsepower of an 8 cylinder 4 stroke eight cylinder of single acting Diesel engine with 650 mm bore and 1400 mm stroke and the average mean effective pressure is 30 kg/cm <sup>2</sup> at a speed of 100 RPM,	1888 Kw	13,388 Kw	9,111kw	21,000 Kw
868	what would be the most operating symptom of this statement? An evaporator coil of a single evaporator, air cooled refrigerator is accumulating excessive frost due to a failure of the defrost mechanism. If it has thermostatically controlled box solenoid and a low pressure cutout controlled compressor, as well as a high pressure cutout, in terms of its compressor.	short cycle on high pressure cutout	run continuously	fail to start	short cycle on low pressure cutout
869	The required pressure in Cargo hose should at least have the resistant of one of the following figures.	100 psi	120 psi	75 psi	150 psi
870	Sweting or Frosting of a liquid line means of this condition in the refrigeration system ?	the line is restricted with liquid	the refrigerant contaminated with moisture	proper cooling taking place in evaporator coil	high relative humidity surrounding the liquid line
871	in the 4 stroke diesel engine, when piston is moving downward, what do you call this stroke?	Compression stroke	Pumping stroke	Intake stroke	Exhaust stroke
872	where can you find the sight glass in multi-box refrigeration systems?	before the compressor in the suction line	after the receiver in the liquid line	after the compressor in the discharge	after the condenser in the drain line to the

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

				line	receiver
873	what will be the cause if the starter of Diesel Engine driven by electric if cranks very slowly?	lube oil viscosity is low	Bendix-drive is broken	starter motor is overheated	faulty injector
874	What is the cause Once the compressor does not start in Refrigeration system even the chamber is high in temperature?	too much lack of refrigerant in the system	piston rings are worn out	Not closing the pressure regulating valve	discharge valves are leaking
875	in refrigeration system, where can you usually find the king valve.	after the compressor or the discharge line	after the condenser or receiver	after the expansion valve or before evaporator	after the evaporator or solenoid
876	what would be the result If there is excessive low temperature in one box in a multiple box, direct expansion type refrigeration system?	a leaking hand expansion valve	liquid refrigerant returning to the compressor	an oversized expansion valve	excessive frost on the cooling coils
877	If your ship runs at 20 knots, how many tons per hour will it burn at this speed in case previously it burns 8 tons of fuel per hour at 15 knots?	20.0 tons	21.9 tons	19.0 tons	22.9 tons
878	how many tons per hour will it burn at 18 knots, if previously your vessel burns 8 tons of fuel per hour at 15 knots?	13.82 tons	14.60 tons	15.90 tons	16.7 tons
879	In a direct expansion type multi-box refrigeration system, the compressor is set up to cycle on and off by the action of what device?	low pressure cutout switch	thermostatic expansion valve	high pressure cutout	king solenoid valve
880	where would expect to see the greatest temperature drop across in what system component of small refrigerator using HFC-134a?	compressor	condenser	evaporator	receiver
881	In a direct expansion multiple-evaporator refrigeration system, a chill box may be converted to a freeze box by performing what action?	the feed with the hand expansion valve to be controlled	the compressor suction isolation valve should be throttled	the box solenoid valve should be by passed	bypassing the back pressure regulating valve

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

882	In addition to pressure, most compound and standard pressure gauges used for refrigeration service are also provided with a scale indicating what parameter?	absolute pressure	superheated refrigerant temperature	saturated refrigerant temperature	sub cooled refrigerant temperature
883	if there is a shortage of refrigerant in refrigeration system, what will be the cause?	the suction pressure is high	discharge is pressure	in the sight glass you can see bubbles	short cycling of compressor
884	What do you called by increasing moisture content in Air conditioning?	humidification	dampening	moisturizing	dehumidification
885	during the Inspection of a low pressure gear pump, cavitation is indicated by a wear pattern:	at the extreme upper and lower peripheries of the housing	throughout the entire periphery of the housing when matched machined gear sets are used	along the discharge side of the housing	along the inlet side of the housing
886	Large quantities of halogenated chlorofluorocarbons when released from refrigeration systems, will contribute to ozone depletion in which region of the atmosphere?	bathosphere	ionosphere	stratosphere	troposphere
887	in a Diesel and Otto cycles. In the compression ignition process, it :	in a constant volume basis where it begins	ends on a constant volume basis	begins and ends on a constant pressure basis	begins on a constant level basis
888	Propeller pitch speed minus ship speed divided by the propeller pitch speed is termed:	propulsive efficiency	pitch	true slip	apparent slip
889	In a refrigeration system if Refrigerant is entering the compressor what will be the conditions?	Low pressure vapor	High pressure vapor	Low pressure liquid	High pressure liquid
890	In using a psychometric chart, what device you should use in determining relative humidity?	hydrometer	sling psychrometer	compound humidifier	hygrometer
891	In the air ejector after condenser assembly Serious tube leaks will cause this situation:	fouled nozzles	the contaminated drain inspection tank will overflow.	steam strainers is clogged	an overflow of the atmospheric drain tank
892	Black oil can be an indication of what condition in refrigeration	carbonization resulting from air in the system	Gasket is broken	moisture in the system that creates sludge	piston bearing wear

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	system compressor?				
893	what is the cause of a short cycling of compressor in the ship refrigeration system while it is installed with the high pressure cut out switch.	system is low on refrigerant	discharge valves are leaking slightly	condenser is getting insufficient cooling water flow	discharge valves are leaking excessively
894	What do you call this material as dessicant or dehydrating agent within the refrigeration system?	sodium chloride	slime	calcium chloride	Alumina
895	What process is called in performing by means of removing the latent heat of condensation from a refrigerant in the normal refrigeration cycle?	on the system receiver, refrigerant controls its pressure	the suction side of the compressor, the gaseous refrigerant passed in the heat exchanger	passing it through the expansion valve	In the system, the refrigerant is being condensed
896	The rupture disc used on low pressure refrigerant storage containers is set for what pressure?	1 psig	15 psig	10 psig	5 psig
897	The vessel has received a refrigerated container loaded with 9 long tons of ice cream. The current box temperature is 31F but has a normal set point of minus 10F. Under ideal conditions how long will it take to pull the box temperature down to set point, if the equipment is operating properly? [Specific heat of the cargo equals 0.39 BTU/LB/F, with a container heat gain of 6,000 BTU/hr, and _____ a refrigeration system capacity of 3.5 tons]	8 hours 57 minutes	7 hours 58 minutes	6 hours 48 minutes	9 hours 38 minutes
898	what to do to avoid flooding back and slugging in a refrigeration system?	the expansion valve to be adjusted	discharge pressure must be re adjusted	expansion valve screen must be cleaned	refrigerant should be added
899	For a storage container of R-134a refrigerant, what will be its color coding?	grey	red	light blue	light green
900	What is the color of the flame produced by a halide torch when there is no halogenated refrigerant present at the	blue	Orange	green	purple

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	location of the exploring tube?				
901	a refrigeration system is rated at 48,000 BTU per hour, what is its equivalent tonnage?	3	2.5	4	5
902	What is the maximum volume to which refillable refrigeration cylinders should be filled?	90% full	60% full	70% full	80% full
903	Which of the listed refrigerants will break down and produce phosgene gas When subjected to high heat from a open flame, or an electric heating element,?	R-22	Methyl chloride	Sulphur dioxide	C02
904	Which of the events listed does NOT occur during the instant the piston just reaches top dead center?	Compression	Combustion	Intake	Power
905	in an indirect shipboard central air conditioning system, Which of the fluids listed is normally used to condense the primary refrigerant?	Sodium Nitrate brine.	Calcium Sulfate brine.	Fresh water Seawater	Air together with Water
906	Which of the following substances is normally classified as a low pressure refrigerant?	R-12	R-132	R-122	R-134A
907	Which of the listed reasons could cause frost to form on the suction line of a refrigeration compressor?	Condenser cooling water temperature is too high.	Expansion valve is stuck open.	Liquid line service valve is closed.	Shortage of refrigerant in the system.
908	there is no change in state can happen in case additional heat is applied in the mixture of steam and water in a boiler, this means the mixture reached at what point?	saturation end point	supercritical end point	vaporization end point	critical point
909	In a Boiler water analysis, when there is a zero reading in a Ph value, the water is at this state.	neutral	alkaline	acidic	soft
910	In order to remove or blow away some product of combustion and any deposits of carbon in a boiler, what is the	scrubber	soot blower	swirler	air blower

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	equipmnt being used?				
911	What do people onboard ships normally do when a water level high alarm is activated?	Stop burner	Blow-off thru scum valve	close main stop valve	Stop feed water pump
912	A diesel engine emits blue exhaust smoke due to _.	cold air intake	excessive cylinder lubrication	high compression pressure	light load
913	Which of the following is fitted in an air tank to eliminate any oil/water accumulation?	Unloader	Fusible plug	Drain valve	Filter
914	In a centrifugal pumps shaft, give the reason why removable sleeve is installed?	Can be economically replace as they wear out	Shaft strength can increse	when necessary, it can be removed	Easy to replace the pump shaft packing
915	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
916	On a Bourdon tube instrument A zero reading.	equal to atmospheric pressure	near absolute zero	absolute vacuum	absolute Zero
917	If the if the engine has indicated power output of 190 hp and shaft power of 162 hp. Calculate the friction power.	84.4 hp	28 hp	28 kW	84 kW
918	Cylinder wear may take place as a product of mechanical wear,corrosion and combustion which is hard to remove?	Abrasion	Corrosion	Frictional wear	Adhesion
919	What part of big diesel engine is where burnt gases passes through before it reaches the funnel?	Air cooler	Supercharger	Exhaust gas manifold	Scavenging manifold
920	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
921	kPa is equivalent to _____.	3.06 mm of Hg	43.52 psi	3 in of Hg	2,250.2 bars
922	When a pressure gauge reads zero, the absolute pressure is equal to what psi?	1.47	7.41	1.74	14.1
923	Which of the following is	Its pressure	Its velocity	its velocity	Its velocity

# MANAGEMENT ENGINE

	TRUE to a liquid moving at a constant flow rate?	decreases as it enters a larger pipe	increases as it enters a larger pipe	increases as it enters a narrower pipe	increases as it enters a same pipe
924	The measure of the amount of salt present in water is called _____.	Density	Specific Gravity	Viscosity	Salinity
925	Which of the following could greatly affect the efficiency of any heat exchanger?	oil	water	scale	salt
926	In order to reach any deck onboard by Fresh water inside hydropore tank, it is by this means.	Pressurized air	Head pressure	put a valve	Superheated steam
927	How do you control freshwater heating temperature in the evaporator side of a Fresh Water Generator?	Regulate by-pass valve	Regulate outlet valve	Regulate vent valve	Regulate inlet valve
928	Which of the following is reduced as air is compressed?	Pressure	Temperature	Weight	Volume
929	Which of the following valves has a hinged flap, which is pushed to open by outward flow, and closed by its own weight?	sluice valve	side valve	flap check valve	relief valve
930	What is the term for the pressure at which liquid vaporizes at a certain temperature?	Precipitation pressure	Suction pressure	Static pressure	Vapor pressure
931	Which of the following types of air compressors work in a similar principle as the centrifugal pump whereby discharge velocity energy is converted to pressure head?	Centripetal	Rotary	Reciprocating	velocity
932	The boiler tubes that increase the temperature of steam without increasing its pressure is called _____.	screen tubes	generating tubes	superheater	wall tubes
933	When firing a boiler in local manual control, an increase in boiler load must be accompanied by a/an _____.	increase in the forced draft air pressure before an increase in the fuel oil flow		increase in the fuel oil flow before an increase in the forced draft pressure	decrease in the forced draft air pressure before a decrease in the fuel oil flow
934	An air blower driven by an electric motor used to	Soot blower	Surface blow valve	Draft fan	Air vent

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	supply pressurized air into the combustion chamber is called _____.				
935	Which is TRUE concerning immersion suits and their use?	Only a light layer of clothing may be worn underneath.	A puncture in the suit will not appreciably reduce its value.	They provide sufficient flotation to do away with the necessity of wearing a life jacket.	They should be tight fitting.
936	You are underway when a fire breaks out in the forward part of your vessel. If possible, you should _____.	call for assistance	put the vessel's stern into the wind	abandon ship to windward	keep going at half speed
937	The required number and type of hand portable fire extinguishers to be carried in the vicinity of the radio room exit for a tank vessel on an international voyage is one _____.	C-II	C-I	B-I	B-II
938	Records of tests and inspections of a cargo vessel's fire extinguishing systems shall be kept on board _____.	until the next Coast Guard inspection	until the vessel's Certificate of Inspection expires	for 2 years	for 1 year
939	In areas where CO2 piping is installed, such piping may not be used for any other purpose except _____.	in connection with the fire-detecting system	in connection with the water sprinkler system	to ventilate the space	to run the emergency wiring to the space
940	What is the use of a flame screen ?	It permits the passage of vapor but not of flame.	It prevents the passage of flammable vapors.	It permits vapors to exit but not enter a tank.	It prevents inert gas from leaving a tank.
941	You notice oil on the water near your vessel while taking on fuel. You should first _____.	determine whether your vessel is the source	notify the senior deck officer	stop fueling	notify the terminal superintendent
942	The galley on your cargo vessel has an area of 232 square meters. What would fulfill the minimum requirements for fire protection?	One B-V extinguisher	One B-II extinguisher	One B-I extinguisher	One B-II and one C-II extinguisher
943	You are fighting a fire in a watertight compartment using hoses and seawater. Stability may be reduced because of _____.	reduction of KG to the minimum allowable	reduction of water in the storage tanks	progressive downflooding	increase in free surface which reduces the metacentric height

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

944	A fire is discovered in the forepeak of a vessel at sea. The wind is from ahead at 35 knots. You should _____.	change course and put the stern to the wind	remain on course and hold speed	change course to put the wind on either beam and increase speed	remain on course but slack the speed
945	When two fire hose teams are attacking a fire they should _____.	not wear protective clothing	use fire hoses of different sizes	not attack the fire from opposite sides	use different fire hose pressures
946	Each distress signal and self-activated smoke signal must be replaced not later than the marked date of manufacture?	42	36	24	12
947	Each distress signal and self-activated smoke signal must be replaced not later than the marked date of manufacture?	36	24	12	42
948	By regulation, orange smoke distress signals will expire not more than how many months from the date of manufacture?	24 months	36 months	54 months	42 months
949	When a vessel signals her distress by means of a gun or other explosive signal, the firing should be at intervals of approximately _____.	1 minute	3 minute	10 minutes	1 hour
950	The traditional signal to commence lowering lifeboats and liferafts is _____.	1 short blast of the ships whistle	3 short blast of the ships whistle	1 long blast of the ships whistle	3 long blast of the ships whistle
951	Which of the following is used to signal crew members to report at boat stations or for boat drill?	Three short blasts of the ships whistle.	More than six short blasts followed by one long blast of the ships whistle.	One long blast followed by three short blasts of the ships whistle	A continuous blast of the ships whistle for a period of not less than 10 seconds.
952	Which of the items in the lifeboat equipment listed would be the most suitable for night signaling to a ship on the horizon?	A flashlight	A red handheld flare	A lantern	A red parachute flare
953	Signaling devices required on inflatable liferafts include _____.	an oil lantern	an air horn	red flares	a rocket shoulder rifle
954	When should the emergency position-indicating radio beacon(EPIRB) be activated after	Immediately	After one hour	Only when another vessel is in sight	Only after sunset

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	abandoning?				
955	What should you do with your emergency position indicating radio beacon if you are in a liferaft during storm conditions?	Leave it outside the liferaft and leave it on.	Bring it inside the liferaft and turn it off until the storm passes.	Bring it inside the liferaft and leave it on.	Leave it outside the liferaft but turn it off.
956	What is the most important item to check prior to lowering the lifeboat?	Sail	Boat plug	Cars	Life preservers
957	When patching holes in the hull of a MODU, pillows, bedding and other soft materials can be used as _____.	gaskets	strongbacks	caulking	wedges
958	The order of importance in addressing damage control on a MODU is _____.	restored vital services, control fire, control flooding	control fire, restore vital services, control flooding	control flooding, control fire, repair structural damage	control fire, control flooding, repair structural damage
959	Why it is important to test lifeboat davit limit switches on a regular basis?	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
960	If doublebottom fuel tank levels are found to have increased after a ships grounding, what might be the possible cause?	Improper record keeping of fuel transfer activities	Puncture, crack, or hole in the skin of the vessel	Damaged pneumatic line	Contamination of the contaminated steam supply system
961	A man aboard a vessel, signaling by raising and lowering his outstretched arms to each side, is indicating _____.	a distress signal	danger, stay away	all is clear, it is safe to pass	all is clear, it is safe to approach
962	How can you indicate that your vessel is in distress?	Sounding four short blast and after two seconds sounding three more rapid blasts on the whistle	Displaying three black balls in a vertical line	Continuously sounding the fog horn	Displaying a large red flag
963	The object of plugging holes below the waterline on a MODU should be to _____.	plug the largest holes first	only plug holes in machinery or other vital spaces	eliminate all water entering through the hole	reduce the entry of water as much as possible
964	When more than six short blasts and one long blast	Abandonship/Boat Station	Fire and Emergency	Boat recall	Man overboard

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	of the ship's whistle, accompanied by the same signal on the general alarm bell is sounded, What is the signal for?				
965	Repairing damage to the hull of a MODU at, or above the waterline, reduces the threat of _____.	wind overturning moments	continued progressive flooding	free surface effects	capsizing the MODU
966	After being launched, what does a totally enclosed survival craft which has been afloat over a long period of time require?	Frequent flushing of the water spray system with freshwater	Regular checks of bilge levels	Frequent opening of hatches to permit entry of fresh air	Use of ear plugs to dampen engine noise
967	Which visual distress signal is acceptable for daylight use only?	Self-contained rocket propelled red parachute flare	Handled red line	Orange smoke signal	Red aerial pyrotechnic flare
968	What is the use of EPIRB during abandon ship ?	hold the lifeboat's head up into the seas	seal leaks in rubber rafts	generate orange smoke	send radio homing signals to searching aircraft
969	A hole in the hull above the waterline may be temporarily patched with _____. I. pillows II. blankets III. Mattresses	I only	III only	I, II and III	II only
970	What is the purpose of wire stretched between the lifeboat davit heads?	To support the manropes	Keep the movement of the davits at the same speed	Keep the davits from slipping when they are in the stowed position	Prevent vibration during lowering of the boat
971	How does the hand brake of a lifeboat winch being applied?	automatically engaged if lowering speed is excessive	Manually disengaged when hoisting a boat	Controlled by the centrifugal brake mechanism	By dropping the counterweight lever
972	The person-in-charge shall insure that each rescue boat on a OSV is lowered to the water, launched, and operated at least once every _____.	six months	three months	month	two months
973	Where would you find the FCC authorization for transmitting on your rig's EPIRB?	In the radio log.	On the side of the EPIRB transmitter.	On the Certificate of Inspection.	On the Ship Station License.
974	All of the following are recognized distress signals	orange-colored smoke	the repeated raising and	a green star signal	red flares

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	under the Rules of the Road except_____.		lowering of outstretched arms		
975	Class &quot;B&quot; EPIRB's transmit on frequencies that are monitored by_____.	private, commercial, and military aircraft	orbiting satellites in space	commercial radio stations	commercial fishing vessels
976	What is an approve signaling device required on inflatable liferafts from among the choices?	Air horn	Pistol	Orange smoke signal	Lantern
977	When you are firing a pyrotechnic distress signal, it should be aimed_____.	at about 60 degrees above the horizon	at the vessel whose attention you want to attract	straight overhead	into the wind
978	The master or person-in-charge of a MODU shall ensure that each deck from which lifeboats are launched is_____.	roped off to prevent unnecessary access	kept clear of any obstructions that would interfere with launching	surfaced with a nonskid texture	posted with a list of persons assigned to the lifeboat
979	What must be accurately determined to assess the potential for progressive flooding after your vessel has been damaged?	The strenght of the hull to withstand the progressive flooding	The capacity of the water sprinkler system.	The operation of the machinery space bilge level alarms.	The integrity of the watertight boundaries.
980	What is the important points to remember when operating davits?	The davits should always be hand cranked the last 12 inches into the final stowed position	The gripes should be released after the boat is moving	The boats are generally lowered by surging the falls around cruciform bits	The tricing pendant should be tripped prior to releasing the gripes
981	You are in a survival craft boadcasting a distress message. What information would be essential to your rescuers?	The time of day.	The nature of the distress.	Your position by latitude and longitude.	Your radio call sign.
982	Why are lifeboats usually double-ended?	They are more seaworthy and less likely to be swamped or broach to.	They can go forward and backward more easily.	Appearance and traditional styling.	They require less space for stowing aboard ship.
983	When should distress flares and rockets be used?	They should be set off at half-hour intervals.	Immediately upon abandoning the vessel.	Only when there is a chance of them being sighted by rescue vessels.	They should be set off at one-hour intervals.
984	Progressive flooding in the engine room may be minimized by securing	Transferring reserve feed water	Pumping out flooded compartments	Dumping fuel oil	Evacuating the engine room

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	watertight boundaries and what other measures?				
985	When renewing a portion of damage hull plating with a new insert plate which of the listed guidelines should be followed?	The insert plate should cover at least one full frame space and have rounded corners	The lines of new welding should where possible lie in existing lines of welding	The corners of the insert plate should be square	The insert plate should be at least 9/16 thick
986	In a compartment that has been completely flooded with water the greatest pressure will be exerted _____.	along the top of the bulkhead	at a point that is one-third from the bottom of the bulkhead	at the vertical center of the bulkhead	along the bottom of any bulkhead
987	Your ship has run aground and it is necessary to determine whether or not a compartment has flooded. Therefore you should _____.	open the watertight door and take a quick look	open a hatch dog on the side of the hinges	feel the bulkhead to see if it is hot	tap the bulkhead with a hammer to check for a water level
988	A flat block placed under the end of a wooden shore for the purpose of distributing pressure against a damaged structure is referred to as a _____.	web	strongback	joist	gusset
989	If double bottom fuel tank levels are found to have increased after a ships grounding you should suspect _____.	improper record keeping of fuel transfer activities	contamination of the contaminated steam supply system	a damaged pneumaticator line	a puncture crack or hole in the skin of the vessel
990	Stress concentrations may be reduced at the ends of a crack which has formed in the steel plating of a ship by _____.	drilling a round hole at each end of the crack	installing welded brackets parallel to the crack	V-grooving and welding from both sides of the crack	cutting a square notch at each end of the crack
991	In the event of a collision watertight integrity may be lost if _____.	you operate the dewatering system from a flooded compartment	the dogs on a manhole cover are secure	the sounding tube cap from a damaged tank is missing	you have recently replaced a gasket in a watertight door
992	Progressive flooding may be indicated by _____.	a continual worsening of list or trim	ballast control alarms	excessive draft	excessive list or trim
993	Applicators used aboard ship with 12 inches in length have an outlet end curve of _____.	80°	70°	60°	90°
994	What is the applicable to any ship in such a way that any compartment	Fire Main System	Ballast System	Bilge System	Sea Water System

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	can be discharged of water when the ship is on an even keel in the following arrangement?				
995	Which one is fitted between oil tanks and other compartments and must be at least 760mm. wide?	Cofferdams	Ballast tanks	Hatches	Deep tanks
996	The distance from the waterline to the upper deck is called _____.	freeboard	amidship	load line	breadth
997	How does foam extinguish an oil fire?	By removing the fuel source from the fire	By increasing the weight of the oil	By excluding the oxygen from the fire	By cooling the oil below the ignition temperature
998	Which of the following liquids can ordinarily be discharged overboard without being processed through an oily water separator?	Engine room bilges	Segregated ballast	Cargo pump room bilges	Cargo tank ballast
999	What often fitted adjacent to the machinery spaces amidships to provide ballast capacity improving the draft with little trim when the ship was light ?	Strake	Longitudinal framing	Deep Tanks	Transverse framing
1000	Which of the devices listed prevents water from entering a ship's hull via the propulsion shaft?	Stern tube packing or mechanical shaft seal	Deflector ring and drain	Spring bearings	Oiler rings
1001	Which of the following is equivalent to deadrise?	Rise of Floor	Depth	Sheer	Camber
1002	The inner bottom of the ship is the _____.	watertight boundary formed by the skin of the ship	doubler plating installed over the flat keel plate	compartment between tank top and skin of the ship	plating forming the engine room tank top
1003	Which of the following items listed below consist of vertical stiffeners either of bulb plate or deep-flanged web frames which are attached by brackets to the deck beams and the flooring structure?	Longitudinal framing	Transverse framing	Bilge keel	Duct keel
1004	The purpose of the propeller fair water cone is to _____.	minimize water turbulence	eliminate axial thrust	eliminate cavitation	lock the propeller knot in position

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

1005	What do you call the side of a propeller blade which faces generally in the direction of ahead motion?	Back of blade	Face	Camber	Cone
1006	What do you call the curvature of deck in a longitudinal direction measured between the deck height at midships and the particular point on the deck?	Rake	Flare	Tumblehome	Sheer
1007	The term round of beam is the same as the _____.	Stern Rake	Camber	Freeboard	Keel Rake
1008	The garboard strake is located _____.	at each side of the keel	at the turn of the bilge	at the very bottom center	just under the sheer line
1009	Which of the following areas should be locked up before entering the drydock?	Mess Hall	Lavatories	Galley	Engine Room
1010	The dimension of the structural items of a ship such as frames girders and plating is called _____.	samson post	pintle	scanting	panting
1011	Which of the following items listed below are horizontal weld in the shell plating?	Seams	Pillar	Girder	Butts
1012	What do you call the vertical partitions in a ship arranged transversely of fore and aft?	Girder	Pillars	Bulkheads	Duct Keel
1013	Dry Powder fire extinguishers, which contain a mixture of graphite and sodium chloride as the extinguishing agent, are generally used to fight which type of fire?	Class C	all of the above	Class B	Class D
1014	A branch line valve of a fixed fire extinguishing system on a VESSEL must be marked with the _____.	maximum pressure allowed at that branch	name of the space or spaces which it serves	date of the last maintenance inspection	pressure needed to maintain an effective stream at that point
1015	A carbon dioxide fire extinguisher should be recharged _____.	before every safety inspection	at least annually	whenever it is below its required weight	only if the extinguisher has been used

# MANAGEMENT ENGINE

1016	A Certificate of Financial Responsibility attests that the vessel _____.	has financial backing to meet any liability resulting from the discharge of oil	has the minimum required amount of P&amp;l	will assume the responsibility for any damage or loss to the shipper	has financial reserves to meet reasonable expected crew costs of an intended voyage
1017	Aboard a VESSEL, provided CO2 fire extinguisher has lost 10% of its charge. now it must be _____.	used at the earliest opportunity	hydro tested	recharged	weighed again in one month
1018	A continuous blast of the ships whistle for a period of not less than 10 seconds, supplemented by a continuous sounding of the general alarm for a period of not less than 10 seconds, is the _____.	boat stations signal	fire alarm signal	secure from boat stations signal	lower lifeboats signal
1019	A device fitted over the discharge opening on a relief valve consisting of one or two woven wire fabrics is called a flame	screen	restrictor	filer	stopper
1020	A device for preventing sparks or flames from entering a tank, while permitting the free passage of gases is called a _____.	pressure-vacuum relief valve	sacrificial anode	flame screen	gas absorption detector
1021	A fire starts in a switchboard. This is what class of fire?	A	B	D	C
1022	A fixed carbon dioxide extinguishing system for a machinery space, designed with a stop valve installed in the line leading to the protected space, is actuated with _____.	two independent controls	one control	three independent controls	four independent controls
1023	A fixed carbon dioxide extinguishing system for a machinery space, designed with a stop valve installed in the line leading to the protected space, is actuated with _____.	three independent controls	one control	two independent controls	four independent controls
1024	A fixed carbon dioxide extinguishing system for a	three controls	none of the above	two controls	one control

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	machinery space, designed WITHOUT a stop valve in the line leading to the protected space, is actuated by _____.				
1025	A fixed CO2 fire extinguishing system on a VESSEL. with a capacity of over 300 lbs (136 kilograms) CO2, protecting spaces other than tanks, must have _____.	automatic release in event of a fire	an audible and visible alarm	two or more releasing stations	an audible alarm and time delay
1026	A lifejacket should be provided with	A light	A whistle and a light	On ships built after February 1992 all lifejackets should be fitted with a light	A whistle
1027	A lifeline must be connected to the liferaft _____.	all around	at the stern	in the middle	at the bow
1028	A liferaft which has inflated bottom-up on the water _____.	should be righted by standing on the life line, holding the righting straps, and leaning backwards	will right itself when the canopy tubes inflate	should be righted by standing on the carbon dioxide cylinder, holding the righting straps, and leaning backwards	must be cleared of the buoyant equipment before it will right itself
1029	By regulation a liferaft with a capacity of 8 people in ocean service is required to carry _____.	24 units of provisions	8 liters of fresh water	12 units of provisions	12 liters of fresh water
1030	Shipping regulation, a merchant vessel with a crew of over 20 is required to have on board a	all of these	hospital	emergency medical outfit	medical practitioner
1031	A portable foam fire extinguisher carried aboard a tank vessel must be recharged every _____.	9 months	12 months	6 months	3 months
1032	A portable foam fire extinguisher is placed in operation by	turning it upside down	squeezing the grip handle	pressing the foam lever	opening the hose valve
1033	A portion of the cargo of an LNG carrier boils off during each voyage. How	Vented to the atmosphere.	Burned in the boilers.	Compressed, condensed, and return to the	Mixed with nitrogen and recirculated

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	is the cargo boil off normally handled?			cargo tanks.	through the primary barrier.
1034	A qualified person must be assigned as the second in command of a lifeboat on a VESSEL if the lifeboat has a capacity of more than _____.	50 persons	20 persons	40 persons	30 persons
1035	A racetrack turn would be better than a Williamson turn in recovering a man overboard if _____.	there is thick fog	the sea water is very cold and the man is visible	the wind was from astern on the original course	the man has been missing for a period of time
1036	A raft should be manually released from its cradle by _____.	removing the rubber sealing strip from the container	loosening the turnbuckle on the securing strap	cutting the straps that enclose the container	pushing the button on the hydrostatic release
1037	A rudder that is hardest to run	unbalanced	the semi-balance	the cycloidal	the balance
1038	A rusky helicopter hoist area would preferably have a minimum radius of at least	10 feet of clear deck	25 feet of clear deck	6 feet of clear deck	50 feet of clear deck
1039	All inflatable liferafts is provided with a safety feature on _____.	internal releasing hooks	overhead safety straps	the use of water stabilizing pockets	built in seats
1040	A seaman is reported missing in the morning and was last seen after coming off the mid-watch. Which type of turn would you use to return to the track-line steamed during the night?	Anderson	Racetrack	180 turn	Williamson
1041	A ships low-pressure CO2 fixed fire extinguishing system is normally designed for a storage tank pressure and temperature of approximately _____.	14.7 PSIA and 0 degrees Fahrenheit	300 PSIG and 0 degrees Fahrenheit	150 PSIG and 72 degrees Fahrenheit	1500 PSIG and 72 degrees Fahrenheit
1042	A simple precaution to reduce the possibility of accidental fires in the paint locker, is to _____.	not allow oily rags to accumulate in the space	store paint cans on metal shelves only	label the fixed firefighting system	place a portable fire extinguisher immediately outside the locker
1043	A vessel where the engine personnel are in charge of all technical installations on board are due for a voyage to a cold climate area. Are any special	Implement special routines for starting fire pumps (e.g. local start/stop operation) to	Instruct the personnel in routines to prepare the fireline system, e.g. closing all	Drain all firelines in areas that may be exposed to freezing temperature.	All the mentioned alternatives.

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	precautions to be implemented with regard to fireline/pumps and use of same?	avoid the pumps are started due by a mistake, resulting in filling up the system unnecessarily.	branches and the consequences of not draining the system after use.		
1044	Actuating the fixed CO2 system should cause the automatic shutdown of the _____.	mechanical and natural ventilation	exhaust ventilation only	supply and exhaust ventilation	fuel supply only
1045	After a liferaft is launched, the operating cord _____.	is used to rig the boarding ladder	serves as a sea painter	detaches automatically	is cut immediately as it is of no further use
1046	After being launched from an OSV, a totally enclosed survival craft which has been afloat over a long period of time, requires _____.	frequent opening of hatches to permit entry of fresh air	regular checks of bilge levels	frequent flushing of the water spray system with fresh water	use of ear plugs to dampen engine noise
1047	After having activated the emergency position indicating radio beacon(EPIRB), you should _____.	leave it on continuously	turn it off and on at five minute intervals	turn it off during daylight hours	turn it off for five minutes every half-hour
1048	After having thrown the life raft and stowage container into the water, the life raft is inflated by _____.	pulling on the painter line	using the hand pump provided	forcing open the container which operates the CO2	hitting the hydrostatic release
1049	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	limit switch	brake handle	hoist man
1050	After using a CO2 portable extinguisher, it should be _____.	retagged	put back in service if some CO2 remains	recharged	hydrostatically tested
1051	After using a portable Halon fire extinguisher, it should be _____.	hydrostatically tested before reuse	repainted	put back in service if more than 50% of the charge remains	discarded
1052	After you have put water on a burning mattress, and the fire appears to have been extinguished, you should then _____.	pull the mattress apart to ensure no fire remains	make sure the fire is out with CO2	secure the mattress in a well ventilated area	dry the mattress in a warm area

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

1053	All lifeboats, rescue boats and rigid-type life rafts shall be stripped, cleaned and thoroughly overhauled at least once every	18 months	6 months	2 years	year
1054	All OSV personnel should be familiar with the survival craft _____.	maintenance schedule	navigational systems	boarding and operating procedures	fuel consumption rates
1055	All personnel on board a vessel should be familiar with the rescue boat _____.	boarding and operating procedures	fuel consumption rates	maintenance schedules	navigational systems
1056	All personnel should be familiar with the lifeboats _____.	fuel consumption rates	navigational systems	maintenance schedule	boarding and operating procedures
1057	An approved signaling device required on inflatable life rafts include a(n) _____.	orange smoke signal	pistol	air horn	lantern
1058	An enclosed lifeboat is fitted with a self-contained air support system. With the engine running, what is the minimum period of time the air should remain safe and breathable?	10 minutes	20 minutes	5 minutes	30 minutes
1059	An event involving the actual or probable discharge into the sea of a harmful substance or effluents containing such substance	Miscalculation	Accident	Incident	Negligence
1060	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 _____.	high sea water temperature	combustion air temp too low	cooling water flow	insufficient fuel supply
1061	An inert gas system is designed to reduce the possibility of tank explosions by _____.	removing all hydrocarbon gases from the cargo tanks	reducing the oxygen concentration below levels necessary for combustion	blanketing cargo tanks with inert foam	eliminating sparks and fire in the vicinity of cargo tanks
1062	An inert gas system on a tanker should be used to	dilute tank atmospheres to	blow out cargo lines to prevent	prevent the generation of	prevent fires in the pump room

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	_____.	keep gas concentrations below the lower explosive limit	gas concentrations	flammable or combustible gas in tanks	by continually displacing flammable vapors
1063	An inflatable life raft can be manually released from its cradle by _____.	pushing the button on the hydrostatic release	loosing the turnbuckle on the securing strap	cutting the straps that enclose the container	removing the rubber sealing strip from the container
1064	An inflatable life raft is hand-launched by _____.	removing the securing straps	throwing the entire container overboard then pulling on the painter	kicking the hydrostatic release	the float-free method only
1065	An inflatable life raft should be lifted back aboard the ship by using _____.	two lines passed under the raft	the single hook at the top of the raft	All of the above	the towing bridle
1066	An instrument used to detect explosive gas/air mixtures, usually measures the concentration in terms of the lower explosive limit, and is known as a _____.	gas absorption detector	toxic vapor meter	combustible gas indicator	flame safety lamp
1067	An insulating flange should be used in a cargo hose connection instead of a bonding wire _____.	when the terminal is equipped with a cathodic protection system	when static electricity may be generated	when pumping LNG only	during cold weather
1068	An on-load release system on a survival craft means the cable can be released _____.	only there is a load on the cable	at any time	only when the load is taken off the cable	only when activated by the controls at the lowering station
1069	An oxygen indicator will detect _____.	an oxygen deficiency in a space	the presence of harmful amounts of carbon monoxide	all of the above	concentrations of explosive gas
1070	Annual servicing of a hand portable CO2 fire extinguisher includes _____.	discharging, cleaning inside, and recharging	inspecting the pressure gauge to ensure the needle is within operating range	hydrostatic testing of the cylinder	weighing the cylinder and recharging if weight loss exceeds 10% of the weight of the charge
1071	Approved buoyant work vests may be carried aboard tank vessels and shall be worn by crew members _____.	when working near or over the water under unfavorable working	under the supervision and control of designated ships officers	as substitutes for the approved life preservers during routine drills, weather	all of the above

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

		conditions		permitting, when a vessel is moored pier side	
1072	As a vessel changes course to starboard, the compass card in a magnetic compass_____.	remains aligned with compass north	also turns to starboard	turns counterclockwise to port	first turns to starboard then counterclockwise to port
1073	As a vessel sinks to a depth of 15 feet, the hydrostatic trip releases the liferaft container from its cradle by_____.	pulling the operating cord	releasing the tie-down strap	releasing the CO2 canister	breaking the weak link
1074	At what interval must a foam fire extinguisher be recharged if the vessels Certificate of Inspection is issued for a period of two years?	Biennially	Quarterly	Semiannually	Annually
1075	At what time shall automatic sprinkler, fire-detection and alarm systems be capable of immediate operation? (SOLAS II-2/12.1.1)	When there are no competent officers and fire watch on duty	Nighttime only	At all times	During navigation
1076	At which of the listed tank locations should you obtain oxygen content readings prior to tank washing?	At the hatch coaming and middle of the tank.	At the middle and bottom of the tank.	At the hatch coaming and tank bottom.	At the center of the ullage and one meter below deck.
1077	At which time shall required fixed fire-detection and fire-alarm systems with manual operated call points be in operation? (SOLAS II-2/13.1.1)	Capable of immediate operation at all times	At all times during navigation	Always at nighttime	At sea and in ports when there are qualified officers on duty
1078	Before entering any space that has been sealed, its oxygen level should be tested. What level of oxygen in the space is equal to fresh air?	15.80%	25.80%	10.00%	20.80%
1079	Before inserting a low velocity fog applicator into an all-purpose combination nozzle, you must_____.	put the control handle in the fog position	remove the high velocity fog tip	put the control handle in the solid steam position	tighten the high velocity fog tip
1080	Blocking open or removing fire dampers can cause_____.	fixed foam systems to be ineffective	the accumulation of explosive gases	the fire to spread through the ventilation system	faster cooling of the fire

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

1081	Bonding cables are used to reduce the possibility of accidental spark discharge when _____.	transferring flammable liquids to or from a vessel	securing drill pipe on deck	transferring fuel oil from storage to day tanks	transferring dry mud to or from a vessel
1082	Carbon dioxide extinguishers must be recharged when the charge weight is less than _____.	85%	90%	95%	80%
1083	Cartridge-operated dry chemical fire extinguishers used on VESSELS, should have the propellant cartridge weighed every _____.	12 months	six months	three months	two years
1084	Category 1 EPIRBs transmit on frequencies that are monitored by _____.	commercial fishing vessels	orbiting satellites in space	offshore supply vessels	naval warships
1085	Combustible gas indicators are used to detect flammable gases or vapors in the atmosphere. As a safety feature, they are equipped with _____.	flame arrestors	an inflatable bag	an audible signaling device	a pressure relieving device
1086	Combustible gas indicators are used to detect flammable gases, or vapors present in a tank. This is accomplished by an intricate instrument incorporating a/an _____.	inflatable bag	heated filament	vapor detecting carbon compound	sensitive liquid chemical
1087	Combustible gas indicators measure the concentration of combustible gases as a percentage of the lower explosive limit of the gas. If the hydrocarbon content of the sample exceeds the upper explosive limit _____.	the needle will rise slowly to and remain at the maximum reading	the needle will move rapidly to and remain at the maximum reading	it will not be detected	the needle will move to the maximum reading and return back to zero
1088	Combustible gas indicators measure the presence of combustible gases as a percentage of the _____.	lower explosive limit	upper explosive limit	flash point	fire point

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

1089	Combustible material which is stored adjacent to a compartment where there is a fire, may also be ignited. This ignition can occur by _____.	heat conduction of combustion gases	direct radiation emitted by the adjacent fire	heat convection through the bulkheads	heat radiated from the bulkhead by the adjacent fire
1090	Deck rails on passenger decks of vessels engaged in a ferry or excursion type operation shall be at least _____.	42 inches high	30 inches high	39 1/2 inches high	36 inches high
1091	Distress signals must be stowed	on the lifeboat	in accessible areas	on or near the navigating bridge	near the embarkation deck
1092	During an inspection of a ships storeroom, you find sealed containers of chemicals labeled potassium bicarbonate and potassium chloride. These chemicals are most commonly used aboard ship for _____.	degreasing machinery parts	engine jacket water treatment	recharging dry chemical fire extinguishers	descaling evaporator tubes
1093	During helicopter evacuation of an injured man, what course should the ship steer?	As instructed by the helicopter pilot	With the wind astern so that the effect of the wind is reduced as much as possible	Directly into the wind	With the wind fine on the bow opposite to the helicopter operating area
1094	What is SLR in ABS survey items?	Safety Equipment survey	Load line survey	Safety radio survey	Safety construction survey
1095	What is the procedure for use of the main engine room fire extinguishing system, e.g. Halon or CO2 system?	Release the Halon/CO2 upon the order of the engineer on duty.	Search the engine room, make sure all personnel is out. -Stop ventilation. - Close for all air access. -Upon approval of the Master, release the halon/CO2.	Release the Halon/CO2 as soon as possible without pre warning.	Search the engine room, make sure all personnel is out. -Stop ventilation. - Close for all air access. -Release the Halon/CO2.
1096	What is the use pilot cylinders in a fixed CO2 system?	activate only the 50% of CO2 bottles	activate the main bank all at once	activate individual groups of CO2 bottles in predetermined time delay sequence	activate the main bank if an abnormal rise is detected
1097	What operational limitation should the user	The weight of the unit changes	The lens of the face piece can	the weight is totally light	The attached lifeline can do

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	of a self-contained breathing apparatus be concerned with when using the device?	the users center of gravity.	see the users peripheral vision.		users mobility.
1098	What should you do when the alarm bell on a self-contained breathing apparatus sounds?	Immediately evacuate the contaminated area.	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 reset the alarm so you can 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.
1099	When collecting condensation for drinking water, _____.	only condensation on the bottom of the canopy should be collected	chlorine tablets should be used to make it drinkable	a sponge used to mop up and store condensation must be kept salt free	it should be strained through a finely woven cloth
1100	During the inspection for certification of small passenger vessel of less than 100 gross tons, a hydrostatic test of 1-1/4 times the maximum allowable working pressure shall be made to _____.	oil fired boilers	refrigeration service heat exchangers	tubular heat exchangers	hydraulic accumulators
1101	Each emergency generator on a mobile offshore drilling unit, when tested, must be run under a full load for at least _____.	four hours	ten hours	two hours	one hour
1102	Each emergency light on a VESSEL must be marked with _____.	a no smoking symbol	the letter E	the word DANGER	an arrow pointing to the nearest exit
1103	Each EPIRB required on a VESSEL shall be tested using the integrated test circuit and output indicator every _____.	month	two weeks	week	two months
1104	Each fire hose coupling on a VESSEL must have threads to meet the specifications of the _____.	Underwriters Laboratories, Inc.	National Standard Fire Hose Coupling	American Society of Mechanical Engineers	American Petroleum Institute
1105	Each fire hydrant is required to have at least one spanner wrench and	hose rack or reel	foam applicator	hammer	pick ax

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	at least one _____.				
1106	Each fire hydrant serving the machinery spaces of a VESSEL containing oil fired boilers, internal combustion machinery, or fuel oil units, must be equipped with a _____.	pick axe	marine strainer	firemans outfit	low velocity spray applicator
1107	Each fire pump on a VESSEL must have a pressure gage located _____.	at the pump discharge	at each fire station discharge	at the pump station	at the manifold connection
1108	Each firemans outfit and its spare equipment on a VESSEL must be stowed _____.	at a fire hydrant location	in a separate and accessible location	in a locked cabinet in the machinery space	in an unlocked cabinet in the machinery space
1109	Each hand portable fire extinguisher carried on a VESSEL must be marked with _____.	the names of the individuals qualified to use it	the name of the unit on which it is located	an identification number different from other extinguishers on the unit	the date that it was installed on the unit
1110	Each hand portable, semi-portable, and fixed fire extinguishing unit on a VESSEL must be tested and inspected at least once every _____.	twelve months	six months	six weeks	two years
1111	Each hose in the fuel transfer system for helicopter refueling must have a _____.	splash guard	static grounding device	quick-disconnect nozzle	vapor recovery system
1112	Each hose in the fuel transfer system for helicopter refueling must meet the standards of the _____.	Federal Aviation Administration	Corps of Engineers	National Transportation Safety Board	National Fire Protection Association
1113	Each inert gas system gas main must have an automatic shut down valve at the outlet of the gas production plant. This valve must close automatically upon _____.	blower failure	low inert gas temperature	deck seal low water level	cargo pump failure
1114	Each inert gas system must be designed to supply the cargo tanks with a gas, or mixture of gases, that has an oxygen	10% or less	20% or less	15% or less	5% or less

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	content by volume of _____.				
1115	Which of the following problems occurring in a hydraulic system could cause the use of an oil having a viscosity lower than specified?	Fast response and hunting	Increased power consumption	Oil film breakdown	Seal deterioration
1116	The portion of a hydraulic hose that determines its overall strength, is the _____.	braided inner layer(s)	outer armor	outer cover	inner tube
1117	The pour point of lubricating oils is affected the most by which of the following?	Wax content	Water content	Acid content	Extensive centrifuging
1118	The neutralization number of lube oil used in the machinery has exceeded its permissible range, therefore, it will be necessary to _____.	add make-up oil	operate the machinery at reduced power	renew the entire oil supply	purify the oil
1119	An organic solid lubricant, such as graphite, is suitable as an oil additive when used in _____.	line shaft bearings	bearings subject to fluctuating loads	machinery bearings subjected to high temperatures	antifriction bearings on general service pumps
1120	A filter used in a multi-operation hydraulic system would most likely be located _____.	between the pump and the directional control valves	at the pump suction	between the control valves and the actuators	in the actuator return lines
1121	What is the harmful effect of sulfur in a fuel?	It doesn't readily burn when combined with oxygen.	It forms a corrosive acid when mixed with water or water vapor.	It causes excessive smoking and soot at low firing rates.	It clogs fuel oil strainers more often
1122	Additives commonly found in turbine lubricating oil includes, _____.	corosive agents, oxidation inhibitors, and extreme pressure additives	corosive agents, oxidation inhibitors, and oxidation inhibitor	corosive agents, anti-foaming, and extreme pressure additives	antifoaming agents, oxidation inhibitors, and extreme pressure additives
1123	The ash content of a fuel oil is significant to the operating engineer because it _____.	is an indication of the amount of noncombustible material present in the oil	indicates the quantity of energy released by burning a unit amount of fuel	is useful for determining proper atomization temperatures	reflects the overall thermal efficiency of the fuel oil service systems
1124	Dirt should not be allowed to contaminate a grease lubricant because the _____.	dirt will cause corrosion of bearing	grease will become inflammable	bearings will leak oil excessively	dirt is very abrasive when mixed with grease

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

1125	Which one is fitted between oil tanks and other compartments and must be at least 760mm. wide?	Cofferdams	Ballast tanks	Deep tanks	Hatches
1126	If two different fuel oil are mixed in one tank during bunkering, which of the following substance will be produced?	Sulphur sludge	Asphaltenic sludge	Hydrocarbon water	Carbon residue
1127	On purifiers, as a rule of thumb, the time interval set between automatic de-sludging of 180 cst heavy fuel oil should be?	12 hours	4 to 6 hours	1 to 3 hours	6 to 8 hours
1128	Failure of the fuel oil service pump to maintain fuel oil flow to the burner could be caused by _____.	Excessive return line oil pressure	Dirty fuel oil strainers	Excessive fuel pump speed	A high relief valve setting
1129	An emergency bilge suction is required for _____.	ballast tanks	cargo hold bilges	sludge tanks	machinery space bilges
1130	Which of the following procedures will tell you that the lube oil being used by the engine is still in good condition?	By lube oil analysis	By chemical treatment	By visual inspection	By continuous purification
1131	On a gear pump, what is the usual method of reducing the delivery pressure?	By throttling the suction valve.	By fitting an orifice in the discharge line.	By throttling the discharge valve.	By adjusting the internal spring loaded pressure relief valve.
1132	When taking over the engine room watch, what should you check concerning the operational lubricating oil purifier ?	Check whether throughput is minimum, check the overflow pipe, check whether the alarm is activated	Check whether throughput is on maximum, check the water seal, check the overflow/water flow off pipe, check inlet temperature and back pressure.	Check the setting of the timers, check the inlet temperature, the back pressure, the bearing temperatures.	Check the Ferodo coupling, the bearing temperatures, the inlet temperature and the back pressure.
1133	What might be the cause of an increase of marine diesel engine crankcase pressure?	Compression pressure	Lube oil pressure	Piston ring blow by	Scavenge air pressure
1134	The rate of expansion of heated fuel oil varies with the _____.	viscosity	conductivity	volume	Specific gravity
1135	The lubricating oil on the exhaust side of the turbine blower gets dirty after only a few hours in	Damaged or worn turbine side bearing.	Cooling water leak into oil space..	Labyrinth seal leaking exhaust gas into the oil.	The wrong type of oil used.

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	service. What can the reason be ?				
1136	When fuel oil has seriously contaminated your lube oil, you should _____.	drain and then renew the lube oil supply	filter to remove the fuel	use the settler to remove the fuel	remove the fuel oil by centrifuging
1137	The minimum temperature requirements for fuel oil in storage tanks is related to the _____.	size of the vents	firepoint of the oil	size of the containment area in case of overflow	pumpability of the oil
1138	Which characteristic of fuel oil is the most significant when determining the temperature to which the fuel oil must be heated for proper atomization?	viscosity	flashpoint	specific gravity	pour point
1139	If a bilge pump is able to develop vacuum, but is unable to sufficiently pump out the bilges, you would check for all of the following EXCEPT _____.	the suction strainer	the circuit breaker	for leaks in the suction piping	relief valve is not properly seated
1140	Which type of pump would be most suitable for pumping large quantities such as oil cargoes ?	Reciprocating pumps.	Screw pumps.	Gear pumps.	Centrifugal pumps.
1141	When heated, fuel oil will _____.	increase in specific gravity	expand in volume	increase in viscosity	have a higher specific heat
1142	Which one is fitted between oil tanks and other compartments and must be at least 760mm. wide?	Hatches	Ballast tanks	Deep tanks	Cofferdams
1143	If two different fuel oil are mixed in one tank during bunkering, which of the following substance will be produced?	Hydrocarbon water	Carbon residue	Asphaltenic sludge	Sulphur sludge
1144	On purifiers, as a rule of thumb, the time interval set between automatic de-sludging of 180 cst heavy fuel oil should be?	1 to 3 hours	12 hours	6 to 8 hours	4 to 6 hours
1145	Failure of the fuel oil service pump to maintain fuel oil flow to the burner could be caused by _____.	Excessive fuel pump speed	A high relief valve setting	Dirty fuel oil strainers	Excessive return line oil pressure
1146	An emergency bilge suction is required for	cargo hold bilges	machinery space bilges	ballast tanks	sludge tanks

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	_____.				
1147	Which of the following procedures will tell you that the lube oil being used by the engine is still in good condition?	By continuous purification	By visual inspection	By chemical treatment	By lube oil analysis
1148	On a gear pump, what is the usual method of reducing the delivery pressure?	By throttling the suction valve.	By throttling the discharge valve.	By fitting an orifice in the discharge line.	By adjusting the internal spring loaded pressure relief valve.
1149	When taking over the engine room watch, what should you check concerning the operational lubricating oil purifier ?	Check the Ferodo coupling, the bearing temperatures, the inlet temperature and the back pressure.	Check the setting of the timers, check the inlet temperature, the back pressure, the bearing temperatures.	Check whether throughput is minimum, check the overflow pipe, check whether the alarm is activated	Check whether throughput is on maximum, check the water seal, check the overflow/water flow off pipe, check inlet temperature and back pressure.
1150	What might be the cause of an increase of marine diesel engine crankcase pressure?	Piston ring blow by	Scavenge air pressure	Compression pressure	Lube oil pressure
1151	The rate of expansion of heated fuel oil varies with the _____.	volume	Specific gravity	conductivity	viscosity
1152	The lubricating oil on the exhaust side of the turbine blower gets dirty after only a few hours in service. What can the reason be ?	Cooling water leak into oil space..	The wrong type of oil used.	Damaged or worn turbine side bearing.	Labyrinth seal leaking exhaust gas into the oil.
1153	When fuel oil has seriously contaminated your lube oil, you should _____.	filter to remove the fuel	remove the fuel oil by centrifuging	use the settler to remove the fuel	drain and then renew the lube oil supply
1154	The minimum temperature requirements for fuel oil in storage tanks is related to the _____.	pumpability of the oil	firepoint of the oil	size of the vents	size of the containment area in case of overflow
1155	Which characteristic of fuel oil is the most significant when determining the temperature to which the fuel oil must be heated for proper atomization?	flashpoint	pour point	viscosity	specific gravity
1156	If a bilge pump is able to develop vacuum, but is	the suction strainer	for leaks in the suction piping	relief valve is not properly seated	the circuit breaker

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	unable to sufficiently pump out the bilges, you would check for all of the following EXCEPT _____.				
1157	Which type of pump would be most suitable for pumping large quantities such as oil cargoes ?	Screw pumps.	Gear pumps.	Reciprocating pumps.	Centrifugal pumps.
1158	When heated, fuel oil will _____.	expand in volume	increase in specific gravity	increase in viscosity	have a higher specific heat
1159	What might be the cause of marine diesel engine having an excessive consumption of lubricating oil?	Insufficient lube oil temperature	High lube oil viscosity	Excessive piston ring wear	Dirty lube oil filters
1160	What is the best gasket material to use in cargo fuel oil lines?	Oil-resistant sheet packing	Minimize the effect of a listing condition	Cork sheet packing	Unvulcanized packing
1161	Fuel oil viscosity to the atomizer can be reduced by _____.	increasing the fuel oil heater steam supply	mixing heavier oil with the fuel	changing the atomizer orifice size	increasing fuel oil pressure
1162	The BTU value of fuel oil is determined by a/an _____.	open cup test	viscosimeter	calorimeter	hydrometer
1163	Which of the following signs may indicate there is serious water contamination in the M/E lube oil system ?	Poor performance of the engine	Whitish lube oil	Partly corroded piston rings	Yellowish lube oil
1164	Which component of a hydraulic system would enable the pump to be temporarily shutdown. And yet provide an instantaneous source of hydraulic oil?	modulator	pressure compensator valve	Accumulator	sump actuator
1165	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
1166	What procedure must be done in order to have the fuel oil viscosity entering the atomizer be reduced?	Increase the supply of steam to fuel oil heater	Use lighter kind of fuel oil	Increase the fuel oil specific gravity	Increase the delivery pressure of fuel oil
1167	In a diesel engine fuel oil jerk pump the amount of fuel that will be forced through the spray nozzle on each upward stroke of the plunger depends upon _____.	how much the plunger had been rotated by the rack	the pump supply pressure	the number of sleeve segments engaged with the rack	the slope of the fuel cam

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

1168	In a unit injector an upper helix and lower helix are machined in the lower part of the plunger for_____.	eliminating injection lag	positioning the control sleeve	facilitating plunger rotation	accurate metering of the fuel oil
1169	Fuel injection pumps using the port and helix metering principle requires the use of a_____.	variable stroke	lapped plunger and barrel	variable cam lift	crosshatched design
1170	The plunger in a jerk pump is rotated until the release port is uncover If the port remains uncovered all of the time which of the listed operations will occur?	No fuel will be delivered	The injection nozzle will overheat and carbonize	The fuel delivered to the cylinder will be excessive	The maximum effective stroke will be attained
1171	The function of the window cast into the housing of an individual jerk pump is to _____.	check for sludge on the pump barrel	allow the pump to be timed to the engine	check that the fuel return passages are clear	set up the fuel rack calibration in cubic millimeters
1172	What must be DONE in order to determine the fuel pump rack setting for individual fuel pumps on the diesel engine?	Secure the engine and remove the fuel pump crosshead cover	Secure the engine remove the fuel pump crosshead cover and compare rack setting to master pump setting	Run engine at idle remove cover and secure engine while observing rack movement	Remove the fuel pump cross head cover and observe the rack setting with the engine running
1173	The purpose of the delivery check valve used in a diesel fuel injection jerk pump is to_____.	assist in a quick cut-off of fuel injection	meter the quantity of fuel delivered	reduce fuel oil pressure between injection strokes	allow oil backflow from the injector to the helix
1174	One function of the fuel pump delivery check valve is to_____.	ensure a fuel leakoff between the plunger and barrel which provides lubrication for relative movement	help the injector needle reseal without dribbling at the nozzle holes	prevent carbon deposits from forming on the injector nozzle	maintain popping pressure in the high pressure steel piping to the injector
1175	The delivery valve installed in a port and helix fuel injection pump is designed to_____.	maintain constant pressure in the discharge line	maintain a column of fuel in the line	close with hydraulic action	accurately meter the quantity of fuel injected
1176	The purpose of the delivery check valve used in a diesel fuel injection jerk pump is to_____. I. assist in a quick cutoff of fuel injection II prevent	II only	both I and II	neither I nor II	I only

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	fuel oil backflow from the injection pump				
1177	What will happen if there is surface irregularities such as erosion and pitting on injection pump plungers?	It will disappear due to fuel oil abrasion	It will increase ignition delay	It will affect fuel oil metering	It will affect engine performance at low speed only
1178	If the discharge valve of the fuel injection pump leaks during operation which of the following conditions should be expected?	Effective length of stroke will be increased	Fuel will leak into the return line	Effective length of stroke will be decreased	Injection timing will be increased
1179	Because of the close tolerances used in diesel engine fuel oil pumps a worn plunger requires_____.	replacing the plunger and the barrel	grinding the spare plunger to the barrel	highly polishing both the plunger and barrel	replacing plunger only
1180	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?	Delivery check valve	Cam follower	Tubing to the injector	Pump barrel
1181	What could result in uneven bolt tightening during the installation of a fuel injection pump?	binding of pump moving parts	high torsional shock to fuel lines	improper pump-to-engine timing	ignition delay
1182	If lost motion is present in an individual fuel injection pump which of the following problems will occur?	Fuel injection will remain unchanged	Fuel injection will occur earlier	Fuel injection will occur later	Fuel injection will be increased
1183	If a diesel engine runs roughly which of the systems listed is most likely to be at fault?	Cooling	Ignition	Lubricating	Fuel
1184	In a diesel engine fuel oil jerk pump the amount of fuel that will be forced through the spray nozzle on each upward stroke of the plunger depends upon_____.	how much the plunger had been rotated by the rack	the pump supply pressure	the number of sleeve segments engaged with the rack	the slope of the fuel cam
1185	Fuel oil is regularly transferred to the day tank in order to_____. I - allow impurities to settle out of the fuel and for decanting of fuel II - make fuel available for immediate use. III - fill-up	I only	I II and III	I and III only	I and II only

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	the tank because empty tank can develop corrosion				
1186	Heavy fuel oil used in the system will have the lowest viscosity_____.	at the transfer pump discharge	at the main engine fuel oil header	in the three-way valve	in the settling tank
1187	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 reciprocating plunger directly applying force to a fluid	A propeller drawing a fluid through a venturi nozzle.	A rapidly moving stream of fluid passing through a nozzle
1188	If one of the bilge system suction valves 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 to the forward bilge wells	all of these choices are correct
1189	If the discharge valve is closed before the drive motor is stopped which of the following types of pumps will most likely be damage?	Turbine	Propeller	Gear	Centrifugal
1190	An internal bypass is provided on some hydraulic system suction strainers to help reduce the possibility of _____.	aeration of the oil	spongy actuator movements	contamination of the oil	pump cavitations
1191	An inadequate reciprocating bilge pump discharge is most often caused by _____.	clogged drain valves	scarred cylinder walls	defective intake valves	clogged suction strainer
1192	Treatment of fuel oil by heating the fuel oil inside the tank thus allowing it to remain undisturbed for some time that the gravitational separation of water and heavy foreign materials occur is called_____.	settling	purifying	clarifying	filtering
1193	Which of these is NOT a way of fuel oil treatment?	Purifying	Settling	Filtering	Evaporating
1194	Standby or emergency diesel generator day tanks should always be kept full to reduce the possibility of _____.	sediment contamination	moisture formation from condensation	fuel filter clogging	inadequate transfer pump suction head

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

1195	Proper housekeeping to prevent the formation of microbiological growths within a fuel system includes the prevention of water accumulations and the use of _____.	fuel oil discharge filters	fuel oil centrifuges	chemical additives called biocides	steam coils
1196	The relief valve on the discharge side of the fuel oil service pump may discharge directly to the suction side of the pump or to the _____.	discharge side of the pump	double bottom fuel tank	oil header return line	fuel oil heater inlet
1197	Which of the pumps listed below takes fuel oil suction from the double bottom tanks and discharges it to the settling tanks?	Fuel oil service pump	Settler service pump	Fuel oil transfer pump	Centrifugal type general service pump
1198	Proper filtering and straining of diesel fuel oil is important because the _____.	dirty fuel will clog the intake air filter	fuel oil pump will overspeed if dirt is not removed	fuel injectors may be damaged by foreign particles in the fuel oil	fuel oil transfer pumps cannot tolerate small amounts of grit in the oil
1199	What will happen if fuel oil is heated?	Fuel oil will expand in volume	Fuel oil will have a higher specific heat	Fuel oil will increase in viscosity	Fuel oil will increase in specific gravity
1200	How are sea water contamination in fuel oil be removed?	Filtering	Gravitational separation in settling tank	Heating and Evaporation	Treatment with chemicals
1201	When fuel oil is accidentally mixed with lube oil _____ which of the following processes listed below can be used to separate them? I - Filtering; II - Settling	either I or II	I only	neither I nor II	II only
1202	The primary purpose of heaters in a pressurized fuel oil system is to _____.	improve the flash point of the fuel	reduce fuel oil specific gravity for proper combustion	increase the fire point of the fuel	reduce the fuel viscosity for proper atomization
1203	When changing a lube oil purifier from a separator to a clarifier you _____.	install a smaller inside the diameter ring dam	install a larger inside the diameter ring dam	install a seal ring at the top	change all the discs
1204	Increasing the distance between receiving tank and supply pump will result in an increase in discharge temperature and _____.	attending personnel	suction temperature is decreased	less power is needed	more power is needed

# MANAGEMENT ENGINE

1205	What precautions should be observed when transferring fuel oil to the settling tanks?	Maintaining a supply of chemical dispersant to clean up minor oil spills adjacent to the ship	Maintaining a high transfer rate until a slight trickle of oil is observed flowing from the overflow line	Sounding the tanks frequently and reducing the transfer rate as the level approaches maximum fill	Plugging gooseneck tank vents to prevent accidental overflow
1206	What do you call the devices that utilizes the rapid flow of a fluid to entrain another fluid and thereby move it from one place to another?	Mixed flow pumps	Jet pumps	Volute pumps	Centrifugal pumps
1207	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	heat the fuel to proper temperature for atomization	allow the sediments and water to settle
1208	An axial piston differs from a radial piston pump as the pistons of an axial piston pump are positioned _____.	radially from the shaft	at an angle to each other and to the shaft	parallel to each other and to the shaft	parallel to each other but at right angle to the shaft
1209	Which statement represents an advantage of rotary pumps as compared to reciprocating pumps?	Rotary pumps eliminate discharge slippage of the pumped liquid, while this does not hold true for the reciprocating pump.	Rotary pump are capable of pumping more fluid than reciprocating pump of the same weight.	The high discharge pressure of a rotary pumps permits a larger volume of fluid per unit time than the reciprocating pump	Rotary pump occupy only one-half the space of reciprocating pumps.
1210	What type of hydraulic pump is commonly used in steering systems?	Axial piston type	Volute type	Screw type	Lobe type
1211	What are the main contaminants in fuels?	Sea water, chemicals and heavy cracked fuels	Sludge and water	Chemical waste, bitumen and water	Chemical waste, waste lubricating oil and microorganism
1212	Fuel oil settling tanks are used to _____. I - separate water and solid particles from the fuel II - make stripping of sludge and water from fuel oil easier III - store oil for daily use	I II and III	II and III only	I and III only	I and II only
1213	A distinguishing feature of an eductor, when compared to other pumps, is the _____.	small size of impeller	lack of moving parts	ease at which the wearing rings may be changed	discharge end being smaller than the suction end

# MANAGEMENT ENGINE

1214	Valves used in diesel engine fuel oil pressure piping are to be _____.	so constructed as to permit packing under pressure	forge constructed under the approval of the Marine inspector	solenoid released upon the failure of engine lubrication	either of the gate or globe valve type
1215	Which of the following increases when fuels are heated?	volume	specific heat	viscosity	specific gravity
1216	What is the main reason for having a low suction line on the fuel oil service or settling tanks?	To prevent loss of suction during rough weather	To increase the amount of fuel available for use	Facilitate sludge and water removal	To decrease suction head on the pump
1217	Which of the following is the purpose of heating the fuel oil?	To increase viscosity	To reduce pour point	To avoid carbon deposits	Easy transfer and meet parameter for ignition quality
1218	The purpose of the relief valve in a fuel oil service system is _____.	to regulate the atomizer oil pressure	to protect the service pump from high discharge pressure	to control the oil pressure regulators	supply constant pressure to the burner combustion control valves
1219	Fuel oil transfer systems used onboard diesel propelled vessels are required to have _____.	the capacity of the engine driven pump exceed the consumption rate of the engine to which it is attached	two fuel oil transfer pumps, with a combined capacity exceeding the maximum consumption of the main engine	engine driven transfer pumps and only used in constant speed applications	two fuel oil transfer pumps provided where one is to be independent of the main engine
1220	Pumps normally used for fuel oil service are _____.	two-stage centrifugal pumps	positive displacement pumps	explosion proof gear pumps	non-vented plunger pumps
1221	Fuel oil day tanks for diesel engines must be checked and cleaned at regular intervals in order to remove _____. I - water II - sludge III - salinity	I only	I and III only	I and II only	II and III only
1222	Aside from oil purifier, oil clarifier is another way of oil treatment by removing which of the following?	Heavy Solid Impurities	Water	Sodium and Vanadium Compound	Sulphur
1223	Permitting a diesel engine fuel oil day tank to run dry can cause _____.	air in the fuel system	water condensation in the cylinders	fuel dilution of the lube oil	overhead injection pumps
1224	Machinery driving fuel oil transfer and fuel oil service pumps must be fitted with a remote	within the fireroom	the throttle station	outside the space concerned	within the space concerned

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	means of stopping the machinery from _____.				
1225	What is the recommended heating temperature of fuel oils before changing over from diesel oil?	100C	85C	110C	95C
1226	On purifiers, as a rule of thumb, the time interval set between automatic de-sludging of 180 cst heavy fuel oil should be?	6 to 8 hours	12 hours	4 to 6 hours	1 to 3 hours
1227	Failure of the fuel oil service pump to maintain fuel oil flow to the burner could be caused by _____.	excessive return line oil pressure	a high relief valve setting	excessive fuel pump speed	dirty fuel oil strainers
1228	Which of the following would prevent a steam reciprocating pump from delivering its rated capacity?	A clogged suction strainer	Air trapped in the discharge expansion chamber	Excessive suction lift	A leaking snifter valve
1229	The main function of wearing ring in the centrifugal pump is to _____.	prevent wear of the pump casing and impeller	maintain alignment between impeller and casing	absorb impeller shaft and thrust	prevent water leakage to the atmosphere
1230	What do you call an auxiliary machinery that adds to the energy of a liquid or gas causing an increase in its pressure and perhaps a movement of the liquid?	Ejector	Accelerator	Pump	Accumulator
1231	How will you operate a centrifugal fire pump at reduced capacity?	Open the priming line	Throttle the discharge valve	Adjust the relief value	Throttle the suction line
1232	Lost of pump efficiency may be the result of _____.	air entering the pump through a pin hole leak in the discharge manifold	the suction valve in the wide open position	a leak in a gasket on the suction side of the pump	the pump being installed too close to the suction tank
1233	Lantern rings are provided on centrifugal pumps in order to _____.	allow for visual inspection of shaft and packing	allow for distortion of the wearing rings	provide a passage for the packing glands	adjust leakage at the shift gland
1234	How is the amount of oil atomized by the return flow variable capacity atomizer, used with some automatically fired boilers being controlled?	By proportioning device in the atomizer fuel valve	By oil pressure in the oil return line	By the amount of air admitted to the atomizer	By quantity of oil delivered by the service pump

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

1235	What is referred by control volume?	Fixed regulated space	Closed system	An isolated system	Reversible system
1236	What is the reason why absorption filters not commonly used in steam turbine or diesel engine lubricating systems?	Filters can absorb no more than five times their weight in water	They are only effective at temperature below 100 F	Filters utilize exotic and expensive filtering media making them too costly for use	Filters remove additives from the lube oil
1237	Which of the following characteristics of lube oil are the most important to the engineer from an operational standpoint?	Viscosity, Acidity, and demulsibility	Ash content, carbon residue, and gravity	Pour point, flash point, and precipitation number	Auto-ignition point, viscosity index, and film strength
1238	What is the most important action to be done after receiving information from the barge master that the bunkering process is already completed?	Ask for the sample	Calculate the fuel oil received	Remove the hose connection	Ask for the receipts
1239	A filter used in a multi-operation hydraulic system would most likely be located _____.	between the pump and the directional control valves	at the pump suction	between the control valves and the actuators	in the actuator return lines
1240	A high water level in a deaerating feed heater will cause the automatic dump valve to drain condensate to the _____.	auxiliary condenser	main condenser	reserve feed tank	atmospheric drain tank
1241	What is the velocity of a fluid particle at the center of the pipe section?	Becoming slow	Minimum	Average	Maximum
1242	What is the hydraulic system components that could an O-ring seal be satisfactorily used in providing a good sealing?	Hydraulic ram	High pressure pump shaft casing	Relief valve spool	Directional valve
1243	The crackling noise coming from the centrifugal pump housing is an indication of _____.	reversed pump rotation	insufficient packing	badly leaking unloaders	excessive suction lift
1244	In order to compensate for wear resulting from rotation and abrasives in the liquid handled , a centrifugal pump is fitted with _____.	wearing rings	bearings	casing volute	lantern ring
1245	Why proper filtering and straining of diesel fuel is	Dirty fuel will clog the intake	Fuel injectors will get damaged	Fuel oil transfer pumps cannot	The fuel oil pump will

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	important?	air filter	by foreign particles in fuel oil	tolerate small amounts of grit in the oil	overspeed if dirt is not removed
1246	What might be the problem if a bilge pump is in normal operation and develop a good vacuum, but unable to discharge any water?	Bilge pump priming valve is open	The wearing rings are excessively worn	The suction strainer is clogged	Bilge pump suction valve is close
1247	What will happen if one of the bilge system suction valves does not properly seat?	All of these choices are correct	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	Bilge well aft connected to that valve will siphon its contents to the forward bilge wells
1248	What should you do when bunkering is completed. I - Blank the line, II - Air blow supply hose to ship or shore, III - Drain the supply hose content to a drip pan	I and III only	I, II and III	II and III only	I and II only
1249	Before performing any maintenance on a hydraulic system storing energy in an accumulator, you should_____.	pressurize the system to test for leaks	disconnect the pump pressure control switch	operate the machine until it reaches normal temperature	bleed off all pressure within the system
1250	What is the term referred to the sediment - forming tendency of a manufactured fuel when mixed with another fuel?	Incompatibility	Proportionality	Blending	Compatibility
1251	A hydraulic fluid flow control circuit controlling the amount of fluid supplied by a pump operating system pressure is known as_____.	metered-out circuit	metered-in circuit	bleed-out circuit	bleed-in circuit
1252	Which part is the weakest link when the pumping connections are made up of flanged hoses in an oil pumping activity?	Hose	Stud	Flange	Bolt hole
1253	Which of the listed pumping arrangements will be hazardous when two similar centrifugal pumps are used to discharge a cargo of flammable liquid?	Both pumps are operating at the same speed and discharging to a common line.	Each pump operating at different speed and taking suction from the common line.	Both pumps are operating at same speed and taking suction from a common line.	Each pump operating at a different pressure and discharging into a common line.

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

1254	In a duplex reciprocating pump_____.	the slide valve of one cylinder is controlled by the piston rod of the other cylinder	both slide valves operate simultaneously	the same size as the pump discharge nozzle	one self smaller than the pump discharge nozzle
1255	If an operating horizontal centrifugal pump becomes air bound, you should vent it at the_____.	discharge flange	bottom of the casing	suction line	top of the casing
1256	The unit of temperature in S.I. units is	Fahrenheit	Centigrade	Kelvin	Celsius
1257	According to Gay-Lussac law for a perfect gas, the absolute pressure of given mass varies directly as	temperature	volume, if temperature is kept constant	absolute temperature, if volume is kept constant	absolute
1258	An ideal gas as compared to a real gas at very high pressure occupies	unpredictable behaviour	more volume	same volume	less volume
1259	According to Daltons law, the total pressure of the mixture of gases is equal to	sum of the partial pressures of all	greater of the partial pressures of all	average of the partial pressures of all	sum of the partial pressures of all divided by average molecular weight
1260	The unit of pressure in S.I. units is	kg/cm <sup>2</sup>	pascal	mm of water column	dynes per square cm
1261	A closed system is one in which	mass does not cross boundaries of the system, though energy may do so	mass crosses the boundary but not the energy	both energy and mass cross the boundaries of the system	neither mass nor energy crosses the boundaries of the system
1262	According to kinetic theory of gases, the absolute zero temperature is attained when	volume of the gas is zero	pressure of the gas is zero	specific heat of gas is zero	kinetic energy of the molecules is zero
1263	Super heated vapour behaves	as steam	approximately as a gas	exactly as gas	as ordinary vapour
1264	Absolute zero pressure will occur	at the center of the earth	at sea level	under vacuum conditions	when molecular momentum of the system becomes zero
1265	The unit of power in S.I. units is	pascal	watt	joule.	newton
1266	Intensive property of a system is one whose value	does not depend on the mass of the system, like temperature, pressure, etc.	is dependent on the path followed and not on the state	is not dependent on the path followed but on the state	depends on the mass of the system, like volume

# MANAGEMENT ENGINE

1267	Which law states that the internal energy of a gas is a function of temperature	Regnaults law	Charles law	Boyles law	Joules law
1268	Gases have	only one value of specific heat	three values of specific heat	two values of specific heat	no value of specific heat
1269	To convert volumetric analysis to gravimetric analysis, the relative volume of each constituent of the flue gases is	multiplied by its specific weight	multiplied by its molecular weight	multiplied by its density	divided by its molecular weight
1270	An isolated system is one in which	neither mass nor energy crosses the boundaries of the system	mass does not cross boundaries of the system, though energy may do so	both energy and mass cross the boundaries of the system	mass crosses the boundary but not the energy
1271	Properties of substances like pressure, temperature and density, in thermodynamic coordinates are	path functions	real functions	cyclic functions	point functions
1272	Which of the following quantities is not the property of the system	specific volume	temperature	pressure	heat
1273	Mixture of ice and water form a	open system	closed system	heterogeneous system	isolated system
1274	Which of the following is not the intensive property	heat	pressure	temperature	density
1275	Which of the following items is not a path function	work	heat	thermal conductivity.	kinetic energy
1276	Work done in an adiabatic process between a given pair of end states depends on	the end states only	the value of heat transferred	the value of index n	particular adiabatic process
1277	Which of the following parameters is constant for a mole for most of the gases at a given temperature and pressure	specific volume	volume	mass	entropy
1278	Solids and liquids have	one value of specific heat (ft) two values of specific heat	three values of specific heat	one value under some conditions and two values under other conditions.	no value of specific heat
1279	The term N.T.P. stands for	normal thermodynamic pressure	nominal temperature and pressure	normal temperature and pressure	natural temperature and pressure
1280	Change in enthalpy in a closed system is equal to heat transferred if the	temperature	entropy	pressure	volume

# MANAGEMENT ENGINE

	reversible process takes place at constant				
1281	The basis for measuring thermodynamic property of temperature is given by	first law of thermodynamics	second law of thermodynamics	third law of thermodynamics	zeroth law of thermodynamics
1282	First law of thermodynamics furnishes the relationship between	heat, work and properties of the system	various thermodynamic isobaric properties	various properties of the system	various thermodynamic processes
1283	On volume basis, air contains following parts of oxygen	25	23	21	77
1284	In the choices for which of the following substances, the internal energy and enthalpy are the functions of temperature only	saturated steam	perfect gas	any gas	water
1285	The specific heat of air increases with increase in	temperature	both pressure and temperature	pressure	variation of its constituents
1286	For a thermodynamic process to be reversible, the temperature difference between hot body and working substance should be	infinity	maximum	minimum	zero
1287	A heat exchange process in which the product of pressure and volume remains constant is known as	isentropic process	adiabatic process	hyperbolic process.	throttling process
1288	In an isothermal process, the internal energy of gas molecules	remains constant	may increase/decrease depending on the properties of gas	increases	decreases
1289	Zeroth law of thermodynamics	states that if two systems are both in equilibrium with a third system, they are in thermal equilibrium with each other	deals with heat engines	deals with reversibility and irreversibility of process	deals with conversion of mass and energy
1290	Energy can neither be created nor destroyed but can be converted from one form to other is inferred from	zeroth law of thermodynamics	third law of thermodynamics	second law of thermodynamics	first law of thermodynamics
1291	One watt is equal to	1 N/mt	1 kNm/hr	1 Nm/s	1 Nm/hr
1292	Work done is zero for the following process	all of the choices	free expansion	throttling	constant volume

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

1293	For which of the following substances, the gas laws can be used with minimum error	wet steam	superheated steam	dry steam	saturated steam
1294	Universal gas constant is defined as equal to product of the molecular weight of the gas and	specific heat at constant pressure	ratio of two specific heats	gas constant	specific heat at constant volume
1295	For which of the following substances, the internal energy and enthalpy are the functions of temperature only	superheated steam	perfect gas	water	saturated gas
1296	If a gas vapour is allowed to expand through a very minute aperture, then such a process is known as	free expansion	throttling.	adiabatic expansion	parabolic expansion
1297	The specific heat of air increases with increase in	temperature	airflow	pressure	volume
1298	If a fluid expands suddenly into vacuum through an orifice of large dimension, then such a process is called	hyperbolic expansion	adiabatic expansion	parabolic expansion	free expansion
1299	Which of the following processes are thermodynamically reversible	free expansion	isothermal and adiabatic	hyperbolic and $pV = C$	constant volume and constant pressure
1300	Which of the following processes is irreversible	adiabatic	isothermal	isobaric	throttling
1301	For a thermodynamic process to be reversible, the temperature difference between hot body and working substance should be	infinity	maximum	zero	minimum
1302	Minimum work in compressor is possible when the value of adiabatic index $n$ is equal to	1	0.75	1.25	0.25
1303	The more effective way of increasing efficiency of Car not engine is to	increase lower temperature	increase higher temperature	decrease lower temperature	decrease higher temperature
1304	Entropy change depends on	change of temperature	mass transfer	heat transfer	gas transfer
1305	For reversible adiabatic process, change in entropy is	maximum	minimum	equal	zero

# MANAGEMENT ENGINE

1306	Isochoric process is one in which	no mechanical work is done by the system	all parameters remain constant	free expansion takes place	mass and energy transfer do not take place.
1307	How does foam extinguish an oil fire?	By removing the fuel source from the fire	By cooling the oil below the ignition temperature	By increasing the weight of the oil	By excluding the oxygen from the fire
1308	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
1309	If a firefighting situation calls for low-velocity fog you would _____.	put the lever on an all-purpose fire nozzle all the way forward	order the engine room to reduce pressure on the fire pump	put the lever on an all-purpose fire nozzle all the way back	attach a low-velocity fog applicator with the nozzle shut down
1310	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	Engine room and largest cargo space	All cargo-space	All the space of the vessel
1311	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
1312	A definite advantage of using water as a fire extinguishing agent is its characteristic of _____.	alternate expansion and contraction as water in a liquid state becomes a vapor	rapid contraction as water is converted from a liquid to a vapor	absorption of smoke and gases as water is converted from a liquid to a vapor	rapid expansion as water absorbs heat and changes to steam
1313	At the required fire drill, all persons must report to their stations and demonstrate their ability to perform duties assigned to them _____.	By the Coast Guard regulations	By the person conducting the drill	In the Muster List ("Station Bill")	At the previous safety meeting
1314	You are underway when a fire breaks out in the forward part of your vessel. If possible you should _____.	put the vessel's stern into the wind	abandon ship to windward	call for assistance	keep going at half speed
1315	A galley grease fire would be classified as .	Class B	Class A	Class C	Class D
1316	In the event of a fire, the doors to a stair tower must be closed to prevent the spread of fire by _____.	radiation	convection	ventilation	conduction

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

1317	A fire may spread by which of the following means?	transmission	ventillation	contraction	conduction
1318	The function of the bypass valve on the self-contained breathing apparatus is to _____.	allow the wearer to manually give himself oxygen	control the pressure of the oxygen as it enters the body	release excess heat which would otherwise cause the bottle to explode	allow exhaled gases to pass outside the bottle
1319	Foam extinguishes fire by _____.	Chemical action	Cooling	Inerting the air	Smothering
1320	Extinguishing oil fire is very effective when _____.	Cutting off oxygen source	Cooling below its ignition temperature	Removing fuel	Spraying with water
1321	Fuel vents are fitted with corrosion resistant screen to prevent ____.	Escape of flammable vapors	Damge to the ball check	Flames entering the tank vent	Corrosion in the tank vent
1322	Which fire extinguishing agent has the greatest capacity for absorbing heat?	Carbon dioxide	Dry chemical	Foam	Water
1323	Annual servicing of a hand portable CO2 fire extinguisher includes _____.	hydrostatic testing of the cylinder	discharging, cleaning inside, and recharging	inspecting the pressure gauge to ensure the needle is within operating range	weighing the cylinder and recharging if weight loss exceeds 10% of the weight of the charge
1324	A spark arrestor _____.	prevents sparks from getting out of an engine's exhaust system	keeps sparks from falling into an open tank	secures covers on ullage openings	grounds static electricity
1325	On an inspection of your tankship you notice that there are no portable fire extinguishers in the pump room. To comply with regulations, you _____.	should arrange to have a B-II extinguisher placed in the vicinity of the exit	should arrange to have a B-II extinguisher placed in the lower pumproom	may substitute sand for the required extinguishers	need not be concerned since no portable extinguishers are required in the pumproom
1326	How often shall crew members participate in fire drills?	once every month	once every 6 months	once every year	once every week
1327	All of the following are part of the fire triangle except _____.	oxygen	electricity	heat	fuel
1328	What is required in addition to the heat, fuel, and oxygen of the fire triangle to have a fire?	Pressure	Electricity	Smoke	Chain reaction
1329	Fire alarm system thermostats are actuated by _____.	smoke sensors	an electric eye which actuates when smoke	the difference in thermal expansion of	pressure loss due to air being heated

# MANAGEMENT ENGINE

			interferes with the beam	two dissimilar metals	
1330	The supply of carbon dioxide used in the fixed extinguishing system aboard a cargo vessel must be at least sufficient for _____.	all the spaces of a vessel	all cargo spaces	the space requiring the largest amount	the engine room and largest cargo space
1331	Valves on steam-smothering lines to cargo tanks shall be set with _____.	the master control valve shut and valves to individual cargo tanks open	the master control valve shut and valves to individual cargo tanks shut	the master control valve open and valves to individual cargo tanks shut	all valves open
1332	What is the function of the bypass valve on the self-contained breathing apparatus?	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.	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.
1333	You are fighting a class "B" fire with a portable dry chemical extinguisher. The discharge should be directed _____.	over the top of the fire	at the seat of the fire, starting at the near edge	at the main body of the fire	to bank off a bulkhead onto the fire
1334	You are fighting a fire in the electrical switchboard in the engine room. You should secure the power, then _____.	determine the cause of the fire	use a portable foam extinguisher	use a low-velocity fog adapter with the fire hose	use a portable CO2 extinguisher
1335	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
1336	The smoke detector (fire indicator) indicates fire in a cargo hold loaded by general cargo. What first action should be taken?	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	Inspect the scene before deciding the method to be used for fire-fighting	Use the ship's gas extinguishing central system to put out the fire
1337	Which extinguishing agent is most likely to allow reflash as a result of not cooling the fuel below its ignition temperature?	CO2	Water stream	Water spray	Foam
1338	Combustible gas indicators operate by drawing an air sample into the instrument _____.	where it is mixed with nitrogen	over an electrically heated platinum filament	where its specific gravity is measured	where it is ignited by a sparking device

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

1339	Maximum allowable working pressure for each oil transfer hose assembly must be at least_____.	150 psi	250 psi	200 psi	100 psi
1340	Which unit will provide excellent mobility to the wearer in an unsafe atmosphere and provide oxygen to sustain life?	An ammonia gas mask	Immersion suit	A fresh air breathing apparatus	A self-contained breathing apparatus
1341	Which of the listed tanks present the greatest potential for an explosion?	A full tank of diesel oil	A partially filled tank of hydraulic oil	A partially filled tank of diesel oil	A full tank of lubricating oil
1342	Which of the following vessel's making a sea voyage requires to keep an oil record book?	All tank ships and tank barges over 150 gross tons	All tankers under 150 gross tons	All cargo and miscellaneous vessels under 500 gross tons	All cargo and miscellaneous vessels below 500 gross tons
1343	Fire main outlet valves or hydrants located on e decks shall be in _____.	protected against freezing or be fitted with valves and drain valves	opened up and internally examined at each Coast Guard biannual inspection for certification	open area or at the gangway near the emergency hallway	behind glass or a suitably marked enclosure
1344	Who among these officers onboard are considered knowledgeable enough who can act as guides in order that provisions of International laws and Conferences are observed and implemented?	Chief Engineer	Boatswain	Master and Chief officer	Master and Chief Engineer
1345	Which part is the weakest link when the pumping connections are made up of flanged hoses in an oil pumping activity?	Bolt hole	Hose	Stud	Flange
1346	Chemical foam is most suitable for use on a fire involving_____.	burning insulation	oil	electrical machinery	hot bulkheads
1347	If a fire hose is left unattended and under pressure with the nozzle shut off, the fire hose will _____.	Become elongated by 125%	Burst under pressure	Lash about violently	Remain motionless
1348	Which of the following statements is true concerning carbon dioxide when used as a fire extinguishing agent?	Carbon dioxide should be applied slowly to a large engine room fire.	Its smothering effect is excellent for class B fires.	Carbon dioxide is corrosive when exposed to fire.	Its total cooling effect is far greater than water
1349	Maximum allowable working pressure for each	250 psi	150 psi	100 psi	200 psi

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	oil transfer hose assembly must be at least_____.				
1350	Which unit will provide excellent mobility to the wearer in an unsafe atmosphere and provide oxygen to sustain life?	A self-contained breathing apparatus	Immersion suit	An ammonia gas mask	A fresh air breathing apparatus
1351	Which of the listed tanks present the greatest potential for an explosion?	A full tank of diesel oil	A partially filled tank of diesel oil	A partially filled tank of hydraulic oil	A full tank of lubricating oil
1352	Which of the following vessel's making a sea voyage requires to keep an oil record book?	All cargo and miscellaneous vessels below 500 gross tons	All tankers under 150 gross tons	All cargo and miscellaneous vessels under 500 gross tons	All tank ships and tank barges over 150 gross tons
1353	Fire main outlet valves or hydrants located on e decks shall be in _____.	behind glass or a suitably marked enclosure	opened up and internally examined at each Coast Guard biannual inspection for certification	protected against freezing or be fitted with valves and drain valves	open area or at the gangway near the emergency hallway
1354	Who among these officers onboard are considered knowledgeable enough who can act as guides in order that provisions of International laws and Conferences are observed and implemented?	Boatswain	Master and Chief officer	Chief Engineer	Master and Chief Engineer
1355	Which part is the weakest link when the pumping connections are made up of flanged hoses in an oil pumping activity?	Stud	Hose	Flange	Bolt hole
1356	Chemical foam is most suitable for use on a fire involving _____.	oil	burning insulation	hot bulkheads	electrical machinery
1357	If a fire hose is left unattended and under pressure with the nozzle shut off, the fire hose will _____.	Become elongated by 125%	Lash about violently	Remain motionless	Burst under pressure
1358	Which of the following statements is true concerning carbon dioxide when used as a fire extinguishing agent?	Its smothering effect is excellent for class B fires.	Carbon dioxide is corrosive when exposed to fire.	Its total cooling effect is far greater than water	Carbon dioxide should be applied slowly to a large engine room fire.
1359	The dumping of plastic such as fishing nets or garbage into the sea is regulated	COLREGS	IMO	SOLAS	MARPOL

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	by _____.				
1360	What does the presence of load line certificate endorsement onboard indicate?	Vessel's seaworthiness	Compliance of the class	Compliance to Coast Guard requirement	Compliance with the owners
1361	If a fire occurs in an electric cable, in which the inner layers of insulation have burned, you should FIRST _____.	remove the electrical load on the cable	secure power to the cable	cut the cable with a cable cutter	insulate the melted ends
1362	Under the ISM Code, what is a document issued to a ship which signifies that the Company and its shipboard management operate in accordance with the approved safety management system?	Class Certificate	Documentation Certificate	Document of Compliance	Safety Management Certificate
1363	Which of the following fire extinguishing agents has the greatest capacity for heat absorption?	Chemical foam	Dry chemical	Water fog	Carbon dioxide
1364	The MAIN objection to 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	extinguishing action is not as good as with soda acid	dry chemical leaves a powder residue which may render electrical equipment inoperative
1365	Which of the documents below identifies chemical listings, its physical properties, health hazards as well as firefighting procedures?	Material Safety Data Sheet	Hazardous Chemical Information Sheet	Hazardous Chemical Loading Document	Chemical Characteristics Document
1366	Through which of the listed process is sufficient heat produced to cause spontaneous ignition?	Latent heat of condensation	Heat of expansion	Heat of oxidation	Latent heat of sublimation
1367	Gasoline is a flammable liquid whose vapors are _____.	highly explosive	heavier than air	toxic	all of the above
1368	Which of the petroleum products listed has the lowest flash point?	Hydraulic oil	Refrigeration oil	Diesel oil	Lubricating oil
1369	Which of the following statements concerning chemical foam is TRUE?	It is formed as a result of the reaction between dry powder and	Foam bubbles are formed as a result of mechanical mixing with air.	It is recommended for use on fires in main propulsion	It is useful in fighting chemicals fires only.

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

		water.		electric motors.	
1370	Who is responsible to the Operation Manager for the technical aspects and seaworthiness of the ships, except for the engineering spaces and personnel?	Fleet manager	Marine Superintendent	Master	Designated Person Ashore
1371	What is the purpose of adopting international convention onboard?	Provide uniform practice	Port state control implementation	Avoid accident onboard	To confirm with requirements
1372	In firefighting, the term 'protecting exposures' means _____.	protecting exposed areas of the superstructure from flames	keeping flames from burning at the tank vents	protecting fire fighters from direct exposure to the heat of the fire	taking measures to prevent the spread of fire from the involved compartment to an adjacent compartment
1373	What is the main reason of implementing provisions on International Conferences or Convention onboard?	Port State recommendations	Class Society recommendations	Provide uniform practice.	Reduce accidents at sea.
1374	Automatically closed fire dampers installed in the vessel's ventilation system are operated by the use of a _____.	remote operated valve	fusible link	CO2 system pressure switch	heat or smoke detector
1375	If the crew are still on board and salvage tug is around, what would the master do if it is determined that saving the ship is not possible?	Don't abandonship	Abandonship and let go	Save the ship	Contact coast guard
1376	Mechanically foam used for firefighting is produced by mechanically mixing and agitating _____.	foam chemical with air and water	soda acid and water	dry chemical and water	bicarbonate soda with air and water
1377	Which is NOT a mandatory requirement of the shipboard oil pollution emergency plan?	Reporting requirements	Steps to control a discharge	National and local coordination	Diagrams
1378	What is termed as the process of killing the ineffective bacteria from the water so as to make it safe for drinking?	Tri-oxidation	Disinfection	Sterilization	Ultra-hydration
1379	Which of the following	The agent	AFFF controls	Because AFFF	AFFF can only be

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	statements is true concerning Aqueous Film Forming Foam (AFFF)?	cannot be used in conjunction with dry chemicals.	the vaporization of flammable liquids by means of a water film.	works through surface tension, it can not be broken up if it is agitated.	produced from fresh water.
1380	What is a major advantage of using a positive pressure type self-contained breathing apparatus?	Facial hair will not affect the mask performance.	The equipment is lightweight and the wearer can work without difficulty in confined spaces.	The speed with which it can be put into operation is around 45 seconds.	The average operating time is over an hour.
1381	Which of the following conditions is true concerning flammable liquid vapors with a concentration above the explosive limit?	The mixture is too rich to burn.	The mixture is too lean to burn.	The vapor is about to explode.	Conditions are perfect for combustion.
1382	According to the Pollution Prevention Regulation, who makes final decision of when oil transfer may begin?	The senior deck officer	The captain of the port	The designated persons in charge of vessel and facility	Any local coast guard representative
1383	What is the function of the bypass valve on the self-contained breathing apparatus?	In the event of a malfunction in the equipment, the valve can be operated manually to give the wearer air.	When pressure in the apparatus exceeds 7 psi above atmospheric pressure, the valve opens to release pressure.	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.
1384	During man overboard situation, the first person who saw the incident shall _____.	throw a marker and inform any deck officer around	throw a life ring and shout for help	shout for help and do not lose sight of the man in the water	throw a life ring and inform the bridge
1385	Why an upper limit switch is used when handling lifeboat equipment?	To keep the tricing line from releasing or getting tangled	To assist in cranking in the lifeboat	To prevent the davits from pulling up against the stops	To stop the lifeboat from being lowered
1386	Maximum allowable working pressure for each oil transfer hose assembly must be at least_____.	150 psi	100 psi	200 psi	250 psi
1387	Which unit will provide excellent mobility to the wearer in an unsafe atmosphere and provide oxygen to sustain life?	A self-contained breathing apparatus	An ammonia gas mask	Immersion suit	A fresh air breathing apparatus
1388	Which of the listed tanks present the greatest potential for an explosion?	A full tank of diesel oil	A full tank of lubricating oil	A partially filled tank of diesel oil	A partially filled tank of hydraulic oil

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

1389	Which of the following vessel's making a sea voyage requires to keep an oil record book?	All tankers under 150 gross tons	All tank ships and tank barges over 150 gross tons	All cargo and miscellaneous vessels under 500 gross tons	All cargo and miscellaneous vessels below 500 gross tons
1390	Fire main outlet valves or hydrants located on e decks shall be in _____.	protected against freezing or be fitted with valves and drain valves	open area or at the gangway near the emergency hallway	opened up and internally examined at each Coast Guard biannual inspection for certification	behind glass or a suitably marked enclosure
1391	Who among these officers onboard are considered knowledgeable enough who can act as guides in order that provisions of International laws and Conferences are observed and implemented?	Master and Chief officer	Boatswain	Chief Engineer	Master and Chief Engineer
1392	Which part is the weakest link when the pumping connections are made up of flanged hoses in an oil pumping activity?	Flange	Hose	Bolt hole	Stud
1393	Chemical foam is most suitable for use on a fire involving _____.	electrical machinery	burning insulation	oil	hot bulkheads
1394	If a fire hose is left unattended and under pressure with the nozzle shut off, the fire hose will _____.	Become elongated by 125%	Burst under pressure	Lash about violently	Remain motionless
1395	Which of the following statements is true concerning carbon dioxide when used as a fire extinguishing agent?	Carbon dioxide should be applied slowly to a large engine room fire.	Its total cooling effect is far greater than water	Carbon dioxide is corrosive when exposed to fire.	Its smothering effect is excellent for class B fires.
1396	The dumping of plastic such as fishing nets or garbage into the sea is regulated by _____.	MARPOL	COLREGS	SOLAS	IMO
1397	What does the presence of load line certificate endorsement onboard indicate?	Compliance with the owners	Vessel's seaworthiness	Compliance of the class	Compliance to Coast Guard requirement
1398	If a fire occurs in an electric cable, in which the inner layers of insulation have burned, you should FIRST _____.	insulate the melted ends	remove the electrical load on the cable	secure power to the cable	cut the cable with a cable cutter

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

1399	Under the ISM Code, what is a document issued to a ship which signifies that the Company and its shipboard management operate in accordance with the approved safety management system?	Safety Management Certificate	Class Certificate	Document of Compliance	Documentation Certificate
1400	Which of the following fire extinguishing agents has the greatest capacity for heat absorption?	Dry chemical	Chemical foam	Water fog	Carbon dioxide
1401	The MAIN objection to the use of a dry chemical fire extinguisher on an electrical fire is that the _____.	dry chemical leaves a powder residue which may render electrical equipment inoperative	extinguishing action is not as good as with soda acid	powder conducts electricity back to the fire fighter	extinguisher will need to be recharged
1402	Which of the documents below identifies chemical listings, its physical properties, health hazards as well as firefighting procedures?	Hazardous Chemical Loading Document	Chemical Characteristics Document	Material Safety Data Sheet	Hazardous Chemical Information Sheet
1403	Through which of the listed process is sufficient heat produced to cause spontaneous ignition?	Heat of expansion	Latent heat of condensation	Latent heat of sublimation	Heat of oxidation
1404	Gasoline is a flammable liquid whose vapors are _____.	heavier than air	toxic	highly explosive	all of the above
1405	Which of the petroleum products listed has the lowest flash point?	Diesel oil	Refrigeration oil	Lubricating oil	Hydraulic oil
1406	Which of the following statements concerning chemical foam is TRUE?	It is formed as a result of the reaction between dry powder and water.	It is recommended for use on fires in main propulsion electric motors.	Foam bubbles are formed as a result of mechanical mixing with air.	It is useful in fighting chemicals fires only.
1407	Who is responsible to the Operation Manager for the technical aspects and seaworthiness of the ships, except for the engineering spaces and personnel?	Fleet manager	Designated Person Ashore	Master	Marine Superintendent
1408	What is the purpose of adopting international convention onboard?	Provide uniform practice	Port state control implementation	To confirm with requirements	Avoid accident onboard

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

1409	In firefighting, the term 'protecting exposures' means _____.	protecting exposed areas of the superstructure from flames	taking measures to prevent the spread of fire from the involved compartment to an adjacent compartment	keeping flames from burning at the tank vents	protecting fire fighters from direct exposure to the heat of the fire
1410	What is the main reason of implementing provisions on International Conferences or Convention onboard?	Port State recommendations	Reduce accidents at sea.	Class Society recommendations	Provide uniform practice.
1411	Automatically closed fire dampers installed in the vessel's ventilation system are operated by the use of a _____.	fusible link	remote operated valve	CO2 system pressure switch	heat or smoke detector
1412	If the crew are still on board and salvage tug is around, what would the master do if it is determined that saving the ship is not possible?	Save the ship	Abandonship and let go	Don't abandonship	Contact coast guard
1413	Mechanically foam used for firefighting is produced by mechanically mixing and agitating _____.	soda acid and water	bicarbonate soda with air and water	foam chemical with air and water	dry chemical and water
1414	Which is NOT a mandatory requirement of the shipboard oil pollution emergency plan?	Reporting requirements	Diagrams	National and local coordination	Steps to control a discharge
1415	What is termed as the process of killing the ineffective bacteria from the water so as to make it safe for drinking?	Sterilization	Ultra-hydration	Tri-oxidation	Disinfection
1416	Which of the following statements is true concerning Aqueous Film Forming Foam (AFFF)?	AFFF controls the vaporization of flammable liquids by means of a water film.	The agent cannot be used in conjunction with dry chemicals.	AFFF can only be produced from fresh water.	Because AFFF works through surface tension, it can not be broken up if it is agitated.
1417	What is a major advantage of using a positive pressure type self-contained breathing apparatus?	The average operating time is over an hour.	Facial hair will not affect the mask performance.	The equipment is lightweight and the wearer can work without difficulty in confined spaces.	The speed with which it can be put into operation is around 45 seconds.

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

1418	Which of the following conditions is true concerning flammable liquid vapors with a concentration above the explosive limit?	The vapor is about to explode.	The mixture is too rich to burn.	Conditions are perfect for combustion.	The mixture is too lean to burn.
1419	According to the Pollution Prevention Regulation, who makes final decision of when oil transfer may begin?	The senior deck officer	The designated persons in charge of vessel and facility	Any local coast guard representative	The captain of the port
1420	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.	The valve opens in excessive heat to release the oxygen in the bottle and prevent the bottle from exploding.	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.
1421	During man overboard situation, the first person who saw the incident shall _____.	throw a life ring and inform the bridge	throw a life ring and shout for help	shout for help and do not lose sight of the man in the water	throw a marker and inform any deck officer around
1422	Why an upper limit switch is used when handling lifeboat equipment?	To stop the lifeboat from being lowered	To assist in cranking in the lifeboat	To keep the tricing line from releasing or getting tangled	To prevent the davits from pulling up against the stops
1423	In a cartridge-operated dry chemical type fire extinguisher when the CO2 cartridge is activated the dry chemical is released from the extinguisher_____.	by turning the activating handle on the bottom of the container	with the squeeze grip trigger on top of the container	by squeezing the control valve carrying handle	with the squeeze-grip on/off nozzle at the end of the hose
1424	Which unit will provide excellent mobility to the wearer in an unsafe atmosphere and provide oxygen to sustain life?	All of the above	A self-contained breathing apparatus	An ammonia gas mask	A fresh air breathing apparatus
1425	Which of the following statements is correct to fixed carbon dioxide fire extinguishing systems?	A separate supply of carbon dioxide must be provided for each space protected	Distribution piping within the space shall be proportioned from the supply line to give the proper to the outlets	The piping shall be used for no other purpose that it may be incorporated with the fire-detecting system	The system is fixed and there is no need for a maintenance and inspection
1426	When entering a burning compartment equipped with a fire hose and an all-purpose nozzle	the high velocity fog at the overhead to absorb heat	a straight stream aimed at the flames of the fire	the high velocity fog into the center of the fire	the high velocity fog at the deck to cool it for entry

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	you should first direct_____.				
1427	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 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	Because carbon dioxide dilutes the oxygen concentration in the atmosphere and may cause asphyxiation	Because carbon dioxide breaks down in a fire into carbon monoxide which may cause blood poisoning in the person breathing this gas
1428	Fire main outlet valves or hydrants located on e decks shall be in _____.	all of the above	protected against freezing or be fitted with valves and drain valves	opened up and internally examined at each Coast Guard biannual inspection for certification	behind glass or a suitably marked enclosure
1429	Dry chemical extinguishing agents extinguish a fire by_____.	breaking up the molecular chain reaction	cooling the fuel below ignition temperature	removing the fuel by absorbing the heated vapors	smothering and removing the oxygen from the fuel
1430	If a fire occurs in an electric cable _____ in which the inner layers of insulation have burned you should FIRST_____.	insulate the melted ends	cut the cable with a cable cutter	remove the electrical load on the cable	secure power to the cable
1431	The longer an oil fire is permitted to burn the_____.	harder it is to extinguish	easier it is to extinguish	less chance there is of reignition	easier it is control
1432	Spaces protected by a fixed CO2 system with an alarm which is to sound_____.	for at least 20 seconds prior to release of CO2	for the first 20 seconds CO2 is being released into space	during the entire period that CO2 is being released	if all doors and ventilation are not secured
1433	The three positions of an all-purpose fire nozzle are_____.	forward: solid stream center: fog back: off	forward: off center: solid stream back: fog	forward: off center: fog back: solid stream	forward: fog center: solid stream back: off
1434	Actuating the fixed CO2 system should cause the automatic shutdown of the_____.	supply and exhaust ventilation	fuel supply only	exhaust ventilation only	mechanical and natural ventilation
1435	A straight stream of water should be used to extinguished_____.	fuel oil fires	a fire in the paint locker	galley grease fires	burning bedding materials
1436	When compared to other fire-extinguishing agents water fog_____.	has the greatest cooling ability	has the greatest ability to produce foam	will completely remove toxic fumes from the air	will completely remove combustible vapors from the

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

					air
1437	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?	One half-hour after the fire is extinguished.	Immediately after the fire is extinguished.	After any personnel in fireman outfits reenter the engine room.	After the metal surfaces have cooled down.
1438	The primary function of an automatic sprinkler system is to_____.	alert the crew to the fire	protect people in the areas which have had sprinkler heads installed	limit the spread of the fire and control the amount of heat produced	instantaneously extinguish the fire which triggered it
1439	Control valves for a CO2 fire extinguishing system may be located within the protected space when_____.	an automatic heat sensing trip is installed	the CO2 cylinders are also in the space	there is also a control valve outside	it is impractical to locate them outside
1440	When reentering an engine room that has been flooded with CO2 the investigating team should initially_____.	enter from the lowest possible level	attempt to operate propulsion machinery	leave the access door possible open	enter from the highest level with breathing apparatus
1441	You notice smoke coming from an open laundry room doorway. After activating the fire alarm which of the following would you do FIRST?	Attempt to determine what is burning	Locate and acquire the nearest emergency breathing apparatus	Break out a fire hose	Wait for the fire team to arrive and assist them as instructed
1442	When any fire has been extinguished with carbon dioxide there is always the danger of the_____.	fire being reignited by residual heat	atmosphere containing a dangerous charge of static electricity	dry ice crystals clogging the machinery	machinery suffering thermal shock damage
1443	Each drilling unit equipped with helicopter fuel storage tanks must have the tanks installed as far as practicable from the_____.	drill floor	engine room	main deck	landing area and sources of vapor ignition
1444	A branch line valve of a fixed fire extinguishing system on must be marked with the_____.	pressure needed to maintain an effective stream at that point	date of the last maintenance inspection	maximum pressure allowed at that branch	name of the space or spaces which it serves
1445	An acceptable method of dealing with accumulated oil found in the pump room bilges is to_____.	transfer the oil to the sea chest	pump the oil into the slop tanks	pump the oil into a clean ballast tank	discharge the oil over the side on an outgoing tide
1446	An initial attempt to extinguish a galley grease	the range hood extinguishing	water	a mechanical foam system	fire dampers only

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	fire may be made by using_____.	system			
1447	A fixed carbon dioxide fire extinguishing other approved system must be installed_____.	in paint lockers	in all of the above locations	in a space with an oil fired boiler	where oil or chemical drums are stored
1448	An A class division bulkhead or deck shall be constructed_____.	that if subjected to the standard fire test they would be capable of preventing the passage of flame for one half hour	with approved incombustible materials and made intact from deck to deck and to shell or other boundaries	that if subjected to the standard fire test they would be capable of preventing the passage of flame and smoke for one hour	of approved incombustible materials but need meet no requirements relative to the passage of flame
1449	While you are on your lifeboat station you hear a signal consisting of one short blast of the whistle it indicates_____.	stop lowering the lifeboat	secure the boat stations	abandon ship	commence lowering the lifeboat
1450	Good housekeeping on a vessel prevents fires by_____.	eliminating potential fuel sources	allowing better access in an emergency	improving personal qualifications	eliminating trip hazards
1451	A fire station located in the engine room is required by regulations to have_____.	a spanner wrench suitable for the size of hose at that station	fire hoses sufficient to reach the main deck	a 6 foot or 10 foot high velocity fog applicator	low velocity fog applicator not necessary
1452	A fuel leak occurs in the high pressure fuel piping between the injection pump and fuel nozzle. This requires repair because of the_____.	possibility of pollution	poor combustion which will occur in that cylinder	high cost of fuel	serious fire hazard
1453	These situations should be reported to proper authorities if observed near or within the vicinity of your vessel is /are_____. I - dangerous derelicts II - high succeeding waves III - oil sheen	I and II	I II and III	I and III	II and III
1454	The fire main system should be flushed with fresh water whenever possible to_____.	identify loose pipe joints	help destroy marine growth	prevent corrosion of valve stems	eliminate cracking of fire hose linings
1455	If the depth of the webs is more than 1.5 m rafts or boats alone may be	if a temporary means of access is provided in	if a temporary means of access is provided in	if a permanent means of access is provided in	if a permanent means of access is provided in

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	allowed only _____.	each bay to allow safe entry and exit.	each bay to allow unsafe entry and exit.	each bay to allow safe entry and exit.	each bay to allow unsafe entry and exit.
1456	Fires resulting from spontaneous combustion are usually caused by the improper disposal of _____.	oily rags	lighted matches	cigarette butts	burner torch
1457	Dry Powder fire extinguishers, which contain a mixture of graphite and sodium chloride as the extinguishing agent, are generally used to fight which type of fire?	Class C	Class B	all of the above	Class D
1458	A branch line valve of a fixed fire extinguishing system on a VESSEL must be marked with the _____.	name of the space or spaces which it serves	pressure needed to maintain an effective stream at that point	maximum pressure allowed at that branch	date of the last maintenance inspection
1459	A carbon dioxide fire extinguisher should be recharged _____.	only if the extinguisher has been used	whenever it is below its required weight	at least annually	before every safety inspection
1460	A Certificate of Financial Responsibility attests that the vessel _____.	has the minimum required amount of P&amp;l	will assume the responsibility for any damage or loss to the shipper	has financial backing to meet any liability resulting from the discharge of oil	has financial reserves to meet reasonable expected crew costs of an intended voyage
1461	Aboard a VESSEL, provided CO2 fire extinguisher has lost 10% of its charge. now it must be _____.	recharged	hydro tested	used at the earliest opportunity	weighed again in one month
1462	A continuous blast of the ships whistle for a period of not less than 10 seconds, supplemented by a continuous sounding of the general alarm for a period of not less than 10 seconds, is the _____.	lower lifeboats signal	fire alarm signal	secure from boat stations signal	boat stations signal
1463	A device fitted over the discharge opening on a relief valve consisting of one or two woven wire fabrics is called a flame	screen	filer	restrictor	stopper
1464	A device for preventing sparks or flames from	gas absorption detector	sacrificial anode	flame screen	pressure-vacuum relief

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	entering a tank, while permitting the free passage of gases is called a _____.				valve
1465	A fire starts in a switchboard. This is what class of fire?	B	A	C	D
1466	A fixed carbon dioxide extinguishing system for a machinery space, designed with a stop valve installed in the line leading to the protected space, is actuated with _____.	two independent controls	one control	three independent controls	four independent controls
1467	A fixed carbon dioxide extinguishing system for a machinery space, designed with a stop valve installed in the line leading to the protected space, is actuated with _____.	three independent controls	one control	four independent controls	two independent controls
1468	A fixed carbon dioxide extinguishing system for a machinery space, designed WITHOUT a stop valve in the line leading to the protected space, is actuated by _____.	two controls	one control	none of the above	three controls
1469	A fixed CO2 fire extinguishing system on a VESSEL. with a capacity of over 300 lbs (136 kilograms) CO2, protecting spaces other than tanks, must have _____.	an audible alarm and time delay	an audible and visible alarm	two or more releasing stations	automatic release in event of a fire
1470	A lifejacket should be provided with _____.	On ships built after February 1992 all lifejackets should be fitted with a light	A whistle and a light	A light	A whistle
1471	A lifeline must be connected to the liferaft _____.	at the stern	in the middle	all around	at the bow
1472	A liferaft which has inflated bottom-up on the water _____.	should be righted by standing on the carbon dioxide cylinder, holding	should be righted by standing on the life line, holding the righting	will right itself when the canopy tubes inflate	must be cleared of the buoyant equipment before it will right itself

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

		the righting straps, and leaning backwards	straps, and leaning backwards		
1473	By regulation a liferaft with a capacity of 8 people in ocean service is required to carry _____.	12 liters of fresh water	12 units of provisions	24 units of provisions	8 liters of fresh water
1474	Shipping regulation, a merchant vessel with a crew of over 20 is required to have on board a	all of these	hospital	medical practitioner	emergency medical outfit
1475	A portable foam fire extinguisher carried aboard a tank vessel must be recharged every _____.	6 months	9 months	12 months	3 months
1476	A portable foam fire extinguisher is placed in operation by	squeezing the grip handle	turning it upside down	pressing the foam lever	opening the hose valve
1477	A portion of the cargo of an LNG carrier boils off during each voyage. How is the cargo boil off normally handled?	Burned in the boilers.	Vented to the atmosphere.	Compressed, condensed, and return to the cargo tanks.	Mixed with nitrogen and recirculated through the primary barrier.
1478	A qualified person must be assigned as the second in command of a lifeboat on a VESSEL if the lifeboat has a capacity of more than _____.	50 persons	20 persons	40 persons	30 persons
1479	A racetrack turn would be better than a Williamson turn in recovering a man overboard if _____.	the wind was from astern on the original course	there is thick fog	the man has been missing for a period of time	the sea water is very cold and the man is visible
1480	A raft should be manually released from its cradle by _____.	loosening the turnbuckle on the securing strap	removing the rubber sealing strip from the container	cutting the straps that enclose the container	pushing the button on the hydrostatic release
1481	A rudder that is hardest to run	the balance	unbalanced	the cycloidal	the semi-balance
1482	A rusky helicopter hoist area would preferably have a minimum radius of at least	50 feet of clear deck	10 feet of clear deck	25 feet of clear deck	6 feet of clear deck
1483	All inflatable liferafts is provided with a safety feature on _____.	overhead safety straps	internal releasing hooks	the use of water stabilizing pockets	built in seats
1484	A seaman is reported	Williamson	180 turn	Anderson	Racetrack

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	missing in the morning and was last seen after coming off the mid-watch. Which type of turn would you use to return to the track-line steamed during the night?				
1485	A ships low-pressure CO2 fixed fire extinguishing system is normally designed for a storage tank pressure and temperature of approximately _____.	14.7 PSIA and 0 degrees Fahrenheit	150 PSIG and 72 degrees Fahrenheit	300 PSIG and 0 degrees Fahrenheit	1500 PSIG and 72 degrees Fahrenheit
1486	A simple precaution to reduce the possibility of accidental fires in the paint locker, is to _____.	place a portable fire extinguisher immediately outside the locker	store paint cans on metal shelves only	label the fixed firefighting system	not allow oily rags to accumulate in the space
1487	A vessel where the engine personnel are in charge of all technical installations on board are due for a voyage to a cold climate area. Are any special precautions to be implemented with regard to fireline/pumps and use of same?	All the mentioned alternatives.	Drain all firelines in areas that may be exposed to freezing temperature.	Implement special routines for starting fire pumps (e.g. local start/stop operation) to avoid the pumps are started due by a mistake, resulting in filling up the system unnecessarily.	Instruct the personnel in routines to prepare the fireline system, e.g. closing all branches and the consequences of not draining the system after use.
1488	Actuating the fixed CO2 system should cause the automatic shutdown of the _____.	fuel supply only	supply and exhaust ventilation	mechanical and natural ventilation	exhaust ventilation only
1489	After a liferaft is launched, the operating cord _____.	detaches automatically	is cut immediately as it is of no further use	serves as a sea painter	is used to rig the boarding ladder
1490	After being launched from an OSV, 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	use of ear plugs to dampen engine noise	frequent flushing of the water spray system with fresh water
1491	After having activated the emergency position indicating radio beacon(EPIRB), you should _____.	turn it off and on at five minute intervals	turn it off during daylight hours	turn it off for five minutes every half-hour	leave it on continuously

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

1492	After having thrown the life raft and stowage container into the water, the life raft is inflated by _____.	pulling on the painter line	forcing open the container which operates the CO2	hitting the hydrostatic release	using the hand pump provided
1493	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 _____.	brake handle	hoist man	limit switch	preventer bar
1494	After using a CO2 portable extinguisher, it should be _____.	hydrostatically tested	recharged	retagged	put back in service if some CO2 remains
1495	After using a portable Halon fire extinguisher, it should be _____.	repainted	hydrostatically tested before reuse	put back in service if more than 50% of the charge remains	discarded
1496	After you have put water on a burning mattress, and the fire appears to have been extinguished, you should then _____.	secure the mattress in a well ventilated area	make sure the fire is out with CO2	pull the mattress apart to ensure no fire remains	dry the mattress in a warm area
1497	All lifeboats, rescue boats and rigid-type life rafts shall be stripped, cleaned and thoroughly overhauled at least once every _____.	year	6 months	18 months	2 years
1498	All OSV personnel should be familiar with the survival craft _____.	boarding and operating procedures	fuel consumption rates	maintenance schedule	navigational systems
1499	All personnel on board a vessel should be familiar with the rescue boat _____.	navigational systems	fuel consumption rates	maintenance schedules	boarding and operating procedures
1500	All personnel should be familiar with the lifeboats _____.	navigational systems	fuel consumption rates	boarding and operating procedures	maintenance schedule
1501	An approved signaling device required on inflatable life rafts include a(n) _____.	air horn	orange smoke signal	pistol	lantern
1502	An enclosed lifeboat is fitted with a self-contained air support system. With the engine running, what is the minimum period of time the air should remain safe _____.	10 minutes	5 minutes	20 minutes	30 minutes

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	and breathable?				
1503	An event involving the actual or probable discharge into the sea of a harmful substance or effluents containing such substance	Miscalculation	Accident	Incident	Negligence
1504	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	insufficient fuel supply
1505	An inert gas system is designed to reduce the possibility of tank explosions by _____.	reducing the oxygen concentration below levels necessary for combustion	eliminating sparks and fire in the vicinity of cargo tanks	blanketing cargo tanks with inert foam	removing all hydrocarbon gases from the cargo tanks
1506	An inert gas system on a tanker should be used to _____.	prevent the generation of flammable or combustible gas in tanks	prevent fires in the pump room by continually displacing flammable vapors	dilute tank atmospheres to keep gas concentrations below the lower explosive limit	blow out cargo lines to prevent gas concentrations
1507	An inflatable life raft can be manually released from its cradle by _____.	pushing the button on the hydrostatic release	removing the rubber sealing strip from the container	loosing the turnbuckle on the securing strap	cutting the straps that enclose the container
1508	An inflatable life raft is hand-launched by _____.	throwing the entire container overboard then pulling on the painter	removing the securing straps	kicking the hydrostatic release	the float-free method only
1509	An inflatable life raft should be lifted back aboard the ship by using _____.	two lines passed under the raft	the single hook at the top of the raft	All of the above	the towing bridle
1510	An instrument used to detect explosive gas/air mixtures, usually measures the concentration in terms of the lower explosive limit, and is known as a _____.	gas absorption detector	flame safety lamp	combustible gas indicator	toxic vapor meter
1511	An insulating flange	when pumping	when the	when static	during cold

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	should be used in a cargo hose connection instead of a bonding wire _____.	LNG only	terminal is equipped with a cathodic protection system	electricity may be generated	weather
1512	An on-load release system on a survival craft means the cable can be released _____.	at any time	only there is a load on the cable	only when activated by the controls at the lowering station	only when the load is taken off the cable
1513	An oxygen indicator will detect _____.	an oxygen deficiency in a space	all of the above	the presence of harmful amounts of carbon monoxide	concentrations of explosive gas
1514	Annual servicing of a hand portable CO2 fire extinguisher includes _____.	discharging, cleaning inside, and recharging	inspecting the pressure gauge to ensure the needle is within operating range	hydrostatic testing of the cylinder	weighing the cylinder and recharging if weight loss exceeds 10% of the weight of the charge
1515	Approved buoyant work vests may be carried aboard tank vessels and shall be worn by crew members _____.	all of the above	as substitutes for the approved life preservers during routine drills, weather permitting, when a vessel is moored pier side	when working near or over the water under unfavorable working conditions	under the supervision and control of designated ships officers
1516	As a vessel changes course to starboard, the compass card in a magnetic compass _____.	turns counterclockwise to port	remains aligned with compass north	first turns to starboard then counterclockwise to port	also turns to starboard
1517	As a vessel sinks to a depth of 15 feet, the hydrostatic trip releases the liferaft container from its cradle by _____.	releasing the tie-down strap	breaking the weak link	pulling the operating cord	releasing the CO2 canister
1518	At what interval must a foam fire extinguisher be recharged if the vessels Certificate of Inspection is issued for a period of two years?	Semiannually	Biennially	Annually	Quarterly
1519	At what time shall automatic sprinkler, fire-detection and alarm systems be capable of immediate operation? (SOLAS II-2/12.1.1)	Nighttime only	During navigation	When there are no competent officers and fire watch on duty	At all times

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

1520	At which of the listed tank locations should you obtain oxygen content readings prior to tank washing?	At the hatch coaming and middle of the tank.	At the center of the ullage and one meter below deck.	At the middle and bottom of the tank.	At the hatch coaming and tank bottom.
1521	At which time shall required fixed fire-detection and fire-alarm systems with manual operated call points be in operation? (SOLAS II-2/13.1.1)	At sea and in ports when there are qualified officers on duty	At all times during navigation	Always at nighttime	Capable of immediate operation at all times
1522	Before entering any space that has been sealed, its oxygen level should be tested. What level of oxygen in the space is equal to fresh air?	20.80%	15.80%	10.00%	25.80%
1523	Before inserting a low velocity fog applicator into an all-purpose combination nozzle, you must _____.	tighten the high velocity fog tip	put the control handle in the solid steam position	remove the high velocity fog tip	put the control handle in the fog position
1524	Blocking open or removing fire dampers can cause _____.	the fire to spread through the ventilation system	faster cooling of the fire	the accumulation of explosive gases	fixed foam systems to be ineffective
1525	Bonding cables are used to reduce the possibility of accidental spark discharge when _____.	transferring fuel oil from storage to day tanks	transferring dry mud to or from a vessel	securing drill pipe on deck	transferring flammable liquids to or from a vessel
1526	Carbon dioxide extinguishers must be recharged when the charge weight is less than _____.	85%	80%	90%	95%
1527	Cartridge-operated dry chemical fire extinguishers used on VESSELS, should have the propellant cartridge weighed every _____.	12 months	six months	three months	two years
1528	Category 1 EPIRBs transmit on frequencies that are monitored by _____.	naval warships	offshore supply vessels	commercial fishing vessels	orbiting satellites in space
1529	Combustible gas indicators are used to detect flammable gases or vapors in the atmosphere.	flame arrestors	a pressure relieving device	an audible signaling device	an inflatable bag

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	As a safety feature, they are equipped with _____.				
1530	Combustible gas indicators are used to detect flammable gases, or vapors present in a tank. This is accomplished by an intricate instrument incorporating a/an _____.	sensitive liquid chemical	inflatable bag	vapor detecting carbon compound	heated filament
1531	Combustible gas indicators measure the concentration of combustible gases as a percentage of the lower explosive limit of the gas. If the hydrocarbon content of the sample exceeds the upper explosive limit _____.	it will not be detected	the needle will move to the maximum reading and return back to zero	the needle will move rapidly to and remain at the maximum reading	the needle will rise slowly to and remain at the maximum reading
1532	Combustible gas indicators measure the presence of combustible gases as a percentage of the _____.	lower explosive limit	upper explosive limit	flash point	fire point
1533	Combustible material which is stored adjacent to a compartment where there is a fire, may also be ignited. This ignition can occur by _____.	direct radiation emitted by the adjacent fire	heat convection through the bulkheads	heat conduction of combustion gases	heat radiated from the bulkhead by the adjacent fire
1534	Deck rails on passenger decks of vessels engaged in a ferry or excursion type operation shall be at least _____.	39 1/2 inches high	36 inches high	30 inches high	42 inches high
1535	Distress signals must be stowed	on or near the navigating bridge	in accessible areas	on the lifeboat	near the embarkation deck
1536	During an inspection of a ships storeroom, you find sealed containers of chemicals labeled potassium bicarbonate and potassium chloride. These chemicals are most commonly used aboard ship for _____.	engine jacket water treatment	recharging dry chemical fire extinguishers	degreasing machinery parts	descaling evaporator tubes
1537	During helicopter evacuation of an injured	As instructed by the helicopter	With the wind astern so that	Directly into the wind	With the wind fine on the bow

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	man, what course should the ship steer?	pilot	the effect of the wind is reduced as much as possible		opposite to the helicopter operating area
1538	What is SLR in ABS survey items?	Safety construction survey	Safety radio survey	Load line survey	Safety Equipment survey
1539	What is the procedure for use of the main engine room fire extinguishing system, e.g. Halon or CO2 system?	Release the Halon/CO2 upon the order of the engineer on duty.	Search the engine room, make sure all personnel is out. -Stop ventilation. - Close for all air access. -Release the Halon/CO2.	Search the engine room, make sure all personnel is out. -Stop ventilation. - Close for all air access. -Upon approval of the Master, release the halon/CO2.	Release the Halon/CO2 as soon as possible without pre warning.
1540	What is the use pilot cylinders in a fixed CO2 system?	activate individual groups of CO2 bottles in predetermined time delay sequence	activate only the 50% of CO2 bottles	activate the main bank if an abnormal rise is detected	activate the main bank all at once
1541	What operational limitation should the user of a self-contained breathing apparatus be concerned with when using the device?	The attached lifeline can do users mobility.	The weight of the unit changes the users center of gravity.	The lens of the face piece can see the users peripheral vision.	the weight is totally light
1542	What should you do when the alarm bell on a self-contained breathing apparatus sounds?	Immediately evacuate the contaminated area.	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 reset the alarm so you can 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.
1543	When collecting condensation for drinking water, _____.	it should be strained through a finely woven cloth	chlorine tablets should be used to make it drinkable	only condensation on the bottom of the canopy should be collected	a sponge used to mop up and store condensation must be kept salt free
1544	During the inspection for certification of small passenger vessel of less than 100 gross tons, a hydrostatic test of 1-1/4	oil fired boilers	refrigeration service heat exchangers	hydraulic accumulators	tubular heat exchangers

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	times the maximum allowable working pressure shall be made to _____.				
1545	Each emergency generator on a mobile offshore drilling unit, when tested, must be run under a full load for at least _____.	four hours	two hours	ten hours	one hour
1546	Each emergency light on a VESSEL must be marked with _____.	the letter E	an arrow pointing to the nearest exit	the word DANGER	a no smoking symbol
1547	Each EPIRB required on a VESSEL shall be tested using the integrated test circuit and output indicator every _____.	month	two weeks	week	two months
1548	Each fire hose coupling on a VESSEL must have threads to meet the specifications of the _____.	American Society of Mechanical Engineers	Underwriters Laboratories, Inc.	American Petroleum Institute	National Standard Fire Hose Coupling
1549	Each fire hydrant is required to have at least one spanner wrench and at least one _____.	foam applicator	pick ax	hose rack or reel	hammer
1550	Each fire hydrant serving the machinery spaces of a VESSEL containing oil fired boilers, internal combustion machinery, or fuel oil units, must be equipped with a _____.	marine strainer	firemans outfit	pick axe	low velocity spray applicator
1551	Each fire pump on a VESSEL must have a pressure gage located _____.	at the manifold connection	at each fire station discharge	at the pump discharge	at the pump station
1552	Each firemans outfit and its spare equipment on a VESSEL must be stowed _____.	in a separate and accessible location	at a fire hydrant location	in an unlocked cabinet in the machinery space	in a locked cabinet in the machinery space
1553	Each hand portable fire extinguisher carried on a VESSEL must be marked with _____.	an identification number different from other extinguishers on the unit	the date that it was installed on the unit	the names of the individuals qualified to use it	the name of the unit on which it is located
1554	Each hand portable, semi-portable, and fixed fire	six weeks	six months	twelve months	two years

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	extinguishing unit on a VESSEL must be tested and inspected at least once every _____.				
1555	Each hose in the fuel transfer system for helicopter refueling must have a _____.	quick-disconnect nozzle	static grounding device	vapor recovery system	splash guard
1556	Each hose in the fuel transfer system for helicopter refueling must meet the standards of the _____.	National Fire Protection Association	National Transportation Safety Board	Federal Aviation Administration	Corps of Engineers
1557	Each inert gas system gas main must have an automatic shut down valve at the outlet of the gas production plant. This valve must close automatically upon _____.	low inert gas temperature	deck seal low water level	blower failure	cargo pump failure
1558	Each inert gas system must be designed to supply the cargo tanks with a gas, or mixture of gases, that has an oxygen content by volume of _____.	5% or less	15% or less	10% or less	20% or less
1559	What is the maximum allowable primary current of a 2 KVA step - down transformer with a four to one turns ratio if connected across a 440 volt line?	27.7 amps	18.1 amps	1.1 amps	4.5 amps
1560	The open-circuit voltage of a fully charged lead-acid battery cell is _____.	2.0 volts	2.3 volts	1.8 volts	1.5 volts
1561	A milliammeter, with a full scale deflection reading of 100 milliamps, is known to have an accuracy of + or - 2%. A meter reading of 10 milliamps would indicate a line current of between _____.	9.8 and 10.0 milliamperes	8.0 and 10.0 milliamperes	9.8 and 10.2 milliamperes	8.0 and 12.0 milliamperes
1562	Basic electrical motor action depends on _____.	a current carrying conductor placed in a magnetic field	a conductor rotated within a magnetic field	the relative force of the commutator and commutating poles	the relative force of the armature and interpoles

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

1563	What is the function of damper windings in a synchronous motor ?	DC voltage to the armature	DC voltage to the field	AC voltage to the field	AC voltage to the armature
1564	The Wheatstone bridge is a precision measuring instrument utilizing the principle of changes in_____ .	capacitance	amperage	resistance	inductance
1565	The rated temperature rise of an electric motor is the_____ . .	permissible difference in the ambient temperature of the motor due to existing weather conditions	average temperature rise due to resistance at 10% overload	average temperature at any given latitude	normal temperature rise above the standard ambient temperature at rated load
1566	The part of the shipboard electrical system used to control the distribution of power to the branch circuits, is the_____ .	main switchboard	bridge control panel	disconnect links	governor relay box
1567	Voltage generated by most AC generators is fed from the machine to the bus by means of _____ .	slip rings on a commutator	direct connections from the stator	brushes on a commutator	brushes on slip rings
1568	Battery charging rooms should be well ventilated because the charging process produces_____ .	highly poisonous gas	corrosive gases	highly combustible oxygen	explosive gases
1569	When reading electrical motor controller diagrams, it helps to know that_____ .	current paths in the control circuit are drawn as heavy lines and in the power circuit as lighter lines	circuits subject to 500 volts or greater are drawn as light lines and below 500 volts as heavy lines	current paths in the power circuit are drawn as heavy lines and in control circuit as lighter lines	circuits subject to 500 volts or greater are drawn as heavy lines and below 500 volts as lighter lines
1570	A device that utilizes the principle of electromagnetic induction is the_____ .	transformer	transistor	diode	rheostat
1571	Amortisseur windings are installed in a synchronous motor to_____ . .	produce a higher power factor	provide a means for starting	eliminate arcing between the stator and the rotor	reduce eddy current losses
1572	Which of the following physical characteristics does a wound- rotor induction motor possess that a squirrel cage motor has none?	Slip rings	End plates	A centrifugal switch	End rings
1573	In an induction motor, rotor currents are	slip rings and brushes	external variable resistors	inductive reaction of the	an armature and brushes

# MANAGEMENT ENGINE

	circulated in the rotor by_____.			rotating stator field	
1574	Regarding an 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 by the _____.	balance coil	voltage regulator	phase-balance relay	governor speed droop setting
1575	A low voltage source is being used for testing armature coils. A coil short circuit will be indicated by a _____.	low or zero voltage reading, while the other coils will have higher readings	high voltage reading, while the other coil readings will have an equal or lower value	fluctuating voltmeter reading, while the other coil readings are steady	steady voltmeter reading, while the other coil readings are fluctuating
1576	When measuring AC current flow, you must always connect the meter _____.	in series with the power source and load	using the lowest range possible to prevent instrument damage	insuring correct polarity	in parallel with the power source and load
1577	To increase the frequency of an operating AC generator, you should _____.	increase the field excitation	decrease the field excitation	increase the speed of the prime mover	increase the number of magnetic poles
1578	An electrical device which prevents action from occurring until all other required conditions are met is called _____.	monitor	modulator	limit	interlock
1579	The main purpose of the auxiliary winding on a split-phase, single-phase motor is to _____.	start the motor	keep the motor running in the event the main winding should fail	increase the starting current	limit the starting voltage
1580	The heating of conductors as a result of resistance in a distribution circuit causes a power loss expressed as _____.	hysteresis	IR drop	line droop	line loss
1581	The greatest detrimental effect on idle electrical equipment, such as cargo pump motor is the _____.	loss of residual magnetism	insulation varnish flaking	absorption of moisture in the insulation	dirt collecting on the windings
1582	An electrical device which employs a stationary armature and a rotating	magnetic amplifier	ship's service alternator	three-wire DC generator	saturable core reactor

# MANAGEMENT ENGINE

	electromagnetic field is used aboard ship as a _____.				
1583	A circuit breaker differs from a fuse, in that a circuit breaker _____.	is enclosed in a tube of insulating material with metal ferrules at each end	gives no visual indication of having opened the circuit	melts and must be replaced	trips to break the circuit and may be reset
1584	AC circuits possess characteristics of resistance, inductance, and capacitance. The capacitive reactance of a circuit is expressed in _____.	ohms	mhos	henrys	farads
1585	The frequency output of an operating alternator is controlled by the _____.	relative speed of the rotor poles	output voltage	number of turns of wire in the armature coil	strength of the magnets used
1586	Which of the following types of motors is often designed for use in correcting power factor?	Polyphase	Induction	Synchronous	Wound-rotor
1587	The purpose of a cage rotor winding placed on the rotor of a synchronous motor is to _____.	prevent the machine from falling out of step	start the machine as an induction motor	provide excitation to the DC field	contribute extra torque at synchronous speed
1588	A constant output voltage from an AC generator is maintained by the _____.	reverse power relay	exciter generator	prime mover governor	voltage regulator
1589	The capacity of a storage battery is measured in _____.	ampere-hours	amps	volts	farads
1590	When paralleling two AC generators, what should be the frequency of the incoming machine prior to closing its breaker?	Adjusted with the voltage regulator	Adjusted with the voltage frequency	Slightly greater than the bus frequency	Controlled by placing the governor switch in the automatic position
1591	From among the choices, what is the reactive power drawn by a motor from an AC generator?	The power lost in overcoming friction in the bearings	The power which is used to establish the magnetic field of the motor	The power which is strictly converted to heat generated by current flow through the windings	The power which is transmitted directly through the rotor shaft to perform through useful work
1592	What is the approximate voltage per cell produced by the nickel-iron (Edison)	2.20 volts	0.85 volts	6.05 volts	1.35 volts

# MANAGEMENT ENGINE

	battery?				
1593	What is the maximum allowable primary current of a 2 KVA step - down transformer with a four to one turns ratio if connected across a 440 volt line?	18.1 amps	1.1 amps	27.7 amps	4.5 amps
1594	What is the approximate discharge voltage produced by one cell of a wet type nickel-cadmium battery?	6.0 volts	1.5 volts	1.25 volts	2.2 volts
1595	What is the normal open-circuit voltage of one cell of a fully charged lead-acid battery?	2 volts	12 volts	1.5 volts	6 volts
1596	What should be the ideal in-service temperature of a running electric motor bearing?	10-15 degrees centigrades	40-45 degrees centigrade	15-30 degrees centigrade	30-45 degrees centigrade
1597	Which of the listed sections of an emergency switchboard is used to supply power for alarm signals under emergency conditions?	450 volt, 60 cycle, 3 phase bus	Generator and bus transfer section	24 volt DC bus	120 volt, 3 phase, 60 cycle bus
1598	An emergency generator driven by an internal combustion engine, shall be tested under load for a minimum of 2 hours at least once every ____.	week	month	3 months	2 weeks
1599	A milliammeter with a full scale deflection reading of 100 milliamps is known to have an accuracy of plus or minus 2%. A meter reading of 5 milliamps would indicate a line current of between ____.	4.8 and 5.2 milliamperes	4.5 and 5.5 milliamperes	4.0 and 6.0 milliamperes	4.9 and 5.1 milliamperes
1600	Basic electrical motor action depends on _____.	A current carrying conductor placed in a magnetic field	The relative force of the armature and interpoles	The relative force of the commutator and commuting poles	A conductor rotated within a magnetic field
1601	In an alternating current electrical system, a low system power factor is a direct sign of ____.	a large resistance load	a ground in exciter field windings	a large inductive load	a short in exciter field windings

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

1602	When a resistor is used as a shunt and is connected in parallel with a meter movement coil, it will provide _____.	an extended meter range	none of the above	an increased accuracy of approximately 1.5 percent	a measurement of circuit resistance
1603	When paralleling two AC generators, what should be the frequency of the incoming machine prior to closing its breaker?	Adjusted with the voltage regulator	Slightly greater than the bus frequency	Controlled by placing the governor switch in the automatic position	Adjusted with the voltage frequency
1604	From among the choices , what is the reactive power drawn by a motor from an AC generator?	The power which is strictly converted to heat generated by current flow through the windings	The power which is transmitted directly through the rotor shaft to perform through useful work	The power lost in overcoming friction in the bearings	The power which is used to establish the magnetic field of the motor
1605	What is the approximate voltage per cell produced by the nickel-iron (Edison) battery?	1.35 volts	2.20 volts	6.05 volts	0.85 volts
1606	What is the maximum allowable primary current of a 2 KVA step - down transformer with a four to one turns ratio if connected across a 440 volt line?	1.1 amps	27.7 amps	4.5 amps	18.1 amps
1607	What is the approximate discharge voltage produced by one cell of a wet type nickel-cadmium battery?	2.2 volts	1.25 volts	6.0 volts	1.5 volts
1608	What is the normal open-circuit voltage of one cell of a fully charged lead-acid battery?	12 volts	1.5 volts	2 volts	6 volts
1609	What should be the ideal in-service temperature of a running electric motor bearing?	30-45 degrees centigrade	10-15 degrees centigrades	15-30 degrees centigrade	40-45 degrees centigrade
1610	Which of the listed sections of an emergency switchboard is used to supply power for alarm signals under emergency conditions?	120 volt, 3 phase, 60 cycle bus	Generator and bus transfer section	24 volt DC bus	450 volt, 60 cycle, 3 phase bu
1611	An emergency generator driven by an internal combustion engine, shall be tested under load for a	month	3 months	week	2 weeks

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	minimum of 2 hours at least once evry ____.				
1612	A milliammeter with a full scale deflection reading of 100 milliamps is known to have an accuracy of plu or minus 2%. A meter reading of 5 milliamps would indicate a line current of between ____.	4.0 and 6.0 milliamperes	4.9 and 5.1 milliamperes	4.8 and 5.2 milliamperes	4.5 and 5.5 milliamperes
1613	Basic electrical motor action depends on _____.	A conductor rotated within a magnetic field	The relative force of the armature and interpoles	The relative force of the commutator and commuting poles	A current carrying conductor placed in a magnetic field
1614	In an alternating current electrical system, a low system power factor is a direct sign of ____.	a short in exciter field windings	a large resistance load	a ground in exciter field windings	a large inductive load
1615	When a resistor is used as a shunt and is connected in parallel with a meter movement coil, it will provide ____.	an extended meter range	a measurement of circuit resistance	an increased accuracy of approximately 1.5 percent	none of the above
1616	A series wound DC motor has its armature and field connected in series with a resistor. When the motor is disconnected from its power supply, this motor will exemplify ____.	the proper connections for across the line starting	the proper connections for an automatic strip heater	a reversing controller circuit	dynamic braking
1617	Which of the following equipment below is not fitted to the generator trouble detecting system?	Overcurrent trip device	ACB non-close indicator	Overvoltage trip device	ACB abnormal trip indicator
1618	Common nickel-cadmium and nickel-iron storage batteries utilize ____.	alkaline primary cells	alkaline secondary cells	acid secondary cells	acid primary cells
1619	What do you call a valve which is operated by an electromagnet?	Actuator Valve	Thermostatic valve.	Breaker.	Solenoid valve.
1620	Why is it necessary to reduce the charging rate of a lead -acid battery when it is near full charge?	Prevent damaging battery plates	Allow equalization of cell voltages	Reduce lead sulfate deposits	Increase lead peroxide formation
1621	The RPM of an AC generator can be measured with a/an ____.	vibrating reed meter	synchroscope	ammeter	voltmeter

# MANAGEMENT ENGINE

1622	Which of the meters listed should only be used after a circuit has been electrically de-energized?	Wattmeter	Ohmmeter	Ammeter	Frequency meter
1623	What determines the division of kilowatt load between two paralleled alternators?	Amount of field excitation to the lagging machine	Type of alternator	Load-speed characteristics of the governors	Amount of field excitation to the leading machine
1624	Electrical circuits are protected against overheating by means of a/an _____.	amplifier	capacitor	circuit breaker	diode
1625	What do you call a device which prints out a permanent record of the plant operating conditions?	Analogger	alarm logger	Data logger	bell logger
1626	Which of the following components are used to convert AC produced in the generator windings to direct current?	Rotor and interpoles	Commutator and brushes	Field and exciter	Armature and equalizer
1627	All feeder circuit breakers are molded-case circuit breakers, which means _____.	Fused breaker FB	Air circuit breaker	No fuse breaker or NFB	Automatic fuse breaker or AFB
1628	In order to protect the generator in service from overload, the non-essential load is isolated from the system by what device?	Automatic voltage trip regulator	No fuse breaker tripping system	Main circuit breaker tripping system	Preferential tripping system
1629	An adjustable resistor, whose resistance can be changed without opening the circuit in which it is connected, is called a _____.	rheostat	bleeder resistor	bridge	variable shunt strip
1630	What is the standard method of controlling the output voltage of a 440 volt, 60 Hz, Ac generator?	By adjusting prime mover speed droop	By adjusting number of poles	By adjusting alternator field excitation	By adjusting load on the alternator
1631	How is the voltage output of an AC generator accurately controlled?	By shorting out part of the armature windings	By varying the reluctance of the air gap	changing the sensitivity of the prime mover to large changes in the voltage	By varying the DC exciter voltage
1632	A molded-case breaker provides protection against short circuits in what way?	By using electromagnet	By using shading coil	By using arc quencher	By burn away strip

# MANAGEMENT ENGINE

1633	Voltage will always lead current in a/an_____.	capacitive circuit	inductive circuit	resistive circuit	magnetic circuit
1634	What is the most inefficient method of voltage reduction from the stand point of power loss?	Inductor in series with the load	Capacitor in series with the load	Resistor in series with the load	Capacitor and inductor in series with the load
1635	Wat is the most practical method of controlling the RPM of a step-speed AC motor ?	Vary the number of poles	Change the number of brushes	Vary power factor	Change input voltage
1636	Transformers are used onboard ships with AC generators to _____.	provide different voltage values to operate various types of electrical equipment	change line frequency	decrease power output to modulating frequency controllers	increase power output to modulating frequency controllers
1637	What is the method of testing for a reversed shunt field coil in a DC motor?	Connect the coil to a low voltage source and test for polarity using iron bar across each field	Connect the coil to a low voltage source and test for polarity using test lamp across adjacent fields	Connect the coil to a low voltage source and test for polarity using copper jumper across the interpole connections	Connect the coil to a low voltage source and test for polarity using magnetic compass placed near each field
1638	What is the distinct characteristic of the hydrogen gas that is giving off from the lead - acide battery during charging?	Extremely toxic	Highly explosive	Heavier than air	Considered inert
1639	If a transformer is connected to a DC source, the transformer will overload at the _____.	secondary coil	primary coil	core	contacts
1640	What will happen to the alternator If the energy input is significantly reduced to the prime mover of one ship board alternator operating in parallel with others?	Continue to operate at no load	Slows down and operate at reduced load	Begins to motorize and then trip out	Lose its load and tend to overspeed
1641	Which of the following refers to an electrical device being used to increase or decrease the voltage in an AC.current?	Converter	Inverter	Rectifier	Transformer
1642	As an armature revolves within a magnetic field, friction is developed between the rotated magnetized particles as they pass though each	hysteresis loss	copper loss	eddy-current loss	capacitive reaction

# MANAGEMENT ENGINE

	magnetization cycle. This results in ____.				
1643	Increasing the load on the secondary windings of a transformer will cause a/an ____.	decrease in the primary current	decrease in the primary voltage	increase in the primary voltage	increase in the primary current
1644	What determines the speed of a squirrel cage induction motor?	Bar resistance of the conducting rotor	Diameter of the stator	Motor winding resistance	Number of the stator poles
1645	Basic operating characteristics of the operational amplifier such as gain and stability are the function of its ____.	differential input stage	power output stage	feedback circuit	supply voltages
1646	Two DC drive motors provide input to a single output reduction gear. Upon relieving an at sea watch you notice that one motor has reduced voltage and zero current compared to the normal voltage and current indicated on the opposite motor. What should you check first?	An open circuit breaker	A blown transformer	Sticking voltage and ammeter gauge pointers	Faulty brushes
1647	While starting a main propulsion synchronous motor, the ammeter pegs out at maximum and then returns to the proper value after synchronization. What does this indicate?	Motor has started properly	Power transmission cables are grounded	Slip rings are dirty	Field windings are grounded
1648	The main difference between a shunt-wound motor and squirrel-cage motor is that the shunt-wound motor has _____.	Float rings	Lubricating rings	Brush ring	Slip rings
1649	A transformer in an electric circuit serves to ____.	convert AC current to DC current	increase or decrease circuit voltage as required	transform electrical energy into mechanical energy	generate its own electrical power
1650	Capacitors can be used in electric distribution systems to improve power factor. This is accomplished by seesawing energy between the capacitor and the ____.	generator	transformer	resistive loads	inductive loads

# MANAGEMENT ENGINE

1651	Why is it desirable to operate paralleled AC generators at the same power factor?	Filed excitation losses are kept to a minimum	Because a power factor increase will decrease kilowatt output	Generator rotor will have a lesser tendency to hunt	Circulating current are kept to a minimum
1652	Which of the substances listed can be used to shield sensitive equipment from static magnetic fields?	Mica	Permeable Iron	Glass	Bakelite
1653	To limit the current flow through a DC, voltmeter to as low a value as possible, the moving coil is provided with a/an _____.	external shunt	series inductor	high series resistance	high parallel resistance
1654	Why is it necessary that a battery charging rooms should be well ventilated?	Highly combustible oxygen is produced	The charging process produces corrosive gases	Highly poisonous gas is released	The charging process produces explosive gases
1655	If overloading an electric motor becomes necessary in an emergency, What should you do?	Cool the motor with portable blowers and fans	Increase the residual magnetism value of winding to reduce eddy currents	Hold thermal overload relays open with blocks of wood	Inject small amounts of CO <sub>2</sub> into the windings for cooling
1656	In a single motor electrical steering system what supplies the main steering motor?	Electrical supply from a local motor or generator.	Mains electrical supply	Hydraulic power pack.	Hydraulic power delivered by the main steering motors.
1657	Local action in a dry-cell, or lead storage battery is the process whereby_____.	the battery becomes discharged without being connected to a load	potassium hydroxide absorbs carbon dioxide from the air	the electrolyte compensates for overcharging	hydrogen gas is liberated
1658	Which of the following losses is/are present in every direct current generator armature? I. Winding copper loss II. Core eddy current loss III. Magnetic hysteresis loss	II and III only	I, II and III	I only	I and II only
1659	The 24 volt DC bus on the emergency switchboard is used to supply power to the _____. I. gyrocompass power failure alarm system II. smoke detection system III. general alarm system	I, II and III	I only	I and II only	II and III only
1660	Incandescent lamps are classified according to	II and III only	I only	I and II only	I, II and III

# MANAGEMENT ENGINE

	_____. I. shape of bulb and type of service II. size and style of base III. operating voltage and wattage				
1661	A DC ammeter would normally be connected _____.	without regard to polarity	with internal shunts only	in series with a circuit	in parallel with a circuit
1662	Which of the following statements represents the correct method of connecting the shunt of an ammeter prior to taking a reading?	In series with the load in parallel with the meter movement	In series with the load and in series with the meter movement	In parallel with the load and in parallel with the meter movement	In parallel with the load and in series with the meter movement
1663	What should you do to the charging current when a lead-acid battery gassing freely while receiving a normal charge?	Stop	Reduce	No adjustment needed	Increase
1664	External shunts are sometimes used with ammeters to _____.	reduce reactive power factor error	permit shunts with larger resistance to be utilized	prevent damage to the meter movement from heat generated by the internal shunt	increase meter sensitivity
1665	What is a common method used to control the speed of the AC propulsion motor on a diesel-electric propulsion ship?	Change the input frequency of the voltage to the motor	Decrease the motor voltage	Increase the motor voltage	Decrease the motor voltage
1666	What keep the line losses in a distribution circuit at minimum?	Increase the number of thermal relays in the circuit	Use higher current and lower voltage	Add rubber insulation conductors to the circuit	Use higher voltage and lower current
1667	The Wheatstone bridge is a precision measuring instrument utilizing the principle of changes in _____.	inductance	resistance	capacitance	amperage
1668	In a compound-wound motor, where is a portion of the line current flows through?	Shunt field coils	Frame	Stator	Inertia poles
1669	How does the speed of a synchronous motor change?	Increasing the field excitation	Interchanging any two of the three live leads	Changing the voltage of the system	Changing the input frequency
1670	Which of the following is the function of an automatic voltage regulators provided on main switchboards?	It governs prime mover speed to control voltage	Protect the switchboard from high voltage	It varies field excitation to the generators	Regulate the AC load on the generator

# MANAGEMENT ENGINE

1671	What will happen if you reverse the DC current flow through an electrical coil?	It will reduce the power consumed	Its two-pole field will reverse	It will reduce the amount of flux produced	It will change its impedance
1672	Power transformers are rated in _____.	kilovoltamperes	kilowatt-amps	ampere-turns	kilowatt-volts
1673	When the voltage and the current developed in an AC circuit reach their peak values at the same time, the power factor is considered to be _____.	infinity	leading	unity	lagging
1674	When voltage and current developed in an AC circuit reach their peak values at the same time, the power factor is _____.	lagging	maximum	leading	minimum
1675	The operating torque of the disk or timer element in an AC reverse power relay is obtained from _____.	electromagnets	a separate battery source	the main bus	line voltage
1676	Why is the engine room watch officers should keep a constant check on the loads carried by electric motors?	Residual magnetism may increase	Low loads necessitate frequent insulation cleaning	Exceeding nameplate value shortens useful life	Energy is wasted if full loading is not utilized
1677	Which of the listed conditions could cause a recently overhauled DC motor to have excessively hot winding and sparking at the brushed?	Low series field current	Excessive humidity	Reversed interpole polarity	High shunt field current
1678	Which of the following starting system should be carried out after overhaul of a motor?	No load	High speed	Low speed	Medium speed
1679	What is the common source of field excitation for synchronous motors?	AC supply	Motor attenuator set	Low voltage battery	DC rectifier
1680	What is a component used to protect the DC generator circuits against malfunctions due to prime mover power loss?	Reverse current relays	Main bus disconnect links	A separate battery back-up	Reverse power relays
1681	Equalization of the power factors of two alternators operating in parallel is accomplished in what manner?	Manually adjusting the output of current transformers	Accomplish automatically by the automatic voltage regulator	Accomplish automatically by the designed action of the governors	Manually adjusting the governor controls
1682	Which of the following electrical instrument is	Clamp meter	Meager tester	Ammeter	Multi tester

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	the safest to use in taking the current even without switching off or opening the circuit?				
1683	Relative to the secondary winding of a step-up transformer, the primary winding will have ____.	fewer turns	same number of turns but smaller wires	more turns	twice as many turns
1684	What will happen if connections on a DC shunt motor are changed on either the field connections, or the armature connections?	Motor will run as a generator	Motor will not run	Direction of rotation will be the same	Direction of rotation will be reversed
1685	What is the purpose of DC generator brushes?	Provide excitation to a DC generator	Neutralize armature reaction	Convert DC current to AC current	Conduct electric current to an outside current
1686	A switchboard for an AC electrical system requires the use of which of the following devices?	Current transformer governor	Ohmmeter	Frequency meter	Induction voltage regulator
1687	A bus disconnect link is used to isolate ____.	the generator circuit breaker from the bus	one bus bar from the ground detection system	positive and negative buses from the neutral	different bus phases from the equalizer connection
1688	The purpose of a magnetic relay is to ____.	relay voltages at increased power	provide overcurrent protection during starting	remotely open and close contacts	open a circuit only in the event of overload
1689	As storage battery for an emergency lighting and power system must have the capacity to ____.	close all watertight doors twice	open all watertight doors four time.	open and close all watertight doors in six consecutive cycles within a 20 second period	none of the above
1690	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. What are these devices?	Differential relays	Limit switches	Analog relays	Overlap sensors
1691	What protects a molded-case circuit breaker against sustained overload?	Overvoltage release	Low voltage relay	Thermal acting trip	Reverse current relay
1692	The shunt of a DC ammeter should be connected in ____.	series with the load and in series with the	parallel with the load in series with the meter	parallel with the load and in parallel with the	series with the load and in parallel with the

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

		meter movement	movement	meter movement	meter movement
1693	When a transformer is used to step-down voltage, the low voltage winding is ____.	the secondary coil	part of the core	the primary coil	not insulated
1694	What indicates a violent gassing developed by a lead-acid battery during charging?	Specific gravity is insufficient	Plate separators are grounded	Cell voltages are excessive	Charging rate is excessive
1695	When the non-essential load has been removed from the feeder system but the service generator remains overloaded, what device automatically activates?	Time delay trip device	Overcurrent tripping device	Preferential tripping system	ACB trip device
1696	What is the function of capacitors which are commonly used on power supply circuits for engine room automation consoles?	decrease the average value of the output voltage	prevent overloads	To filter out ripple for rectification	act as a permanent load
1697	What do you call the device where a low input voltage is imparted to it which then delivers a high output voltage?	Primary transformer	Step-down transformer	Secondary transformer	Step-up transformer
1698	What electrical component initiates the division of the reactive KVA load between paralleled AC generators?	Voltage regulators	Prime mover governors	Proportioner	Phase balance relay
1699	What do you call a torque produced by a motor when the shaft will not turn, even though rated voltage is applied to the stator?	Pullout torques	Breakdown torque	Locked rotor torque	Torque margin
1700	What will happen if you reverse the DC current flow through an electrical coil?	Reduce the amount of flux produced	Change its impedance	Reduce the power consumed	Reverse its two-pole field
1701	Which of the following provides the initial torque to turn a DC generator?	Residual magnetism in voltage regulator	A mechanical prime mover	Residual magnetism in the field poles	Residual magnetism in the armature
1702	The division of kilowatt load between two AC generators operating in parallel is controlled by the settings and	prime mover governors	reverse power relays	voltage regulators	field rheostat

# MANAGEMENT ENGINE

	characteristics of the _____.				
1703	On some diesel-electric ships, the DC propulsion motor will only attain half speed when the generator fields are fully excited. How should the speed above this be obtained?	Lower the generator engine speed	Decrease excitation	Raise the generator engine speed	Rotate brush alignment
1704	What do you call a DC generator used to supply direct current in order to maintain an AC generator field?	Exciter	Armature	Rotor	Stator
1705	Transformer cores are laminated to reduce _____.	tertiary flux	eddy currents	secondary flux	leakage flux
1706	To test the feeder system for grounding, the three earth lamps will be activated when this switch is manipulated.	The push button switch	Selector switch	Lamp switch	Micro switch
1707	A transformer works on the basic principle of _____.	increasing power	attraction and repulsion	self impedance	mutual induction
1708	What is the simplest method of controlling the terminal voltage of compound-wound DC generator?	Carbon pile regulator in series with load	Balance coil diverting neutral current through the shunt field	Separate exciter in a series with the shunt field	With a hand-operated field rheostat connected in series with line shunt field circuit
1709	Which of the following types of motor has two separate field windings usually connected in parallel with the armature circuit?	Shunt-wound motor	Series-wound motor	Compound-wound motor	Induction motor
1710	Which of the following types of motor whose speed at normal operation is constant or practically constant?	Universal motor	Regulated speed motor	Synchronous speed motor	Series-wound motor
1711	How would you describe a circuit with a blown fuse?	Bonded circuit	Short circuit	Open circuit	Grounded circuit
1712	Which of the following operating characteristics for DC motors is considered to give high starting torque?	Differential-compound	Shunt	Cumulative-compound	Series
1713	The resistance value of a resistor in a circuit can best be determined by	band markings on the resistor	single solid body color of the resistor	physical size of the resistor	amperage value written on the resistor

# MANAGEMENT ENGINE

	the _____.				
1714	What is the recommended practice on the frequency of the incoming machine prior to closing the breaker when paralleling two AC generators?	Greater than the line frequency	Slightly greater than the line frequency	The same as the line frequency	Slightly less than the line frequency
1715	What is the characteristic of the mica used in the commutators of DC machinery?	Softer than copper but wears away at slower rate	Softer than copper	Harder than copper	Same hardness as copper
1716	Regarding an induction motor, where is the output power developed related to?	Current flow in the interpoles	Speed of the rotating field	DC field excitation	Slip of the rotor
1717	What type of AC single-phase motor will also operate on direct current?	Series-wound	split-phase	Repulsion-start	Shaded-pole
1718	What do you call an AC motor which uses rheostat in the motor circuit to vary the speed?	Wound rotor induction motor	Regenerative braking motor	Squirrel-cage induction motor	Squirrel cage induction motor
1719	Which of the following is the most common of excitation for synchronous motor?	Poor contact of brushes	Step-up transformer	DC supply	AC supply
1720	Which of the listed transformers uses a single winding to produce voltage transformation?	Isolation transformers	Autotransformers	Stepup transformers	Stepdown transformers
1721	What type of electric motor is commonly used to start small auxiliary diesel engines?	Synchronous	Shunt	Cage	Series
1722	Which of the following electric motors would be the most reliable to use on the open main deck of a vessel?	Synchronous motors	Drip proof motors	Squirrel cage motors	Watertight motors
1723	When a megohmmeter is used to test the dielectric strength of wire insulation, what causes the initial dip of the pointer toward zero?	The dielectric absorption effect of the insulation	The capacitance of the circuit	The leakage of current along the surface of dirty insulation	Good insulation
1724	On a modern 13 amp square pin electric plugs, which of the following statements is true ?	The fuse is at the neutral connection.	The earth wire goes to the centre top connection.	The neutral wire is coloured brown.	The live wire is coloured blue.
1725	The timer element of a	the movement of	the load	the power flow	the power flow

# MANAGEMENT ENGINE

	reverse power relay will activate when ____	the disk is damped by a permanent magnet	difference generators is more than 10 percent	is the opposite to the tripping direction	is the same as the tripping direction
1726	The difference between the synchronous speed of a three phase induction motor and its operating speed is called slip and may be correctly expressed as _____.	the decrease in shaft torque	reduced fuel consumption	a percent of synchronous speed	the reduced amp rating
1727	What determines the cycle per second developed by the alternator aboard your vessel?	The speed of the engine driving the alternator	The resistance applied to the field rheostat	The synchronous speed of induction	The adjustment made to the voltage regulator
1728	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 have twice as much resistance as the primary windings	The secondary windings have half as many turns as the primary windings	The secondary windings use smaller wires than the primary windings	The secondary windings can only provide half as much current as the primary windings
1729	What will happen if there is a change in field excitation of an alternator operating in parallel?	There will be a change in voltage output	There will be a change in kilowatt load	There will be a change in current rating	There will be change in alternator frequency
1730	What is the advantage of DC motors over AC motors?	They are less expensive	They require less maintenance	They offer slow speed	Offer infinite speed variations
1731	A galvanometer is an instrument used to measure ____.	thickness of galvanized metal	quantity of galvans in an electric circuit	very small amounts of current or voltage	resistance of electrical wiring insulation
1732	Regulations require emergency diesel engine starting systems to have sufficient capacity to provide power for at least ____.	six consecutive cranking cycles	three continuous starting sequences	nine repeated starts under load	twelve cranking periods of 5 seconds
1733	In a three-phase, open-delta connected transformer, the line current is equal to ____.	three times the phase current	the difference of any two phase currents	the phase current	the sum of any two phase currents
1734	In a running electric motor, why are we using a sound listening bar?	To detect if motor is overload	To detect fault in ball bearing	To detect fault in motor windings	To detect fault in stator windings
1735	Why is an armature cores in a DC generator made of laminated steel sheets?	To increase the hysteresis effect	To fit the curvature of the frame	To reduce eddy current losses	To allow for easy assembly
1736	What will be the next step after closing the circuit	To balance the kilowatt load	To reduce voltage load	To maintain the power factor	To balance ampere load

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	breaker to place two similar alternators in parallel?				
1737	Why is a modern DC generators fitted with commutating poles?	Reduce spring pressures ion the brushes	Reduce the load on the main poles	To prevent motorizing	To reduce sparking
1738	Why is there an amortisseur windings installed in a synchronous motor?	eliminate arcing between the stator and the rotor	To produce a higher power factor	To dampen any speed fluctuation as a result of load change	produce a higher power factor
1739	What is the purpose of squirrel-cage windings in a synchronous motor?	To provide a means for starting	To provide more precise balancing	To eliminate arcing between the stator and the frame	To produce a higher power factor
1740	When energizing a DC propulsion motor using Local override manual control, What should the variable resistor do?	quickly to the full run position	Turn to a position which initializes motor rotation and then turn back to the slow position	quickly to the mid position	Turn all the way to the full run position then quickly back to slow
1741	What is an operating characteristic appearing on the name plates of shipboard AC motors?	type of overload protection	locked rotor torque	rated slip	Temperature rise
1742	When mixing electrolyte, which if the following precautions should always be observed?	Use a heavy duty aluminum pail	Add the acid to the water	Add the water to the acid	Mix the solution outdoors
1743	If the approximate voltage to be measured in an electric circuit is not known, you should _____.	only have to calibrate the meter before using it	connect the meter in series with the circuit	Use the lowest voltage range on the voltmeter	use the highest voltage range on the voltmeter
1744	The basic operating principle of a transformer is attributed to ____.	thermionic emission	mutual reaction	electromagnetic induction	variance of a conductor in a magnetic fluid
1745	How is kilowatt load divided between two AC generators operating in parallel?	Adjusting the governor controls	Varying the excitation voltage	Increasing both prime mover speeds simultaneously	Decreasing both prime mover speeds simultaneously
1746	An increase in which of the listed conditions will increase the speed of synchronous electric motor?	Voltage	Armature current	Inductance	Frequency
1747	Which of the following meters uses a shunt connected in series with the load, but parallel with the meter movement?	voltmeter	ammeter	power factor meter	wattmeter

# MANAGEMENT ENGINE

1748	A general purpose electrical multimeter can be used to directly measure _____.	all of the above	field flux	current	watts
1749	When the feeder system has no ground fault, what does the pointer of the insulation resistance indicates	500 ohm resistance	Zero ohm resistance	100 ohm resistance	Infinity ohm resistance
1750	When used for taking resistance measurements a volt-ohm-milliammeter is normally powered by _____.	a hand cranked generator	the current in the circuit being tested	internal storage batteries	a step down transformer
1751	When a resistor is used as a shunt and is connected in parallel with a meter movement coil it will provide _____.	an extended meter range	an increased accuracy of approximately 1.5 percent	none of the above	a measurement of circuit resistance
1752	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 _____.	a short circuit	a partial ground	continuity	the resistance is infinite
1753	For practical purposes in a simple series circuit employing two resistors the largest voltage drop will occur across the resistor which has _____.	a resistance equal to the other	less resistance than the other resistor	a partial short circuit	the greatest resistance
1754	In a simple series circuit the entire source voltage will drop across _____.	a partial short circuit	a short circuit	the resistor next to the negative terminal	the resistor next to the positive terminal
1755	Line losses in a distribution circuit are kept to a minimum by _____.	increasing the number of thermal relays in the circuit	using higher current and lower voltage	adding rubber insulation conductors to the circuit	using higher voltage and lower current
1756	Four lamps are connected in parallel in a single circuit. If one of the lamp burns out the others will _____.	all go out	burn with their original intensities	become brighter	become dimmer
1757	On a main switchboard If all three ground detection lamps burn with equal intensity when the test button is depressed	The test switch is grounded	The current transformers are shorted	All three phases are grounded	The bulbs are operating properly

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	which of the listed conditions is indicated?				
1758	An instantaneous-trip type fuse will ____.	open as soon as the load current exceeds its set point	allow a preset delay between overcurrent and melting	open a circuit by using a time delay element with a magnetic trip	reset itself when the overcurrent is corrected
1759	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
1760	Which of the following statements describes the significance of ambient temperature in relation to the service life of electronic components?	Ambient temperature is not significant as long as the relative humidity is kept low	Ambient temperature should be as high as possible to drive off moisture	Increased ambient temperature decreases the service life of electronic components	A reduced ambient temperature causes a corresponding reduced service life
1761	Which of the instruments listed could be used to locate a grounded field coil in a synchronous motor?	Voltmeter	Ammeter	Megohmmeter	Frequency meter
1762	When testing for blown fuses in a three-phase supply circuit to a motor you should first ____.	ensure the circuit is de-energized an then use a continuity tester	apply the megger across the tops of the line fuses	apply an ammeter diagonally across the top of the first line fuse and the bottom of the third line fuse	apply the voltage tester across the bottoms of the line fuses
1763	Electrical power loss due to hysteresis is a result of ____.	heat generated by magnetic polarity reversals	arcing at brushes	pulsating terminal current	excessive field current
1764	The RMS value of a sine-wave current may also be expressed as the ____.	maximum value	instantaneous value	effective value	average value
1765	Ammeters and voltmeters used in sinusoidal AC power systems indicate which of the following values of the waveforms measured?	Root-mean-square value	Average value	Maximum value	Peak value
1766	An electric tachometer receives the engine speed signal from a ____.	bimetallic sensing device	stroboscopic sensing device	vibrating reed meter generating a voltage proportionate to engine speed	small generator mounted on the engine
1767	In process control terminology	binary values	digital values	analog values	bumpless values

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	continuously variable values which change without distinct increments such as temperature pressure or level are called _____.				
1768	An adjustable resistor whose resistance can be changed without opening the circuit in which it is connected is called a _____.	variable shunt strip	bridge	rheostat	bleeder resistor
1769	A resistance in a circuit of unknown value is to be tested using the voltmeter/ammeter method. Therefore the meters should be connected with _____.	the ammeter in parallel and the voltmeter in series with the resistance	the ammeter in series and the voltmeter in parallel with the resistance	both meters in series with the resistance	both meters in parallel with the resistance
1770	Which of the listed conditions describes the effect on intrinsic semiconductor operation as a result of a temperature increase?	Conductivity will increase	Resistivity will increase	Inductive reactance will decrease	Capacitive reactance will decrease
1771	The most inefficient method of voltage reduction from the standpoint of power loss even when placed in series with the load is the use of a/an _____.	inductor	capacitor	resistor	transistor
1772	The most inefficient method of voltage reduction from the stand point of power loss is a/an _____.	resistor in series with the load	capacitor in series with the load	inductor in series with the load	capacitor and inductor in series with the load
1773	Transformers are used onboard ships with AC generators to _____.	change line frequency	increase power output to modulating frequency controllers	decrease power output to modulating frequency controllers	provide different voltage values to operate various types of electrical equipment
1774	The rotation of the main propulsion motor in a modern AC propulsion drive system is reversed by _____.	power directional relays	electronically changing the phase sequence of the voltages generated by the power converter	reversing the direction of current flow in the armature	changing the direction of current flow in the motor's field winding
1775	The purpose of a heat sink as frequently used with _____	decrease the forward current	compensate for excessive doping	prevent excessive	increase the reverse current

# MANAGEMENT ENGINE

	transistors is to_____.			temperature rise	
1776	A semiconductor is a material with a_____.	conductivity higher than a normal insulator	high conductivity at low temperatures	conductivity higher than a normal conductor	low conductivity at high temperatures
1777	Tightly knit metal braid wire can be used with a printed circuit board when_____.	reactance in the circuit must be kept to a minimum	electrically produced magnetic fluxes would cause inaccuracies in adjacent components	required to desolder components on the board	conductor resistance is not a factor
1778	What do we call the number of vibrations made per second?	Frequency	Velocity	Acceleration	Displacement
1779	What is an electric controller for accelerating a motor from rest to normal speed and for stopping the motor and design for starting a motor in either direction of rotation includes the additional function of reversing?	Automatic starter	Starter	Drum controller	Across the line starter
1780	You are paralleling two alternators and the synchronizing lamps remain lighted as the synchroscope pointer approaches the zero degree position. This indicates that the _____.	Synchroscope is defective or broken	Alternator voltages are 900 apart	Incoming alternator is coming too fast	Alternator power factors are in phase
1781	How are the power transformers rated?	Kilowatt-volts	Kilowatts	Ampere-turns	Kilovolt-amperes
1782	Brushless generator operates without the use of_____. I - commutators II - brushes III - slip rings	I II and III	II only	I and II only	I only
1783	When paralleling two AC generators what should be the frequency of the incoming machine prior to closing its breaker?	Adjusted with the voltage frequency	Controlled by placing the governor switch in the automatic position	Slightly greater than the bus frequency	Adjusted with the voltage regulator
1784	Across the line starters are used with AC motors to obtain_____.	high starting current	reduced starting current	controlled starting acceleration	regulating starting current

# MANAGEMENT ENGINE

1785	Raising the generator field excitation to a DC propulsion motor in a diesel-electric plant will _____.	increase main motor speed	decrease main motor speed	affects main motor speed if done in conjunction with higher generator engine speed	affects main motor speed only
1786	When a controller is provided with reset rate adjustment _____ a change in this adjustment results in a change of the _____.	desired prepositioned value of the controlled medium	desired value of the proportionally controlled variable	floating rate of the proportional-speed floating component	value representing the readjusted controlled variable
1787	Air gap readings should be taken periodically on electrical generation equipment to _____.	determine the amount of varnish that can be applied to correct insulation problems	determine the condition of the bearings	increase machine efficiency	provide for the correct proper tightening of the field coil bolts and correct lateral adjustment of the field coils
1788	A displacer level sensor uses a _____.	displacer exactly in weight to the volume of the liquid it displaces	displacer heavier than the liquid in the process vessel	displacer that varies in density from top to bottom	displacer lighter than the liquid in the process vessel
1789	In a governor what is the fall in speed which occurs as the load on the engine increased?	Slip	Decreased	Droop	Reduced
1790	In AC motor turboelectric power plant the propeller speed is controlled by varying the _____.	electric coupling	turbine speed	number energized motor poles	propulsion generator strength
1791	The kind of transformer where the high voltage winding is entirely wound over the low voltage winding is called the _____.	Float Type	H - Type	Core Type	Shell Type
1792	A change in field excitation of an alternator operating is parallel will bring change to its _____.	Frequency	Current output	Voltage output	Kilowatt load
1793	In simple harmonic motion _____ what term means the time it takes a body to move from one end of the path to the other end and back again?	Velocity	Period	Displacement	Frequency

# MANAGEMENT ENGINE

1794	An electric device that must be fitted in all generators circuit breakers is _____.	over current relay	Frequency meter	Step-up transformer	Step-down transformer
1795	Prior to closing the circuit breaker when paralleling two DC generators you must be certain that the _____.	synchroscope needle is revolving slowly in the fast direction	frequency of the incoming machine is slightly higher than the bus frequency	current from the incoming machine is the same as the bus current	voltage of the incoming machine is at or slightly above the bus voltage
1796	When paralleling two AC generators the synchroscope selector switch and frequency meter switch should be set-up to monitor of what frequency?	Oncoming generator	Bus transfer relay	Generator on the line	Bus
1797	An alternator shall be protected from running like a motor because of _____. I - high voltage feed into the bus II - excessive load in bus III - damage to alternator	II and III only	I and II only	I and III only	I      II and III
1798	Load is added to an AC generator with a constant field excitation the prime mover slows down when _____.	Increasing frequency and lowering generated voltage	Lowering frequency and increasing generated voltage	Lowering frequency and lowering generated voltage	Increasing frequency and increasing generated voltage
1799	A control action which produces a corrective signal relative to the speed at which the controlled variable is changing is called _____.	derivative action	integral action	reset action	proportional action
1800	Motorization of an alternator is undesirable because _____. I - it gives additional load on the bus II - it can cause possible damage of alternator III - high voltage pulses are induced in the bus	I and III only	II and III only	I    II and III	I and II only
1801	On large generators space heaters are used to _____.	prevent electrolysis due to condensation in the bearings	maintain rotor and stator winding temperatures above the dew point to prevent the formation of	prevent condensation in the lube oil	keep the machine at ambient temperature of the machinery space

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

			condensation		
1802	How many 1.5 volt batteries are required to supply a load of 12 volts if the batteries are connected in series?	6	10	12	8
1803	In D.C. motor construction, the armature coils ends are _____.	soldered to the commutator bar risers	spliced with the field windings	imbedded into core slots	crimped together with brush pigtails
1804	It is a kind of circuit protection device where the trip mechanism is actuated by a small armature if excessive current is sensed in the circuit.	Safety Fuse	Thermal breaker	Magnetic Breaker	Voltage Regulator
1805	It is the right time to use or install on tankers the electric bonding cable to avoid explosion.	Before hose connection for loading	During oil cargo loading	Before opening cargo cleaning	After cargo hold cleaning
1806	The 24 volt DC bus on the emergency switchboard is used to supply power to the _____.	smoke detection system	gyrocompass power failure alarm system	general alarm system	all of the above
1807	The distance between a generator and its load is 100 feet. What would be the approximate total voltage drop across a two wire supply cable if the current were 5.5 amperes and the resistance of the wire were 2.525 ohms per 1,000 feet?	2.77 volts	0.5 volts	1.38 volts	1.90 volts
1808	The existing resistance of a conductor is dependent upon its length, cross-sectional area, _____.	material and temperature	material and insulation	inductive reactance and insulation	capacitive reactance and material
1809	The item referred to as a pigtail on a DC motor brush rigging is a _____.	flexible spring adjuster	brush holder	conductor	feather spring
1810	The most common source of excitation for synchronous motors is a/an _____.	AC supply	half-wave transformer	step-up transformer	DC supply
1811	The rating of a storage battery that delivers 15 amps for 12 hours is:	360 ampere hours	150 amperes hours	180 ampere hours	27 amperes hours

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

1812	The specific gravity of the electrolyte in a lead-acid battery is measured by a _____.	hydrometer	gold plate	titration pipette	litmus paper test
1813	The twisting force developed by a motor and applied to a shaft is called _____.	voltage	torque	electromotive force	magnetism
1814	These are magnets parts that supply the magnetic field of a generator.	Poles	Slip ring	Brush holders	Armature
1815	What device commonly utilizes the principle of electromagnetic induct?	diode	transistor	transformer	Rheostat
1816	What is the unit of power being used in moving electronic from one point to another point?	Amperes	Ohms	Volts	Watts
1817	What kind of resistor uses metal with low resistance value and melting point is designed to blow thus opening the circuit when the current exceeds the rated value of resistance?	Switch	Breaker	Fuse	Cartridge
1818	Which of the instruments listed should always be connected in series with a circuit?	Voltmeter	Wattmeter	Megohmmeter	Ammeter
1819	A circuit that has one of the two wires in contact with the hull of the ships is called a	short circuit	flux leakage	grounded circuit	impedance
1820	A milliammeter, with a full scale deflection reading of 100 milliamps, is known to have an accuracy of plus or minus 2%. A meter reading of 10 milliamps would indicate a line current of between _____.	9.8 and 10.0 milliamperes	9.8 and 10.2 milliamperes	8.0 and 10.0 milliamperes	8.0 and 12.0 milliamperes
1821	Before you touch a small capacitor which is connected to a de-energized circuit, or which disconnected entirely, you should _____.	short circuit the terminals to make sure that all the capacitors is discharged	gently tap it with a screwdriver	tag it with a de-energized tag	be equipment with an insulated fuse puller
1822	Electrical power is expressed in _____.	amps	volts	ohms	watts
1823	It is an electrical device being used to increase or	Inverter	Converter	Transformer	Rectifier

# MANAGEMENT ENGINE

	decrease the voltage in an A. C. current.				
1824	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 can not be returned to zero on the scale?	The lead clips should be replaced.	The test reading should be added to each final reading.	The test reading should be subtracted from each final reading.	The batteries should be replaced.
1825	The charging of lead acid storage batteries always result in_____.	a dangerous explosives gas being liberated	the danger of lead poisoning	dangerous acid burns	all of the answers
1826	The direction of the rotation of an induction motor is _____.	opposite the rotating field direction	the same as the direction of the rotating field	determined by the number of poles	determined by the staggering of the brushes
1827	The existing resistance of a conductor is dependent upon its length, cross-sectional area, _____.	material and insulation	resistive coefficient and material	temperature and insulation	material and temperature
1828	The most common source of excitation for synchronous motors is a/an_____.	AC supply	step-up transformer	DC supply	half-wave transformer
1829	The pitting of controller contacts can be caused by _____.	all of the above	excessive spring pressure	high ambient temperature	insufficient contact pressure
1830	The rated temperature rise of an electric motor is the:	average temperature rise due to resistance	normal temperature rise above the standard ambient at record hold	average temperature of any given latitude	permissible difference in the ambient temperature of the motor due to weather
1831	The twisting force developed by a motor and applied to a shaft is called _____.	torque	magnetism	electromotive force	voltage
1832	These are magnets parts that supply the magnetic field of a generator.	Slip rings	Armatures	Poles	Brush holders
1833	Type of permanent magnets are normally made of:	Cobalt receptance	Alnico alloy	Bronze equalizer	Tin polarizer
1834	What device commonly utilizes the principle of electromagnetic induct?	transistor	rheostat	diode	transformer
1835	What is the unit of measured being on	Length in feet	Cubic milimeters	Square inch	Circular lines

# MANAGEMENT ENGINE

	electric wires and cables?				
1836	What kind of relay if the position of one relay affects the operation of another relay.	Magnetic	Interlocked	Thermal	Overlapped
1837	Which of the following refers to a characteristics of a magnetic line of force?	travels from back and forth between the north and the south poles of a bar magnet	travels from north to south through the surrounding medium of a bar magnet	travels from south to north through the surrounding medium of a bar magnet	stay stationary between the north and the south of a bar magnet
1838	A circuit that has infinite resistance is called _____ circuit?	an open	a short	all of the above	a ground
1839	A mil is:	1/10 inches	1/100 inches	1/1,000,000 inches	1/1,000 inches
1840	It is a kind of an overload relay that is being actuated by an electromagnet coil.	Voltage	Magnetic	Current	Thermal
1841	The important components of D.C. motors are the following _____ . I. Commutator II. Brush III. Tachometer	I, II, & III	I & III	I & II	II & III
1842	The equivalent reading in degrees Celsius if the reading in the thermometer is 626 degrees Fahrenheit is _____.	330	310	318	336
1843	The most common source of excitation for synchronous motors is a/an _____.	step-up transformer	half-wave transformer	AC supply	DC supply
1844	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	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
1845	The true power indicated by the pointer movement of a wattmeter depends on the current through the load, the magnetic of the potential across the load and the:	power factor of the load	angle of coil displacement	high resistance from the load	inertia of the moveable coil

# MANAGEMENT ENGINE

1846	These are good characteristics of an autotransformer as compared to other types of transformer are _____ I - Efficiency is extremely high II - Short circuit current is high III - Physical size is very small	II and III	I, II, and III	I and II	I and III
1847	Type of detector which detect particular matter of all sized, down to size of a gas molecule, provide that the number sufficiently is high:	Gas emitter	Gas funnel detector	Fuel gas detector	Ionization chamber smoke detector
1848	Which of the following proportional band values most closely approaches ON-OFF control?	-10%	100%	2%	500%
1849	Conductors and bushbars on a switchboard, panel or control board shall be located as to be free from _____.	obstruction	physical damage	None of these choices	dirt
1850	In a compound-wound motor, a portion of the line current flows through the _____.	shunt field coils	all of the above	series field coils	interpoles
1851	The important components of D.C. motors are the following _____ I. Commutator II. Brush III. Tachometer	I & II	I, II, & III	I & III	II & III
1852	The direction of rotation of an induction motor is _____.	the same as the direction of the rotating field	determined by the staggering of the brushes	determined by the number of poles	opposite the rotating field direction
1853	The equivalent in pounds per square in (PSI) a pressure of 1 kgs/cm <sup>2</sup> pressure is _____.	14.78	14.43	14.22	14.56
1854	The physical size of a resistor that determines the ability of the resistor to absorb heat is rated in:	ohms	volts	farads	watts
1855	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	normal temperature rise above the standard ambient

# MANAGEMENT ENGINE

				to existing weather conditions	temperature at rated load
1856	The true power indicated by the pointer movement of a wattmeter depends on the current flow through the load, the magnitude of the potential across the load, and the _____.	power factor of the load	high resistance from the load	angle of coil displacement	inertia of the movable coil
1857	Thermistor are among second class resistance thermometer utilizing elements made of semi-conducting material, all of which have the characteristics of _____.	A resistance increase with temperature	A resistance decrease with voltage increase	A resistance increase with voltage increase	A resistance decrease with temperature increase
1858	What is the best conductor material being used in an electrical circuit?	Wood	Glass	Rubber	Silver
1859	Which of the following procedures should be used to maintain a large electric motor during periods of inactivity?	Spraying a solvent periodically to remove carbon dust.	Compressed air should be blown over areas where dust is deposited.	Space heaters should be used to prevent condensation of moisture.	A thin layer of air-drying varnish should be applied on the windings.
1860	A circuit is protected from overheating by a/an _____.	magnetic contactor	thermal overload relay	pyrometer	overload transformer
1861	A megohmmeter is used to measure _____.	insulation resistance values	voltage	power	capacitance
1862	A short circuit may be measured by _____.	megger	dynamometer	voltmeter	ammeter and ohmmeter
1863	A voltmeter measuring points range 0 - 24 and you are to measure 6 volts, what point will you set the meter?	1	0	12	6
1864	An AC diesel-electric propulsion system requires less maintenance than a DC diesel-electric system for which one of the following components?	AC generator	Propulsion motor	Diesel engine	Propulsion transformers
1865	Electrical material being used in electrical installations that permits free motion of electrons?	resistors	relays	conductors	insulators

# MANAGEMENT ENGINE

1866	In a compound-wound motor, a portion of the line current flows through the _____.	shunt field coils	inertial poles	stator	frame
1867	In D.C. circuits, power is expressed as the product of:	volts and amperes	volts and coulombs	amperes and coulombs	ohms and amperes
1868	It is a kind of action in a control system where the said action can be done singly or combination of two.	Derivative	Integral	Split	Proportional
1869	It is an electrical AC motor where the rotor share the number of poles as the stator with which it is to be used.	Single phase	Induction	Synchronous	Three phase
1870	It is the resistance in an electrical circuit when 4 resistors are connected in parallel having equal resistance of 200 ohms each.	50	70	200	800
1871	Motor name plate data includes C rise . This indicates the _____.	maximum allowable temperature rise for continuous no load service	permissible temperature rise of the windings above the designed ambient temperature	actual running temperature of the winding from no load to full load	maximum allowable temperature rise above normal full load operating temperature
1872	The important components of D.C. motors are the following _____ . I. Commutator II. Brush III. Tachometer	I & amp; amp; II	II & amp; amp; III	I, II, & amp; amp; III	I & amp; amp; III
1873	The equivalent in degrees Fahrenheit if a thermometer can measure a maximum temperature of 500 degrees Celsius is _____.	902	800	887	932
1874	The performance of the machineries can be monitored during their respective operations in an automated vessel where.	console	control room	ships office	recreational room
1875	The rated temperature of an electric motor is the	normal temperature rise above the	average of the temperature of the given	permissible difference in the ambient	average temperature rise due to

# MANAGEMENT ENGINE

		standard ambient at rated load	latitude	temperature of the motor due to the weather	resistance at 10% overload
1876	Three wire DC generators can incorporate an unbalance of _____.	25%	10%	50%	5%
1877	A megohmmeter is used to measure _____.	voltage	capacitance	insulation resistance values	power
1878	A short circuit may be measured by _____.	voltmeter	megger	dynamometer	ammeter and ohmmeter
1879	An open coil can be detected by _____.	needs adjustment	high resistance	low resistance	normal operation
1880	Conductor resistance may be INDIRECTLY measured by using a/an _____.	voltmeter and an ammeter	voltmeter only	ammeter only	frequency meter
1881	Electrical machinery insulation will break down more rapidly due to _____.	low loading of motors and generators	high temperatures and vibration	frequent megger testing	high operating frequencies
1882	How is the DC output obtained from a brushes exciter?	from the semiconductor rectifier mounted on the exciter armature	directly from the commutator by induction	from a semiconductor rectifier mounted on the stator	from collector rings mounted on the armature
1883	In a cartridge-type fuse, the metal element is contained in a _____.	thermal cut out	porcelain window	flasher device	fiber tube
1884	In cold weather the specific gravity of a battery:	lowers	rises	none of the above	remains the same
1885	It is the resistance in an electrical circuit when 4 resistors are connected in parallel having equal resistance of 200 ohms each.	200	80	800	50
1886	Motor field can be tested by a/an _____.	wattmeter	megger	ammeter	Voltmeter
1887	The charge of an alkaline battery can be determined with _____.	an ammeter	a voltmeter	a hydrometer	a hygrometer
1888	The energy consumed by an AC motor, as strictly reactive power, is _____.	used to do mechanical work	lost as heat generated by bearing friction	lost in doing work to turn the motor itself	used to establish the magnetic field of the motor

# MANAGEMENT ENGINE

1889	The instruments that are being used to measure the temperature of 600 degrees Celsius and above are _____ . I - Thermocouple II - Pyrometer III - Thermometer	I and II	II and III	I, II, and III	I and III
1890	The performance of the machineries can be monitored during their respective operations in an automated vessel at the _____.	ships office	recreational room	console	control room
1891	The rate at which heat is produced in a direct current circuit is equal to _____.	E divided by I	I times R divided by T	I squared times R	P divided by R
1892	The source of electricity that lights the emergency lamps are coming from a/an _____.	wet batteries	emergency generator	Dry batteries	Step down transformer
1893	The true power indicated by a wattmeter depends on the current flow through the load, the magnitude of the potential across the load, and the _____.	power factor of the load	angle of coil displacement	high resistance from the load	inertia of the movable coil
1894	Three wire DC generators can incorporate an unbalance of _____.	25%	10%	50%	5%
1895	What is the approximate voltage per cell produced by the nickel-iron (Edison) battery?	2.20 volts	1.35 volts	0.85 volts	6.05 volts
1896	What will the material have, if it retains a larger part of their magnetization after the magnetizing force is removed?	High permeability	High flux density	High permanence	Low hysteresis loss
1897	Which of the following components are used to convert alternating current produced in the generator windings to direct current?	Armature and equalizer	Field and exciter	Rotor and interpoles	Commutator and brushes
1898	A megohmmeter is connected to each end of	an open coil	a dirty coil	a loose coil	good continuity

# MANAGEMENT ENGINE

	an individual motor winding. A low ohm reading indicates _____.				
1899	An open coil can be detected by _____.	high resistance	needs adjustment	low resistance	normal operation
1900	Conductor resistance may be INDIRECTLY measured by using a/an _____.	frequency meter	voltmeter and an ammeter	ammeter only	voltmeter only
1901	If it becomes necessary to start an axial piston hydraulic motor under conditions where the hydraulic fluid is colder than the lowest temperature recommended for proper operation, you should operate the system at _____.	no load until the normal operating temperature is reached	neutral stroke until all of the air has been vented	maximum torque to attain rapid warm-up	minimum speed until the normal operating pressure is reached
1902	In a cartridge-type fuse, the metal element is contained in a _____.	flasher device	porcelain window	thermal cut out	fiber tube
1903	It is a device used for measuring temperature above 500 deg. Celsius?	Pysograph	Thermostats	Venturimeter	Pyrometer
1904	Low horsepower, polyphase induction motors can be started with full-line voltage by means of:	across-the-line	primary-resistor	sesistorcondary-re	autotransformer
1905	A pneumatic dual element, main propulsion, boiler feedwater regulating system commonly used aboardship utilizes _____.	two-position differential action	proportional plus reset action	proportional action	on /off reset action
1906	In an automation system, increasing or decreasing the loading pressure by a set amount is known as _____.	proportioning	positioning	controlling	biasing
1907	What will happened when using a fuse whose rating higher than necessary?	Endangers the apparatus it is supposed to protect	Reduce the possibility of fuse getting blown	Waste money because they are more expensive	Increase the efficiency of the apparatus
1908	A controller with floating action has a controlled	Offset	Control point	Set point	Neutral zone

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	variable where the range of values produces no motion of the final control element. What do you call this range of values?				
1909	A closed loop pneumatic control system always operates with _____.	feedback to the controller	simple on/off control	no controller feedback	a fixed final control element position
1910	The meat box temperature control circuit, as used in the ship service refrigeration system, is an example of _____.	proportional control	two position control	reset control	single speed floating control
1911	The shipboard general alarm system must receive its main source of power from _____.	a storage battery	the emergency generator	an auxiliary generator	the ships service generator
1912	From among the choices , what is the reactive power drawn by a motor from an AC generator?	The power lost in overcoming friction in the bearings	The power which is transmitted directly through the rotor shaft to perform through useful work	The power which is used to establish the magnetic field of the motor	The power which is strictly converted to heat generated by current flow through the windings
1913	What will happen if you close the circuit breaker of the incoming alternator 180 degrees out of phase with loaded alternator when paralleling?	The rotor of the incoming alternator will coop	the rotor of the loaded alternator will hunt	Both alternators will parallel 180 degree out of phase	severe cross currents will occur which could cause damage
1914	When the helm is turned on the navigation bridge, which of the following actions will be the first response in the steering room on a ship equipped with an electro-hydraulic steering gear?	The pumps go to full stroke	Both port and starboard cables are energized	The six-way valve aligns itself with the running pump	The synchronous receiver turns, duplicating the helm motion
1915	In the event of power failure during cargo loading operations, the movement of an electric powered cargo winch will be stopped by _____.	a spring set brake	the weight of the load on the broom	a manual override switch	a hand operated band brake
1916	Why is an upper limit switch used when handling lifeboat equipment?	To prevent the davits from pulling up against the stops	To keep the tricing line from releasing or getting tangled	To assist in cranking in the lifeboat	To stop the lifeboat from being lowered

# MANAGEMENT ENGINE

1917	What is the first step in removing a generator from parallel operation?	turn off all electrical equipment	remove the load from the off going generator	trip the generator off the switchboard	increase the cycles of the generator staying on the line
1918	At what percentage of an overload can most generators withstand?	20 percent	15 percent	25 percent	35 percent
1919	Which of the following precautions should you take when securing propulsion generators and motors for an extended period of time?	Disconnect the brush pigtails from their contacts and discharge carbon dioxide into the units to keep them dry	Disconnect the brush pigtails from their contacts and circulate air through the units	Life the brushes from commutator or collector rings and circulate cool dry air through the units	Lift the brushes from commutator collector rings and use the built-in heater to prevent moisture accumulation
1920	What is the usual value of leakage coefficient for electrical machines?	1.5 to 1.25	1 to 5	5 to 10	0.5 to 1
1921	What is the approximate discharge voltage produced by one cell of a wet type nickel-cadmium battery?	1.25 volts	1.5 volts	6.0 volts	2.2 volts
1922	What is the normal open-circuit voltage of one cell of a fully charged lead-acid battery?	1.5 volts	6 volts	2 volts	12 volts
1923	What is the approximate voltage produced by a nickel-cadmium battery cell?	1.25 volts	1.50 volts	6.05 volts	2.30 volts
1924	What should be the ideal in-service temperature of a running electric motor bearing?	40-45 degrees centigrade	15-30 degrees centigrade	30-45 degrees centigrade	10-15 degrees centigrades
1925	Sound powered telephone onboard the ship derives its power from a _____.	12 volts battery	permanent magnet and moving coil	power supplied by ships generator	24 volts battery
1926	Which of the listed sections of an emergency switchboard is used to supply power for alarm signals under emergency conditions?	450 volt, 60 cycle, 3 phase bu	Generator and bus transfer section	120 volt, 3 phase, 60 cycle bus	24 volt DC bus
1927	Running on emergency power source, all connected visual and audible fire alarm signals on fixed fire detection	1 hour	15mins	1.5 hours	30mins

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	system to be capable of operating for a period of at least _____.				
1928	The most commonly used electric motor onboard is _____.	Sealed type electric motor	3 phase cage - rotor induction motor	Open style electric motor	close stle electric motor
1929	The open-circuit voltage of a fully charged lead-acid battery cell is _____.	2.0 volts	1.5 volts	1.8 volts	2.3 volts
1930	The life expectancy of electric insulation is approximately halved for an increased operating temperature by how many degrees centigrade?	40 degrees centigrade	20 degrees centigrade	30 degrees centigrade	10 degrees centigrade
1931	Which of the following is the most common voltage produced from main generators onboard?	220V	440V	360V	110V
1932	The number of cells in 12-volts lead acid battery is _____.	6 cells	4 cells	3 cells	12 cells
1933	Three 12 volt storage batteries connected in parallel will give a total voltage of _____.	36 volts	48 volts	12 volts	24 volts
1934	What will be the phase angle relationship of a six-pole, three-phase, rotating field generator?	360 degrees	60 degrees	120 degrees	180 degrees
1935	The 3 wire generator is similar to the 2 wire generator that armature is tapped at _____.	60 degrees	90 degrees	120 degrees	180 degrees
1936	When a series wound DC motor has its armature and field connected in series with a resistor is disconnected from its power supply, this motor will exemplify _____.	a automatic strip heater	across the line starting motor	a reversing controller circuit	dynamic breaking
1937	The KW is evenly distributed between two alternators just placed in parallel by adjusting _____.	the rotor field excitation	the engine governor settings	a balance coil	a interpole field rheostat
1938	A material with a few free electrons is known as _____.	an insulator	a conductor	a semiconductor	All of the above
1939	Basic electrical motor action depends on	The relative force of the	A conductor rotated within a	A current carrying	The relative force of the

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	_____.	commutator and commuting poles	magnetic field	conductor placed in a magnetic field	armature and interpoles
1940	Which of the following types of DC motors has its field connected in parallel with its armature?	Shunt type	Series type	Salient pole type	A counter EMF type
1941	What device commonly utilizes the principle of electromagnetic induct?	A diode	Rheostat	transistor	transformer
1942	The charge of an alkaline battery can be determined with the use of_____.	a voltmeter	a hydrometer	a hygrometer	an ammeter
1943	When an object moves back and forth over a definite path in equal intervals of time, this motion is called_____.	a periodic motion	a interval motion	a circular motion	a frictional motion
1944	In an alternating current electrical system, a low system power factor is a direct sign of_____.	a ground in exciter field windings	a large resistance load	a short in exciter field windings	a large inductive load
1945	When a resistor is used as a shunt and is connected in parallel with a meter movement coil, it will provide_____.	an increased accuracy of approximately 1.5 percent	an extended meter range	a measurement of circuit resistance	none of the above
1946	A conductor is a material that has_____.	many free electrons	a structure similar to semiconductors	a positive charge	few free electrons
1947	It is desirable to operate paralleled AC generators at the SAME power factor because_____.	a power factor increase will decrease kilowatt output	field excitation losses are kept to a minimum	generator rotors will have a lesser tendency to hunt	circulating currents are kept to a minimum
1948	When two or more generators are connected in parallel, what device is used to disconnect a generator from the line if a generator start drawing power from the line?	A magnetic type relay	A reverse power relay	A thermal type relay	A reverse current relay
1949	A series wound DC motor has its armature and field connected in series with a resistor. When the motor is disconnected from its power supply, this motor will exemplify_____.	dynamic braking	a reversing controller circuit	the proper connections for an automatic strip heater	the proper connections for across the line starting
1950	The operating torque of the disk or timer element in an AC reverse power	line voltage	the main bus	electromagnets	a separate battery source

# MANAGEMENT ENGINE

	relay is obtained from _____.				
1951	In a series circuit, where will the entire source voltage drop across?	an open circuit	the resistor next to the negative terminal	the resistor next to the positive terminal	a short circuit
1952	A generator operates on the principles that _____.	a small voltage in the primary high voltage because of the large number of coils in the secondary	when the field revolves, current is generated	when an armature revolves, a magnetic field is induced	voltage is induced when a conductor cuts a magnetic field
1953	In an automatically fired auxiliary boiler, what action takes place in the control circuit if the desired steam pressure is reached?	The high limit control switch secures power to the entire oil firing system	A temperature sensing device opens the circuit breaker in the burner motor	The stock relay secures the power to the high voltage side of the ignition transformer	The stock relay actuates the low limit control which breaks the ignition circuit
1954	Which of the following procedures should be used to maintain a large electric motor during periods of inactivity?	A thin layer of air-drying varnish should be applied on the windings.	Spraying a solvent periodically to remove carbon dust.	Compressed air should be blown over areas where dust is deposited	Space heaters should be used to prevent condensation of moisture.
1955	What is the difference between a three-phase and single phase motor?	A single phase motor is widely use than the three phase motor	A three-phase motor is self-starting and a single-phase motor requires auxiliary means of starting	A three-phase motor is used only for small horsepower and a single-phase motor is used only for high horsepower	A single phase motor uses AC while three phase motor uses DC
1956	What is an example of AC motor that runs at a constant speed which is used for an electric clock motor?	Wound motor induction motor	AC squirrel cage motor	Synchronous motor	AC induction motor
1957	The most common source of excitation for synchronous motors is in a _____.	DC exciter generator	Low voltage battery	Motor attenuator set	AC supply
1958	Which of the following is the most common of excitation for synchronous motor?	DC supply	AC supply	Step-up transformer	Poor contact of brushes
1959	What is the function of damper windings in a synchronous motor ?	DC voltage to the armature	DC voltage to the field	AC voltage to the armature	AC voltage to the field
1960	What will be the result of setting the relief valve opening pressure in a hydraulic system lower than the required	Lower operating efficiency of the system	Maximize the working speed of the hydraulic system	Not to overload the normal working capacity of the system	Accelerated action of the system component

# MANAGEMENT ENGINE

	operating pressure?				
1961	What do we call the number of vibrations made per second?	Acceleration	Displacement	Velocity	Frequency
1962	How does the full torque electric brake on an electric cargo winch function?	Automatically govern the hosting speed of the load	Automatically hold the load as soon as current to the machine is shut-off	Act as a backup brake in the event the mechanical break should fail	Automatically govern the lowering speed of the load
1963	Motor name plate data includes, C rise. What does C rise mean?	Permissible temperature rise of the winding above the designed ambient temperature	Actual running temperature of the winding from no load to full load	Maximum allowable temperature rise for continuous no load service	Actual running temperature of the winding from no load to full load
1964	The function of the voltage regulators used with AC generators is to cut out or divide the _____.	the KW load equally between generators operating in parallel	generators when they are no longer required	reactive current between generators operating in parallel	additional generators automatically as required
1965	A motor whose speed can be adjusted gradually, but when once adjusted for a given load will vary in considerable degree with change in load; an example is a DC compound-wound motor adjusted by field control or a wound-rotor induction motor with rheostatic speed control.	Varying speed motor	Adjustable speed motor	Multi-speed motor	Adjustable varying-speed motor
1966	Which of the following actions should be the final step when paralleling two DC generators?	Balancing the load	Closing the circuit breakers	Closing the equalizer switches	Adjusting the governors
1967	Inductance is the property of an electric circuit that _____.	aids any change in the applied voltage	opposes any changes in the current through the circuit	opposes any change in the applied voltage	aids any change in the current through the circuit
1968	The counter e.m.f. of a DC motor _____.	aids the applied voltage	often exceeds the supply voltage	helps in energy conversion	regulates its armature voltage
1969	The identifying feature of squirrel-cage induction motor is that it has NO _____.	iron core in the rotating part	commutator or slipping	windings on the stationary part	air gap
1970	In a dc motor the mechanical output power actually comes	Back e.m.f.	Field systems	Electrical input power	Air-gap flux

# MANAGEMENT ENGINE

	from _____.				
1971	The division of kilowatt load between two AC generator operating in parallel is controlled by the settings and characteristics of the _____.	Characteristics of governor	Number of poles in the armature	Field excitation of the engine	All of the above
1972	Generators with the same voltage at no load and maximum load but with the peak voltage in between are _____.	All of the options	Flat compounded	over-compounded	special nonconductors
1973	When starting a DC motor, where the speed is controlled by a variable rheostat, the rheostat must be FIRST be turned _____.	quickly to the run position	to the mid position	All the way to the run position then quickly back to slow	To the slow position then gradually moved to full speed
1974	What is a machine that comprises a magnetic field excited from a DC source or formed of permanent magnets?	Alternating Current commutating machine	Direct Current commutating machine	AC commutator	DC commutator
1975	What is the converter that combines both motor and generator action, with one magnetic field and with two armatures or with one armature having separate windings?	Dynamotor	Alternator	Inverter	Rectifier
1976	What is called a dynamo using a permanent magnet in producing a magnetic flux?	Alternator	Magneto	Relay	Amlidyne
1977	The D.C. generator that gives information about the speed of a motor is called a/an	Wattmeter	Potentiometer	Ammeter	Tachometer
1978	The total voltage induce into the secondary windings of a transformer is determined mainly by the ratio of the number of turns in the primary to the number of turns in the secondary and by what other factor from the choice?	Amount of voltage applied to the primary windings	Amount of current applied to the primary windings	Amount of resistance applied to the primary windings	Length of wire in the primary winding
1979	What determines the	Amount of field	Type of	Load-speed	Amount of field

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	division of kilowatt load between two paralleled alternators?	excitation to the lagging machine	alternator	characteristics of the governors	excitation to the leading machine
1980	Fuses are rated in ____.	amperage, interrupting capacity and voltage	amperage	voltage	interrupting capacity
1981	After you close the circuit breaker to parallel two similar alternators, the next step is to balance the _____.	Voltage loads	Power factor	Kilowatt loads	Ampere loads
1982	Electric current is the flow of electrons through a conductor. The rate of this flow is measured as _____.	volts / watts	ohms / voltage	coulombs / second	amperes / centimeter
1983	In a simple harmonic motion, the maximum displacement is called.	amplitude	travel	distance	period
1984	Which of the following statements is true concerning the operating characteristics of a squirrel-cage motor?	Rotor slip is dependent upon the motor load	An increase in motor load results in less slip	A decrease in rotor speed results in less generated current	A decrease in rotor, speed produces a weaker magnetic field
1985	Why is some main diesel engines vibrating at a certain RPM?	High engine speeds	Propeller unbalance	An overloaded propeller	The engine is operating at critical rpm
1986	What do you call a device which prints out a permanent record of the plant operating conditions?	alarm logger	Analogger	bell logger	Data logger
1987	The overspeed tripping device installed on an auxiliary turbine is automatically actuated by _____.	centrifugal force	high back pressure	applied spring force	hydraulic pressure
1988	Slip rings are sometimes fitted on DC generators to _____.	None of the stated options	supply AC from the machine	convert the internal AC to DC	apply excitation to the field
1989	A DC generator used to supply direct current in order to maintain an AC generator field it is known as a/an _____.	Armature	Stator	Rotor	Exciter
1990	Which of the following components are used to convert AC produced in the generator windings to direct current?	Rotor and interpoles	Commutator and brushes	Field and exciter	Armature and equalizer

# MANAGEMENT ENGINE

1991	A voltage regulator on a shunt wound generator varies the _____.	Armature current	Resistance of the both the armature and the field circuit	Resistance of the armature series	Resistance of the field circuit
1992	Which of the following quantity maintains the same direction whether a dc machine runs as a generator or as a motor?	Armature current	Field current	Induced e.m.f	Supply current
1993	Under constant load conditions, the speed of a d.c motor is affected by _____.	Armature current	Back e.m.f.	Ampere current	Field flux
1994	What is true if the counter EMF of a DC motor is at MAXIMUM?	Motor is at rated speed	Armature has just begun to turn	armature is not turning	motor is almost up to rated speed
1995	As an armature revolves within magnetic field, friction is developed between the rotated magnetized particles as they pass through each magnetization cycle. This results in _____.	eddy current loss	hysteresis loss	copper loss	armature reaction
1996	The most common type of AC service generator found aboard ship is the stationary _____.	electromagnetic field, oscillatory armature type	electromagnetic field, revolving armature type	armature, oscillatory electromagnet field tpe	armature rotating electromagnetic field type
1997	What should you do regarding the following situation? Diesel generators 1 and 2 are operating in parallel at near full load. Diesel generator 1 suddenly trips out mechanically on low lube oil pressure and the reverse power relay trips generator 1.	Strip the board of all non vital circuits	Secure alarms, reset reverse power relay and start #1 engine	Ascertain cause of low lube oil	Start the emergency generator
1998	Two AC generators of the same capacity are operating in parallel. One with a zero speed droop setting and the other with a 5% speed droop. If its capacity is not exceeded, What will happen to the unit whose governor has the zero speed droop setting?	Assume the smaller share of the load	Have poor sensitivity characteristics	Have poor power response	Maintain the frequency of the system
1999	All feeder circuit breakers are molded-case circuit	Automatic fuse breaker or AFB	No fuse breaker or NFB	Fused breaker FB	Air circuit breaker

# MANAGEMENT ENGINE

	breakers, which means _____.				
2000	In order to protect the generator in service from overload, the non-essential load is isolated from the system by what device?	Automatic voltage trip regulator	No fuse breaker tripping system	Preferential tripping system	Main circuit breaker tripping system
2001	In low horsepower, what can start the polyphase induction motors with full-line voltage?	compensator	autotransformer	primary-resistor	across-the-line
2002	Partition of kilowatt load between two parallel alternators determined by the _____.	Field excitation	Governor setting	Transformer output	Balance flywheel
2003	The capacitance is measured in units called _____.	rectifier	generator	battery	farads
2004	Why is the magnitude of the magnetomotive force required for air gap is much greater than that required for iron part of a magnetic circuit?	Air has the lowest relative permeability	Air is gas	Air is the conductor of magnetic flux	Air has the highest relative permeability
2005	Why is the different operation of AC generator could hardly maintain the maximum power required?	Due defective voltage regulator	Due to improper setting slip ring	Due failure of prime mover	Due to improper setting of load limit switch
2006	The advantage of alternating current over direct current is that alternating current provides for _____.	none of these choices	reduced power consumption	ease of voltage rotation	better regulation control
2007	An electric tachometer receives the engine speed signal from a _____.	Slip ring activated	Small generator mounted as engine	Stroboscopic sensing device	Bimetallic sensing device
2008	An adjustable resistor, whose resistance can be changed without opening the circuit in which it is connected, is called a _____.	bridge	bleeder resistor	rheostat	variable shunt strip
2009	What is related between AC & DC generators?	both supply 3-phase power	constructed at the same size for the same KW rating	both producing alternating voltage	both control the delivery of voltage
2010	Which of the following activities occurs during the charging process of a lead-acid storage battery?	The specific gravity of the acid increase	Both plates change chemically to lead sulfate	Oxygen gas is absorbed	Hydrogen gas is absorbed

# MANAGEMENT ENGINE

2011	The electric charge which remains in an insulated conductor due to a nearby charge of opposite polarity is called _____.	Polarity charge	Bound charge	Neutral charge	Block charge
2012	The torque produced by a motor when its shaft will not turn even through rated voltage is applied to the stator is known as _____.	Pullout torque	Locked rotor torque	Breakdown torque	Torque margin
2013	Color of the DC motor commutator when there is correct commutation _____.	Chocolate brown	Burnished green	Brick red	Shiny blue
2014	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
2015	International Convention on control of harmful "Anti-Fouling Systems" on ships entered into force on _____.	17 October 2007	17 September 2007	17 October 2008	17 September 2008
2016	The number of certificated able seamen and lifeboatmen required on board is listed in the _____.	Certificate of Inspection	Muster List ("Station Bill")	American Bureau of Shipping code	Safety of Life at Sea Convention
2017	The Safety Equipment Certificate shows that the vessel conforms to the standards of the _____.	American Bureau of Shipping	American Salvage Association	S.O.L.A.S. Convention	U.S. Coast Guard
2018	The order of importance in addressing damage control is _____.	control fire, control flooding, repair structural damage	control fire, restore vital services, control flooding	restore vital services, control fire, control flooding	control flooding, control fire, repair structural damage
2019	What does International Convention on control of harmful "Anti-Fouling Systems" requires all ships to have/carry?	Classification Compliance	IAFS Certificate	IMO Certificate	Flag State Compliance
2020	During the course of a voyage, a seaman falls on the main deck and injures his ankle. The Master should submit a Report of Marine Accident, Injury or Death if the _____.	of life only injury is the result of misconduct	injured needs first aid	injury results in loss of life only	injured, is unable to perform routine duties

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2021	The organization that certifies the safe working load of cargo cranes on a vessel is the _____.	U.S.D.A.	National Cargo Bureau	classification society	U.S. Coast Guard
2022	In controlling pollution, which action should be taken after all dirty ballast has been transferred to the slop tank and prior to discharge through the oily water separator?	The slops should be allowed time to settle.	Chemicals should be added to emulsify the oil.	The dirty ballast tank is crude oil washed.	The clean tanks should be ballasted.
2023	The supplement to the IOPP Certificate contains what type of data?	A checklist of the equipment installed for controlling the discharge of oil.	The grades of cargo that an oil tanker is permitted to carry.	The trade routes upon which the vessel may operate.	A list of the underwriters who will assume financial responsibility in the event of an oil spill.
2024	What does OCIMF stand for	Outstanding Companies International Marine Forum	Oil Companies International Marine Fund	Oil Companies International Marine Forum	Oil Companies International Marine Forum
2025	How many months is the maximum validity of derrating certificate.	12	9	4	6
2026	Which of the following document is used to verify lowest number of crew that can safely run a vessel?	Muster List	Minimum safe manning	Crews competency	Ship master list
2027	Under the ISM Code, what is an identifiable deviation that poses a serious threat to the safety of personnel or a serious risk to the environment that requires immediate corrective action and includes the lack of effective and systematic implementation?	Observation	Near miss	Major non-conformity	Incident report
2028	Oil pollution regulations require any transfer, or discharge of oil or oily water should be recorded in _____.	oil record book	Pollution control board	Bridge log book	engine room tank log book
2029	Before setting out on a three day voyage, Regulations require that the steering gear, whistle and communications system between the	8 hours	4 hours	1 hour	12 hours

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	bridge and engine room must be tested within how many hours prior to departure?				
2030	Each pressure gage used in an oil transfer operation must be accurate to within _____.	5 percent	1 percent	10 percent	3 percent
2031	Passenger vessels shall maintain an Oil Record Book, if the vessel is _____.	150 gross tons and above	400 gross tons and above	300 gross tons and above	200 gross tons and above
2032	What is the validity of a load line certificate issued to a cargo ship?	4 years	3 years	2 years	5 years
2033	Which ship must maintain Part II (Cargo/Ballast Operations) of the Oil Record Book?	A non-tanker that carries more than 200 cubic meters of oil in bulk.	A ship of 150 gross tons or above, other than an oil tanker.	An oil tanker of 100 gross tons or above.	A ship of 200 gross tons or above.
2034	What do you call a document certifying the correctness of the load line marks on a vessel?	Clearance papers	Load Line Certificate	Solas Certificate	Certificate of Inspection
2035	The International Maritime Conventions covers which of the following areas?	Marine insurance	Charter parties	Shipbuilding	Maritime pollution
2036	The overall responsibility in maintaining the Oil Record Book is given to _____.	Chief Mate	Chief Engineer	Master	Cargo Engineer
2037	If the vessel's load line certificate is expired, are you allowed to sail?	To be arrested by authorities	Class suspended	Allowed	Not allowed
2038	What do you call the highest governing body of IMO composed of all member states?	Assembly	Committee	Secretariat	Council
2039	Which of the following kind of document or certificate verifies that the ship carries the number of crew that can run the vessel safe and effective?	Minimum Safe Manning	Crew competency certificate	Shipping articles	Safety management
2040	The sections of an Oil Record Book preceding the log pages contain a _____.	damage control plan for isolating firemain valves	complete classification of hazardous materials	list of machinery space operation items	detailed listing of all organizations to call in the event of an accidental

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

					oil spill
2041	What do you call a tank constructed in tanker intended to collect drains or oily mixture used in cargo tank cleaning as provided in the 73/78 Marpol Conventions?	Wing tank	Slop tank	Center tank	Deep tank
2042	Who shall provide evidence of its commitment to the development and implementation of the QMS and continually improving its effectiveness?	Designated Person	Master of the vessel	Top management	Owners
2043	The process of grinding, shredding, or reducing the size of sewage particles is known as _____.	Maceration	Detention	Bulking	Chlorinating
2044	The process of grinding or shredding sewage into smaller particles is known as _____.	Comminution	Detention	Skimming	Bulking
2045	How many months is the maximum validity of derrating certificate.	6	12	9	4
2046	Which of the following document is used to verify lowest number of crew that can safely run a vessel?	Ship master list	Minimum safe manning	Muster List	Crews competency
2047	Under the ISM Code, what is an identifiable deviation that poses a serious threat to the safety of personnel or a serious risk to the environment that requires immediate corrective action and includes the lack of effective and systematic implementation?	Incident report	Near miss	Observation	Major non-conformity
2048	Oil pollution regulations require any transfer, or discharge of oil or oily water should be recorded in _____.	oil record book	Pollution control board	Bridge log book	engine room tank log book
2049	Before setting out on a three day voyage, Regulations require that	12 hours	8 hours	1 hour	4 hours

# MANAGEMENT ENGINE

	the steering gear, whistle and communications system between the bridge and engine room must be tested within how many hours prior to departure?				
2050	Each pressure gage used in an oil transfer operation must be accurate to within _____.	1 percent	3 percent	10 percent	5 percent
2051	Passenger vessels shall maintain an Oil Record Book, if the vessel is _____.	150 gross tons and above	300 gross tons and above	400 gross tons and above	200 gross tons and above
2052	What is the validity of a load line certificate issued to a cargo ship?	3 years	4 years	2 years	5 years
2053	Which ship must maintain Part II (Cargo/Ballast Operations) of the Oil Record Book?	A non-tanker that carries more than 200 cubic meters of oil in bulk.	A ship of 150 gross tons or above, other than an oil tanker.	An oil tanker of 100 gross tons or above.	A ship of 200 gross tons or above.
2054	What do you call a document certifying the correctness of the load line marks on a vessel?	Clearance papers	Solas Certificate	Certificate of Inspection	Load Line Certificate
2055	The International Maritime Conventions covers which of the following areas?	Maritime pollution	Marine insurance	Shipbuilding	Charter parties
2056	The overall responsibility in maintaining the Oil Record Book is given to _____.	Chief Engineer	Cargo Engineer	Chief Mate	Master
2057	If the vessel's load line certificate is expired, are you allowed to sail?	Allowed	Not allowed	To be arrested by authorities	Class suspended
2058	What do you call the highest governing body of IMO composed of all member states?	Assembly	Committee	Secretariat	Council
2059	Which of the following kind of document or certificate verifies that the ship carries the number of crew that can run the vessel safe and effective?	Shipping articles	Crew competency certificate	Safety management	Minimum Safe manning
2060	The sections of an Oil Record Book preceding	detailed listing of all	list of machinery space operation	complete classification of	damage control plan for isolating

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	the log pages contain a _____.	organizations to call in the event of an accidental oil spill	items	hazardous materials	firemain valves
2061	What do you call a tank constructed in tanker intended to collect drains or oily mixture used in cargo tank cleaning as provided in the 73/78 Marpol Conventions?	Slop tank	Deep tank	Wing tank	Center tank
2062	Who shall provide evidence of its commitment to the development and implementation of the QMS and continually improving its effectiveness?	Owners	Top management	Master of the vessel	Designated Person
2063	The process of grinding, shredding, or reducing the size of sewage particles is known as _____.	Maceration	Detension	Bulking	Chlorinating
2064	The process of grinding or shredding sewage into smaller particles is known as _____.	Comminution	Skimming	Detention	Bulking
2065	What are possible consequences of shipboard operations that is a risk to environment?	Fire	Marine pollution	Explosion	Sinking
2066	An overload in which of the listed motors will result in the illumination of an indicating light at the propulsion control station alarm panel?	Condensate pump motor	Fuel pump motor	Steering motor	Forced draft blower motor
2067	MARPOL 73/78 covers not only accidental and operational oil pollution but NOT pollution by _____.	chemicals	emission from ships funnels	garbage	noise
2068	A vessel is in compliance with federal regulations regarding the discharge of sewage by _____.	All of the above	Holding all sewage onboard	Treating sewage in an approved system	Pumping the sewage ashore to an approved
2069	Prior to entering a shipboard on compartment containing spilled sewage, you should test the atmosphere in the	Methane gas	Hydrogen sulfide	All of the above	Oxygen

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	compartment for _____.				
2070	What is the most important of all UN treaties dealing maritime safety?	IMO	SOLAS	GMDSS	PIMCO
2071	Which of the following kind of statutory certificate is being renewed where the "plimsoll" works are measured and conform to the measurement during its construction?	International oil pollution	International load line	Ship's safety construction	Ship safety equipment
2072	Which of the following represents the maximum percent of oxygen by volume, permitted to be discharge by a ships inert gas system when operating properly?	less than 8 %	less than 12 %	less than 10 %	Less than 6 %
2073	What is an entity responsible for implementing the provisions of International conferences and Conventions?	Ship administration	Managing company	Port state control	Classification society
2074	As provided in Regulations I of Annex V of MARPOL 73/78, what is defined as domestic and operational wastes?	Sewage	Mix oil	Garbage	Bilge
2075	As per the ISM Code, what is a statement of fact made during a safety management audit and substantiated by objective evidence?	Incident report	Near miss	Non-conformance	Observation
2076	Disposal of floating dunnage lining & packing materials outside special area can be made if _____.	not less than 25 miles	not less than 50 miles	not less than 15 miles	not less than 35 miles
2077	In the Oil Record Book, a comprehensive list of operational items are grouped into operational sections. Each section is codified by a/an _____.	number	abbreviation	all of the above	letter
2078	Which of the following	Grounded food	Oily bilge	Oily rags	Dirty water

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	type of garbage allowed to be discharge at sea under the Marpol convention in the high seas?	garbage			
2079	When would scuppers on deck during bunkering should be plugged?	Whenever the vessel is taking fuel	powder conducts electricity back to the fire fighter	only if fixed containment drains are open	extinguisher will need to be recharged
2080	Oil pollution regulations require any transfer, or discharge of oil or oily water should be recorded in _____.	engine room tank log book	Pollution control board	Oil Record Book	Bridge log book
2081	Some fleets registered to irresponsible governments have a hundred times casualty rates than those of the best so the IMO created which of the following to address this problem?	Flag state guidelines	Port state control	Port security officer	Administration guidelines
2082	A pneumatic pressure tank is installed in a sanitary system to _____.	Provide a higher pressure in the system then the pump can deliver	Prevent the sanitary pump from losing suction	Reduce excessive cycling of the sanitary pump	Increase water flow through the system
2083	What is the main reason for implementing provisions of International Conferences or Conventions onboard?	Provide uniform practice	Reduce accidents at sea	Port state recommendations	Class society recommendations
2084	Which of the following document given to the officer of a vessel issued by an administration a certificate of competency in exceptional necessity to fill a vacant position in short period?	Endorsement	Resolution	Dispensation	Certificate
2085	Load line is assigned to a vessel to ensure adequate stability and _____.	structural strength	riser tension	owners representative	lifesaving equipment
2086	The purpose of International Safety Management Code is to provide an international standard for the safe management and operation of the ship and	accident prevention	none of these choices	pollution prevention	safety of the crew

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	for _____.				
2087	IMO was established to adopt legislation while the signatory governments are responsible for its _____.	deregulation	training	implementation	seafarers deployment
2088	Which of the following can be a member of IMO?	Shipowners	Seafarers organization	Seafarer's union	Governments
2089	Who is authorized to approve any alteration on the structure of the vessel after it has been previously surveyed and certificated?	Administration	Shipowner	Vessel charterer	Port state
2090	What is the primary reason why International Conventions and agreements necessary to be implemented onboard worldwide plying vessels?	Shipowner requirements	Classification requirements	Provide uniform requirements	Reduce accidents at sea
2091	It is the recommended procedure as provided in the 1974 SOLAS convention in discharging ballast water in double bottom tank designed and previously loaded with fuel oil. What is it?	Fuel oil transfer pump	Steam driven pump	Oily bilge separator	Discharge direct to barge
2092	As per the ISM Code, in matters of safety and pollution prevention, whose commitment, competence, attitudes and motivation determines the end result?	Designated person ashore	Top management	Management level officers	Individuals at all levels
2093	How many years is the validity of a load line certificate issued to a cargo ship?	Four	Five	Two	Three
2094	Which type of Marine Sanitation Device (MSD) is used solely for the storage of sewage and flushwater at ambient air pressure and temperature?	Type III	Type I	Type II	Type IV
2095	What do you call the drainage from medical premises such as wash basins, tubs, as well as drainage from loading	Refuge	Bilge	Waste	Sewage

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	spaces of living animals onboard as defined in the 73/78 MARPOL conventions?				
2096	Each operation involving the transfer of oil or oily mixture that requires an entry in the OIL Record Book shall be fully recorded _____.	within 12 hours of completion of the operation	within 24 hours of completion of the project	without delay	within 48 hours of completion of the operation
2097	Engines for lifeboats are required to have sufficient fuel to operate for how many hours?	18 hours	24 hours	12 hours	6 hours
2098	What is placed on the underside of an inflatable liferaft to help prevent it from being skidded by the wind or over turned?	Ballast bags	Strikes	Sea anchor	A keel
2099	Which of the following is NOT required to be provided as part of the appendixes of the Shipboard Oil Pollution Emergency plan?	a list of personnel duty assignments	a list of agencies or officials of Coastal State administrations responsible for receiving and processing incident reports	a list of agencies or officials in regularly visited ports	a list which specifies who will be responsible for informing the parties listed and the priority in which they must be notified
2100	If water is rising in the bilge of a survival craft you should first _____.	shift all personnel to the stern	check for cracks in the hull	check the bilge drain plug	abandon the survival craft
2101	While taking on fuel oil the transfer hose begins leaking _____ causing a sheen on the water. You should _____.	shut down operations	reduce the rate of transfer	apply dispersants to the sheen	repair the leak with duct tape
2102	The air spaces in the floor of an inflatable raft will provide protection against _____.	asphyxiation from CO2	rough seas	loss of air in the sides of the raft	cold water temperature
2103	What is the function of centrifugal brake mechanism incorporated in a lifeboat handling winch?	Mechanically stop the boat when the hand break fails	Hold the load suspended during lowering operations	Automatically stop the boat if electric power fails	Automatically control the speed of lowering by gravity
2104	Most lifeboats are equipped with _____.	unbalanced rudders	balanced rudders	conraguide rudders	straight rudders
2105	When a magnetic compass is not used for a prolonged period of time it should _____.	have any air bubbles replaced with nitrogen	have the compensating magnets removed	be locked into a constant heading	be shielded from direct sunlight

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2106	When launching a lifeboat frapping lines should be rigged_____.	before the tricing pendant is released	before the gripes are released	after the boat is in the water	before the boat is moved from the davits
2107	Which of the lifeboat parts listed must be painted bright red?	Buoyancy tanks	Releasing gear lever	Oars	Boat hooks
2108	Which of the following liquids can ordinarily be discharge overboard without being processed through an oily water separator?	Engine room bilges	Cargo tank ballast	Cargo pumproom bilges	Segregated ballast
2109	Why is it important to test lifeboat davit limit switches on a regular basis?	To prevent the possibility of the davit wires parting when the lifeboat is being retrieved and stowed in its davit	To avoid damage to the winch motor	To prevent damage to the releasing gear	To prevent the lifeboat from being lowered at an unsafe speed
2110	The fuel tanks of motor-propelled lifeboats shall be_____.	emptied and the fuel changed at least once each year	emptied and gas freed when the ship is drydocked	constructed so as to be completely spill proof	hydrostatically tested at each inspection for certification
2111	If help has not arrived in 10 -12 hours after having abandoned in a survival craft you should_____.	take a vote on which direction you should go	go in one direction until the fuel runs out	shutdown the engines and set the sea anchor	plot course for the nearest land
2112	A 1500 gross ton vessel (constructed before July 1 1974) equipped with a fill fitting for which discharge containment is impractical to_____.	have the fill fitting altered on or before December 31 1986	use an automatic back pressure shut off nozzle	use a drip collar on the fill fitting	have a designated crew member stand watch over the fill fitting
2113	What immediate action should be done if water is continuously rising in the bilge of a survival craft?	Shift all personnel to the stern	Increase the speed of the survival craft	Shift all personnel to the bow	Check the bilge drain plug
2114	Which statement is true concerning all vessels equipped with refrigeration units of over 20 cubic foot capacity?	A gas mask suitable for protection against each refrigerant used or a self-contained breathing apparatus must be provided	It is the sole responsibility of the chief engineer to ascertain that all members of the engineering department are familiar with the use of gas masks or breathing apparatus	Spare charges shall be carried for at least 50% of each size and variety of gas masks and/or self-contained breathing apparatus	Refrigerant should be replaced yearly

# MANAGEMENT ENGINE

2115	When completing the ballasting operation of a contaminated tank which of the following problems must be guarded against?	Motor overload due to high discharge head	Loss of pump suction	Insufficient pump pressure when topping off	Back flow of contaminated water
2116	The person-in-charge shall ensure that each lifeboat is lowered to the water launched and operated at least once every_____.	two months	three months	month	six months
2117	When inspecting a stored inflatable liferaft on deck you should make sure that the operating cord is_____.	fastened to the float-free link	secured to the hydrostatic release	not fastened to anything	fastened to the raft container
2118	What should be done if a leak in an oil hose coupling cannot be stopped by tightening the coupling bolts?	Notify the Coast Guard of a potential oil spill	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
2119	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	replace the hose	place a large drip pan under the leak and plug the scuppers	notify the terminal superintendent
2120	Pollution Prevention Regulations state that no person may transfer oil to or from a vessel unless_____.	the maximum transfer rate and pressure has been established	oil residue has been drained from all hoses	the maximum amount of oil to be transferred has been recorded on the declaration of inspection	a representative sample has been taken from the oil being received
2121	Bilges may be pumped_____.	overboard only through an approved oily water separator and oil content monitor	overboard only after dark	overboard on the outgoing tide	anytime as long as the oil content is very little
2122	An ocean going ship of 400 gross tons or above must be fitted with a standard oil discharge shore connection be substituted with a suitable_____.	portable flange adapter using a five bolt pattern and a bolt circle diameter of 183 mm	portable flange adapter using a four bolt pattern and a bolt circle diameter of 83 mm	portable flange adapter using a eight bolt pattern and a bolt circle diameter of 83 mm	portable flange adapter using a six bolt pattern and a bolt circle diameter of 183 mm
2123	Which of the following is NOT a function of the	Prevents smoke and other	Provides air for passenger	Pressurizes the water spray	Provides combustion air

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	pressurized air supply for a fully enclosed lifeboat?	noxious fumes from entering craft	respiration	system	for the diesel engine
2124	The criteria for inflammable gases concentration for entering tanks shall be at least _____.	0.02% by volume or less	0.20% by Volume	0.10% by Volume	0.30% by Volume
2125	International Convention on control of harmful Anti-Fouling Systems on ships entered into force on _____.	17 October 2008	17 September 2007	17 October 2007	17 September 2008
2126	The oil content monitoring for engine room bilge shall be zero adjusted every how many months after cleaning the light receiving unit?	3 months	2 months	5 months	4 months
2127	As with the certificate of class statutory certificates for cargo vessels are generally valid for how many years?	5 years	4 years	3 years	2 years
2128	In general a ships dry-docking and repairs shall be carried out once every _____.	24 months	12 months	32 months	12 months
2129	The Ship Maintenance Division Manager or its equivalent shall offer the dry-docking work specification to several shipyards before dry-docking takes place at least _____.	6 months	3 months	2 months	4 months
2130	International Regulations require a single tail-shaft with water lubricated tailshaft bearings stress-relieved keyway and fabricated from materials resistant to corrosion by sea water to be drawn and examined once in every _____.	8 years	3 years	2 years	5 years
2131	In general fuels leaving the refinery have a sodium level below _____.	50 mg/kg	40 mg/kg	30 mg/kg	60 mg/kg
2132	According to regulation of MARPOL 73/78 all	18 miles	12 miles	6 miles	24 miles

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	ships outside special areas can jettison metal at distance from shore of not less than_____.				
2133	Pollution Prevention Regulation state that NO person may transfer oil to or from a vessel UNLESS_____.	Each part of the transfer system is blown through with air	Hose are supported so that couplings have no strain on them	An oil containment boom is available for immediate use	A sample has been taken from the oil being received
2134	Special hazards in transporting bulk LPG includes_____.	all of these choices	high toxicity in small quantity	noxious odor	frost burns to flesh
2135	A shipboard oil pollution emergency plan (SOPEP) is required of_____.	an oil tanker of 150 gross tons or above or other ship of 400 gross tons or above	an oil tanker of 400 gross tons and above or other ships of 150 gross tons and above	all vessel 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
2136	Port State Control verifies compliance of which of the following regulations or requirements of foreign flagships through the inspection of documents and survey of the ship. What is this called?	Statutory Regulation	Classification Society	Annual Survey	Company Requirements
2137	A great deal of attention is paid to the well being of the ships by national and international regulation and during design and operation for the sake of_____.	speed	design	magnificence	safety
2138	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	if the discharge is led to a shore tank or barge	as much as necessary	on the outgoing tide
2139	International Regulations require watertight doors in cargo vessels to be_____.	electrically controlled from a remote station	hydraulically powered only for closing	tested at each inspection for certification	tested within 12 hours after leaving port
2140	Before taking a bunker at a bunkering station it is necessary for a_____ from the supplier to be examined and compared with the instruction form of the	fuel sample	arrangement time of bunkering	bunkering equipments	delivery documents

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	owner or charterer.				
2141	MARPOL 73/78 covers not only accidental and operational oil pollution but NOT pollution by _____.	Noise	Garbage	Emission from ships funnels	Chemicals
2142	A new ocean going ship of 2000 gross tons having an inoperative oily water separator may dispose of its bilge slops by _____.	Pumping them into a settling tank for separator before pumping the oily water residue overboard	holding its slops onboard until they can be discharged to a shoreside reception facility	circulating them through the lube oil purifies to remove water and debris	holding its slops onboard until they can be pumped into the city sewer system
2143	Ship Safety Certificate is issued after complying the important requirements to be surveyed of a passenger vessel which are the _____ I - line throwing appliances II - lifeboats and liferafts III - watertight subdivision	I and II	II and III	I and III	I II and III
2144	Who are covered by the enforcement of rest periods under fitness for duty regulation of STCW? I - Those whose duties involve designated safety II. those whose duties involve designated security III. those whose duties involve designated pollution prevention	II and III	I and II	I II and III	I and III
2145	Which of the following machines have emergency stop outside of engine rooms? I. Bilge pump II. Ballast pump III. Fuel purifier	II & III	I & II	I & III	I II & III
2146	Which of the following statutory law must be followed onboard? I - Safety of vessel and crew II - Protection against pollution III - Crew employment conditions	I II & III	II & III	I & II	I & III
2147	Who are the necessary entities to be informed without delay when there is accident on board involving discharge of harmful substances as	I II and III	I and II	II and III	I and III

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	provided in the 73/78 MARPOL Conventions? I. Ship administration II. Ship owner III. State where incident happened				
2148	The sludge tank installed in the diesel engine room is used to collect _____. I - sludge from the fuel oil centrifuge II - water that has been collected in the settling tank	both I and II	I only	neither I or II	II only
2149	Which of the following is NOT a special areas in Annex I of MARPOL 73/78?	Red sea	Antartic sea	Bering Sea	Baltic Sea
2150	Major classification society undertakes a broad range of activities under strict quality standards to insure the protection of life property and the environment at sea. Ships sailing on international routes must be classified by a society is a requirement of which of the following?	SMS	IACS	IMO	ISO 9001
2151	As define in the 73/78 MARPOL Conventions the liquid hydrocarbon mixture occurring naturally in the earth suited to be transported onboard TANKER vessel even without being treated is the_____.	crude oil	liquefied gas	bunker oil	carbon concentrates
2152	The use of alternative certificates is not intended to _____.	upgrade the skill of seafarers	save time for seafarers on training	justify the assignment of the combined duties of the engine and deck watchkeeping officers to a single certificate holder	lower the cost of training
2153	The grounding of Exxon Valdez off Alaska Coast leads to the creation of_____.	ISM	Marpol	IOPP	OPA 90

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2154	The enclosed space entry permit/pan contains what detail/s? I - Method and duration of communication II - Names of person/s entering III - Name of enclosed space to be entered	I and III only	I II and III	II and III only	I and II only
2155	Which of the following document is used to verify lowest number of crew that can safely run a vessel?	Ship master list	Crews competency	Muster List	Minimum safe manning
2156	Under the ISM Code what is an identifiable deviation that poses a serious threat to the safety of personnel or a serious risk to the environment that requires immediate corrective action and includes the lack of effective and systematic implementation?	Major non-conformity	Near miss	Observation	Incident report
2157	Which of the following should be adopted each time a product tanker will load kerosene or gasoline to the tank?	Steam lines not to be blanked off	No opening of heating coils to cargo tank	Close all heating valves	All steam lines leading to cargo tank to be blanked off
2158	Disposal of floating dunnage lining & packing materials outside special area can be made if_____.	not less than 50 miles	not less than 35 miles	not less than 25 miles	not less than 15 miles
2159	Who is given the blanket authority to grant on MARPOL Certificate to vessels in the Philippines?	Classification society	Bureau of customs	PCG	Marina
2160	According to international Regulations oil transfer should not be carried out unless_____. I - Payment has been made II - All scuppers are plugged III Pipes not part of the transfer system is blanked off	I II and III	I and III only	I and II only	II and III only
2161	Oil pollution regulations require any transfer	oil record book	Pollution control board	Bridge log book	engine room tank log book

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	or discharge of oil or oily water should be recorded in _____.				
2162	Coast Guard regulations require all automatically fired low pressure heating boilers to have an automatic _____.	pressure-control regulator	feedwater control valve	fuel cut off as a result of low water	superheat control system
2163	According to 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, must have under each loading manifold a fixed container or an enclosed deck area having a minimum capacity of:	168 gallons	126 gallons	252 gallons	491 gallons
2164	According to 33 CFR, records of garbage disposal are required to be maintained:	until each quadrennial Coast Guard inspection	until the end of each voyage	for a minimum of one year	for a minimum of two years
2165	According to 46 CFR Part 95, the carbon dioxide cylinders of a fixed fire extinguishing system may be located inside the protected space if the quantity of CO2 required to protect that space is not more than.	300 pounds	600 pounds	400 pounds	500 pounds
2166	According to 46 CFRs Part 199, for each passenger vessel normally operating above 32 degrees north latitude, the minimum number of immersion suits to be carried for each lifeboat is at least.	3	1	2	4
2167	According to 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	9 knots	12 knots	7 knots	6 knots

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	the minimum vessel speeds listed below?				
2168	Your vessel is chartered under a time charter party. Under this type of charter party, your responsibility is _____.	solely to the owner, as under normal conditions	to the owner for vessel administration and to the charterer for cargo operations and schedule	solely to the cargo shippers and consignees	solely to the charterer for all matters pertaining to cargo and ship administration
2169	Your ship is working cargo in port when a hydraulic hose ruptures on the weather deck and oil spills into the harbor. Once the source of the oil spill has been secured, how would you proceed?	Refer to Oil Record Book for directions.	Refer to the ships Fuel Oil Transfer Procedures for directions.	Follow the procedures outlined in the vessels Shipboard Oil Pollution Emergency Plan (SOPEP) manual.	Follow the procedures outlined in the vessels soles manual.
2170	You intend to discharge medical or hazardous wastes ashore. MARPOL Annex V requires you to notify a receiving port or terminal in advance. How much advance notice is required?	Advance notification is not required.	48 hours	24 hours	12 hours
2171	With regards to a ships Oil Record Book, an oil tanker of 150 gross tons and above must maintain entries in _____.	both Part I and Part II	part I only	part II only	part III
2172	With reference to SOLAS II-A, Regulation 4, the capacity of the pump shall not be less than 40 percent of the total capacity of the fire pumps required by this regulation and in any case can deliver not less than _____ cubic meters per hour.	46	38	25	12
2173	Who sets the safety standards for vessels in the domestic trade in accordance with:	MARINA	Department of Transportation and communication	Philippine Coast Guard	Department of Trade and Industry
2174	Who is recognized as the only international body for developing guidelines?	Contracting party	Coastal states	IMO	Member government
2175	Which of the following is NOT a concern of the ISM Code?	safety at sea	avoidance of damage to life and property	prevention of human injury	medical examination

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2176	Which of the following is intended to cultivate a safety culture in the whole cabin of ship operation?	ISM Code	ISPS Code	Port State Control	PMMRR 97
2177	When looking for IMO regulations on vessel watertight integrity, the information will be found in which of the following documents?	ISM manuals	MARPOL	CFRs	SOLAS
2178	Category 1 EPIRBs transmit on frequencies that are monitored by _____.	offshore supply vessels	commercial fishing vessels	orbiting satellites in space	naval warships
2179	Line Displacement is a procedure that is followed at an oil terminal facility, when there is a change of _____.	cargo lines at the terminal before loading	product after the final discharge	product before the start of loading	product during the final phase of loading
2180	A Discharge of Oil Prohibited placard must be fixed in a conspicuous place in each machinery space, or at the bilge and ballast pump control station as required by _____.	33 CFR 155	33 CFR 151	33 CFR 153	46 CFR 42
2181	A 1500 gross ton freight vessel, with a keel laid in 1969, must have a fuel oil discharge containment for the fuel tank vents. This containment must consist of _____.	portable containers of at least 5 U.S. gallon capacity	self-closing scupper drains	a container with a capacity of 3 barrels if it serves one or more vents; each with an inside diameter of 3 inches or more	20 inch high coamings
2182	A category of health hazard, as listed on a Material Safety Data Sheet (MSDS) which includes teratogens and mutagens, is called a _____.	pyrophoric hazard	reactive hazard	reproductive hazard	contamination hazard
2183	A class (fire) divisions are those divisions formed by bulkheads and decks. Which of the following requirements do not comply with the rules? (SOLAS II-2/3.3)	Preventing passage of smoke and flame to the end of a one hour standard test	Constructed of steel or other equivalent material	Suitably stiffened	Insulated on both sides with approved non-combustible material
2184	A crew member suddenly	MAO 32	MAT 32	Mar-32	MAK 32

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	becomes blind in both eyes. Which code should your message contain?				
2185	A Crude Oil Wash (COW) system is considered as _____.	a mechanism which filters and purifies crude oil	a Butterworth system using crude oil instead of water as the cleaning medium	a cleanup for pump room bilges	a water operated Butterworth system
2186	A Crude Oil Washing (COW) system is	Butterworth system using crude oil instead of water as the cleaning medium	Water operated butterworth system	Mechanism which filters and purities crude oil	none of the above
2187	A distress signal _____.	consists of 5 or more short blasts of the fog signal apparatus	consists of the raising and lowering of a large white flag	may be used individually in conjunction with other distress signals	is used to indicate doubt about another vessels intentions
2188	A fine mesh wire screen is fitted to tank vent pipes to prevent _____.	debris stopping up the vent pipe	water from entering the tank	entry of rodents into the tank	passage of flames into the tank
2189	A fire main system must have enough fire hydrants for each accessible space to be reached with _____.	a water spray or solid stream	at least two spray patterns of water	at least 25 psi delivered pressure	a low velocity spray applicator
2190	A fuel/air mixture below the lower explosive limit is too _____.	rich to burn	dense to burn	cool to burn	lean to burn
2191	A health hazard term listed on a Material Safety Data Sheet (MSDS) that indicates allergic-like reaction in some people after repeated exposure is _____.	sensitizer	skin contact hazard	oxidizer	pyrophoric hazard
2192	According to Coast Guard Regulations (46 CFR), 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	20 knots	7 knots	15 knots
2193	According to Pollution Prevention Regulations (33 CFR), the minimum	Nine	Four	Six	Three

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	number of bolts permitted in an ANSI standard flange on an oil hose is:				
2194	Coast Guard Regulations (46 CFR) require that low velocity fog spray applicators be provided for the combination hose nozzles in the machinery spaces of tank vessels. How many applicators are required to be maintained in the machinery spaces of these vessels?	1	3	4	2
2195	Coast Guard regulations require a shipboard oil pollution emergency plan to be reviewed:	quad-annually only	biennially only	annually only	only one every five years
2196	How many miles out to sea must a vessel be located before it can pump overboard an untreated sewage holding tank?	12 nautical miles	3 nautical miles	6 nautical miles	25 nautical miles
2197	How often must fixed CO2 fire extinguishing systems be inspected to confirm the cylinders are within 10% of the stamped full charge weight?	Biannually.	Annually	Semiannually.	Quarterly.
2198	In cleaning up an oil spill, the use of straw or reclaimed paper fibers would be an example of which type of oil removal?	Chemical agent removal	Mechanical removal	None of the above	Absorbent removal
2199	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.	1850 feet	2000 feet	1650 feet	2500 feet
2200	On U.S. inspected ships, oily water separating equipment, bilge alarms, and bilge monitors must be approved under:	46 CFR 162	46 CFR 41	18 CFR 201	33 CFR 151
2201	Plastic garbage bags containing comminuted paper and rags may only be discharged:	Ashore	3 miles from land	12 miles from land	25 miles from land

# MANAGEMENT ENGINE

2202	Pollution Prevention Regulations (33 CFR) specify that the person-in-charge of bunkering is responsible for:	quality of fuel received	vessel draft	establishing the transfer rate	quantity of fuel received
2203	Pollution Prevention Regulations (33 CFR) state that no person may transfer oil to or from a vessel unless:	hoses are supported to prevent kinking and strain on its coupling	each part of the transfer system is blown through with air	a sample has been taken from the oil being received	adequate deck lighting is turned on one hour before sunset
2204	When looking for IMO regulations on a vessels oil water separator, the information will be found in which of the following documents?	ISM manuals	MARPOL	CFRs	SOLAS
2205	What is the basis of competence of personnel performing work under QMS?	Experience, conformity, simulation and environment	Effectiveness, training, cleanliness and risk management	Mission-orientation, dependability, certification and efficiency	Education, training, skills and experience
2206	What administrative matter are you to comply with if an accident under Marpol occurs?	A report shall be made without delay to the fullest extent in accordance to protocol	You are to note this incident down in the Log Book	You are to write a full report of all the details of the incident to the vessels Owners/Operators	A report of the incident is to be made to the Administration of the vessel involved
2207	Under the regulations implementing MARPOL, a mobile offshore drilling unit is required to have an International Oil Pollution Prevention (IOPP) Certificate when the unit:	moves to a new drilling location in U.S. waters	all of the choices	is drilling on the Outer Continental Shelf	engages in a voyage to a port of another country which is a party of Marpol
2208	Under the Convention with respect to collision, actions for recovery of damages are barred after an interval of _____ from the date of casualty.	5 years	6 months	1 years	2 years
2209	The Safety of Life at Sea Convention was developed by the _____.	American Institute of Maritime Shipping	American Bureau of Shipping	international Maritime Organization	u.S. Coast Guard
2210	The Oil Record Book must be maintained onboard the vessel for _____.	6 months and then submitted to the nearest Marine safety Office for review	not less than 3 years and be readily available for inspection	the duration of the ships active employment	an annual inspection
2211	The most frequent incidents of tanker	loading and discharging	due to collisions	human error	oil spill

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	pollution during tanker operations is:				
2212	The largest crew a cargo vessel may carry without having a hospital space is _____.	16	11	6	12
2213	The ISM Code for safety management is one of the tools for implementing a risk-based approach. The management system therefore should _____.	establish procedures for oil spill drills	establish safeguards against all identified risks	establish procedures for abandon ship	establish procedures for incident investigation
2214	The ISM Code consists of how many requirements or elements?	15	13	14	12
2215	The Inter-Governmental Conference on the Convention on the Dumping of Wastes at Sea is generally known as:	London Convention	New York Convention	Hamburg Convention	Netherlands Convention
2216	The hours of rest may be divided into two periods, one period of which shall not be less than:	5 hours	6 hours	8 hours	7 hours
2217	The entry into force of the 1978 protocol relating to the International Convention for the Prevention of Pollution from ships was:	2-Oct-83	2-Oct-84	2-Oct-85	2-Oct-82
2218	SOLAS stipulates that an international shore connection shall have bolts and nuts _____ in diameter, and _____ in length.	18mm,50mm	19mm,50mm	17mm,50mm	16mm,50mm
2219	Regulations for the prevention of pollution by oil, are stipulated in MARPOL 73/78:	annex III	annex I	annex IV	annex II
2220	Regulations for the Prevention of Pollution by Oil entered into force on:	2-Oct-94	2-Oct-93	2-Oct-83	2-Oct-84
2221	A health hazard, listed on a Material Safety Data Sheet (MSDS), that can cause cancer in exposed individuals is called a	cryogenic	carcinogen	none of the above	irritant
2222	A load line for a VESSEL is assigned by the _____.	a recognized classification society	Minerals Management Service	Department of Energy	Corps of Engineers

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

		approved by the Coast Guard			
2223	A load line is assigned to a VESSEL to insure adequate stability and _____.	riser tension	lifesaving equipment	mooring tension	structural strength
2224	A marker pole, with a horseshoe buoy and a sea anchor attached, should be used to _____.	mark the position of a lost mooring	indicate location of a man overboard	determine your vessels sideslip underway	determine your speed through the water
2225	A Report of Marine Accident, Injury or Death, Coast Guard form 2692, must be filed with the Officer in Charge, Marine Inspection when a shipboard casualty results in _____.	the incapacitation of a yard worker due to a boiler flareback	the incapacitation of an injured crewman	the death of a yard or harbor worker in the engine room	All of the above.
2226	A reproductive health hazard, listed on a Material Safety Data Sheet (MSDS), that can damage the fetus during development is called a _____.	mutagen	teratogen	cryogenic	pyrophoric
2227	A reproductive health hazard, listed on a Material Safety Date Sheet (MSDS), that can cause genetic changes in sperm or egg cells is called a _____.	mutagen	cryogenic	carcinogen	teratogen
2228	A ship documents prepared by the master containing the names, nationality, birthplace or passport number and the description of the persons who composes the ships complement;	Crew list	Passengers manifest	Shipping articles	Master List
2229	A ship in distress should transmit the appropriate alarm signal followed by the distress call and message on one or all of the international distress frequencies. Which of frequencies is in accordance with the present recommendations?	550 kHz, 2182 kHz and 121.5 MHz	500 kHz, 2367 kHz and 243 MHz	500 kHz, 2182 kHz and 156.8 MHz	550 kHz, 2367 kHz and 121.5 MHz
2230	A ship is fitted with davit	Every four	Every three	Every year	Every month

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	launched liferafts. How often should onboard training take place, including, when practicable, the inflation and lowering of a liferaft?	months	months		
2231	A ship of 6000 gross tons constructed after June 30, 1974, must have a fixed container, or enclosed deck area under or around each fuel oil vent, overflow, and fill pipe. This fixed container, or enclosed deck area must have a capacity of at least _____	1/2 barrel	5 gallons	21 gallons	1 barrel
2232	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
2233	The Pollution Prevention Regulations (33 CFR) requires that no person may transfer oil to or from a vessel unless:	the transfer system is connected to an automatic back pressure shutoff nozzle	the transfer system is connected to a flexible overflow fuel hose	all unnecessary parts of the transfer system are open and drained	all necessary components of the transfer system are lined up before the transfer begins
2234	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?	200 nautical miles	50 nautical miles	12 nautical miles	100 nautical miles
2235	When inspecting a survival craft, you should check to make sure that the:	steering controls are locked	hydraulic pressure is within the specified range	hydraulic starting system has been drained	sea anchor is deployed
2236	Regulations for the Prevention by Harmful Substances in Package	1-Jul-82	1-Jul-88	1-Jul-98	1-Jul-92

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	Form entered into force on:				
2237	Regulations for the Control of Pollution by Noxious Liquid Substances entered into force on:	6-Apr-87	6-Apr-86	6-Apr-97	6-Apr-96
2238	Regulation 13, Chapter VI of MARPOL shall apply to diesel engines with a power output of more than _____ which is installed on a ship constructed on or after 1 January 2000.	200 kW	133 kW	220 kW	130 kW
2239	Prior to entering a davit launched liferaft, you should make sure that:	the liferaft is full from oxygen inside to avoid suffocation	all personnel have removed their life preserver to facilitate boarding	the liferaft is well ventilated of excess carbon dioxide	all personnel must remove their life preserver except for helmet for head protection
2240	One of the control procedures under Regulation I/4 of the STCW Convention is to verify the number of certificates of the seafarers on board a vessel in conformity with the:	port control requirements	flag state requirements	safe manning requirements	safety regulations
2241	In the Oil record Book, each operation specifies in the regulation must be noted by the:	officer or OIC of the operation and each completed page will be signed by the master	the entries match operations completed after which is signed by the Port Authorities	the entries match operations completed after which is signed by the Master	officer or OIC of the operation and each completed page will be signed by the Port Authorities
2242	In SOLAS, any ratification, acceptance, approval or accession deposited after the date on which the present Convention enters into force shall take effect _____ after the date of deposit.	3 months	12 months	6 months	9 months
2243	In reference to MARPOL 73/78 Annex VI regulations, the sulphur content of any fuel oil used on board ships shall not exceed what percentage by weight?	6.00%	4.50%	1.50%	3.00%
2244	In accordance with	Diesel engines	Diesel engines	Diesel engines	Diesel engines

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	MARPOL 73/78 Annex VI, the nitrous oxide (NOx) emissions associated with certain diesel engines are required to operate under certain acceptable limits. To which of the listed engine applications would the NOx emission regulations apply?	with a power output not greater than 130kW.	with a power output of more than 130kW.	powering emergency diesel-generator sets.	powering lifeboats.
2245	In accordance with MARPOL 73/78 Annex V, the discharge or disposal of garbage on vessels of 400 gross tons and above engaged in commerce requires recordkeeping. Which of the following discharge or disposal operations requires a detailed description of the contents of the garbage?	Discharge overboard to sea.	Discharge to a reception facility.	Incineration on the ship.	Discharge to another ship.
2246	In accordance to SOLAS II, Regulation 43, an emergency source of power can support one of the fire pumps for a period of:	24 hrs	12 hrs	18 hrs	6 hrs
2247	In a ship, fire and boat drills must be held within 24 hours of leaving port if the percentage of the crew replaced is more than:	25%	5%	10%	30%
2248	If your ship is in collision in the waters of a foreign nation, which of the following is NOT a legal responsibility for the MASTER?	Inform the other vessel of the name of your ship and other details	Enter a witnessed statement in the official log book	Go as soon as possible to the nearest appropriate port to report to the authorities	Render assistance to the other ship, if practicable
2249	A tonnage tax is leveled according to the _	Deadweight cargo tonnage aboard	Net tonnage of vessel	Displacement tonnage of vessel	Gross tonnage of vessel
2250	A towing vessels capability is best measured by horse power, maneuverability, displacement and:	stability	propeller design	bollard pull	towing winch horse power
2251	A vessel arrives in a foreign port and the Master is formed that the vessel is being sold of	Must remain on board	Must remain on board until the vessel is delivered to the	Must comply with the decision made the Master	Has the right to an immediate discharge

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	foreign interests. The new owners request that the crew remain on board to complete the voyage. Under these circumstances, the crew		new owners at a:		
2252	A VESSEL is required to carry an Oil Record Book to log entries in the book regarding the _____.	discharge of ballast or cleaning water from fuel tanks	sounding levels of all fuel tanks on a daily basis	grade and specific gravity of all fuel oil carried	fuel consumption rates on a weekly basis
2253	A VESSEL is required to carry an Oil Record Book, and must maintain the book on board for _____.	four years	three years	two years	one year
2254	A water line ruptures under pressure and floods the engine room causing \$(USA)30,000 damage to the machinery. By law, this must be reported to the _____.	insurance underwriter	U.S. Coast Guard	engine manufacturer	owner or his agent
2255	A weather tight door on a VESSEL must not allow water to penetrate into the unit _____.	in any sea condition	in 50 knot winds	in 70 knot winds	in 100 knot winds
2256	A written document identifying chemical material, listing its physical properties, describing health hazards, required controls, correct procedures for firefighting, spill or leak cleanup, waste disposal, and the safe handling and storage of the material,	PPES	HCIS	PELS	MSDS
2257	According to Coast Guard Regulations, flexible hoses used as supply and return lines to hydraulic system components, must have _____.	a designed bursting pressure of at least four times the maximum working pressure of the system	the working pressure of the system stamped on one of the end fittings	the working pressure of the system stamped on both of the end fittings	an inner tube constructed of seamless reinforced polyester braid
2258	According to Federal Regulations, a confined or enclosed space on a ship which is being prepared for HOT WORK, should be inspected, tested and	adjacent spaces have been inspected for combustible materials and possible spread	concentration of flammable vapors in the atmosphere is less than 10% of the L.E.L.	all of the above	oxygen content is below 22%

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	designated SAFE FOR HOT WORK if _____.	of fire			
2259	Protection against sustained overloads occurring in molded-case circuit breakers is provided by a/an _____.	thermal acting trip	overvoltage release	thermal overload relay	current overload relay
2260	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 wiping off the components with a soft cotton rag	Using carbon tetrachloride as a cleaning solvent to clean the components.	Using a vacuum cleaner to remove debris from the components.
2261	As a general rule, the first troubleshooting action to be taken in checking faulty electric control devices is to _____.	test all fuses and measure the line voltage	draw a one line diagram of the circuitry	insulate the apparatus from ground	take megger readings
2262	The electrical energy necessary to transmit a person's voice over a sound-powered telephone circuit is obtained from _____.	dry cell batteries	the emergency switchboard	the speaker's voice	the ship's service switchboard
2263	Which of the listed procedures should be carried out to prevent moisture damage to electrical apparatus during extended periods of idleness?	Place heat lamps in the motor housing.	Cover the equipment with a canvas tarpaulin.	Strap silica gel around the commutator.	Fill the motor housing with CO2 to inert the space.
2264	Electric strip heaters are used in motor controllers to _____.	keep the components at their design ambient temperature	minimize resistance in internal circuits	prevent freezing of movable contacts	prevent condensation of moisture
2265	A fuse that blows often should be replaced only with a fuse of _____.	lower current and higher voltage rating	higher current and voltage rating	the recommended current and voltage rating	higher current and lower voltage rating
2266	To repair a small electrical motor that has been submerged in saltwater, you should _____.	renew the windings	wash it with fresh water and apply an external source of heat	rinse all electrical parts with a carbon tetrachloride cleaning solvent and then blow dry the motor with compressed air	send it ashore to an approved service facility
2267	Which of the listed procedures should be	Strap silica gel around the	Cover the equipment with	Fill the motor housing with	Place heat lamps in the motor

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	carried out to prevent moisture damage to electrical apparatus during extended period of idleness?	commutator.	a canvas tarpaulin.	CO2 to inert the space.	housing.
2268	It is a single-phase induction motor having a relatively high starting torque.	capacitor-start motor	resistance-start motor	shaded pole motor	wound-rotor motor
2269	A low-voltage protection circuit is used in electric motor starting equipment to .	trip circuit contactors when the motor develops a short circuit due to low voltage	trip circuit contactors when the motor overspeeds due to low voltage	prevent the motor from restarting automatically on restoration of voltage	allow the motor to restart automatically on restoration of voltage without manually resetting
2270	A Silicon diodes designed for a specific reverse breakdown voltage, become useful as an electronic power supply voltage regulator.	hot-carrier diodes	tunnel diodes	compensating diodes	Zener diodes
2271	Which of the listed precautions should be observed before spraying liquid solvent on the insulation of an electric motor?	Slow the motor down to low speed.	Disconnect the motor from the power source.	Preheat the insulation to assist in cleaning.	Secure all ventilation in the area.
2272	A generator has been exposed to water and is being checked for its safe operation. Therefore, it is necessary to _____.	take moisture readings with a hydrometer	ground the commutator, or slip rings and run it at half load for 12 hours	test insulation values with a megger	check for shorted coils with a growler
2273	Before testing insulation with a megohmmeter, the windings of large machines should be grounded for about 15 minutes prior to the test, because the _____.	static charge of the machine may give a false reading	armature will have a greater number of leakage paths	insulation may be damaged	insulation may be covered with moisture

# MANAGEMENT ENGINE

2274	Before testing insulation with a megohmmeter, the windings of large machines should be grounded for about 15 minutes just prior to the test as the_____.	armature windings will have a greater number of leakage paths	larger machines may acquire a charge of static electricity during operation	insulation may be covered with moisture	insulation may be damaged
2275	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	lubricate the transistor	aid in the removal of the heat sink	provide maximum heat transfer
2276	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 the connection with a match and recheck with an ohmmeter	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
2277	If a three-phase induction motor malfunctions and drops to a single-phase (one supply line open) .	more torque will be developed	the motor will immediately stop and can only be restarted at no load	the motor will continue to run if it is not heavily loaded	the motor will immediately stop and not be able to be restarted
2278	During its operation, loud buzzing and resultant welding of contacts of a magnetic relay may be caused by .	low voltage on the operating coil	overheating of the contactor coil	low insulation resistance to ground	lubrication of the contact bearing points

# MANAGEMENT ENGINE

2279	If a magnetic controller relay fails to drop out when the coil voltage is removed from the relay, the probable cause may be_____ .	welded contacts .	excessive spring tension	excessive current	overvoltage
2280	When troubleshooting electronic equipment, the FIRST step to be taken before testing the circuit voltage is to_____.	check the voltage supply from the power source	check the current flow through the circuit	set the meter to the lowest range	remove the suspected component
2281	When testing a capacitor with an analog type ohmmeter, a good capacitor will be indicated when _____ .	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 remains there	there is no meter deflection	the meter deflects to a low resistance value and slowly increases towards infinity
2282	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?	Leads must not be twisted so Meter as to cancel out the individual magnetic fields.	Resistor's circuit must be de-energized and at least one end of the component isolated	Correct polarity must be observed because reverse bias will damage the component.	The meter case must be grounded prior to attaching the leads.
2283	In troubleshooting a circuit, you suspect that a resistor may be faulty. Which of the precautions listed must be observed when using an ohmmeter to carry out this test?	The resistor circuit must be de-energized and at least one end of the component isolated	Correct polarity must be observed, connecting the red lead to the banded end of the resistor.	Meter leads must be twisted to cancel the leads' magnetic fields	The meter must be placed in series with the resistor and the circuit.
2284	When troubleshooting a magnetic controller, it is found that the contacts are welded together, the most probable cause is _____ .	high voltage on the operating coil	high ambient temperature	excessive operation at low load	low voltage on the operating coil

# MANAGEMENT ENGINE

2285	The governor control switch of an alternator is moved to the "raise" position. This action will _____.	raise the percentage of speed droop	lower the percentage of speed droop	lower the no-load speed setting of the governor	raise the no-load speed setting of the governor
2286	To test fuses in an energized circuit, you should use a _____.	voltmeter	low voltage light bulb	resistance meter	megohmmeter
2287	One diode of a full-wave rectifier burned out in a shorted condition. Therefore, the output will be _____.	a rectified full-wave	equal to the AC input	zero	a rectified half-wave
2288	If a transformer is connected to a DC source, the transformer will overload at the _____.	primary coil	contacts	secondary coil	core
2289	Magnetic controller contacts may become welded together during operation because of _____.	an open coil	low contact pressure	excessive ambient temperature	excessive magnetic gap
2290	The charge of a lead-acid battery is checked with a/an _____.	ohmmeter	manometer	hydrometer	voltmeter

# MANAGEMENT ENGINE

2291	As an armature revolves within a magnetic field, friction is developed between the rotated magnetized particles as they pass through each magnetization cycle. This results in _____.	hysteresis loss	eddy-current loss	copper loss	armature reaction
2292	The main purpose of an electric space heater installed in a large AC generator is to _____.	prevent acidic pitting of the slip rings	prevent the windings from becoming brittle	prevent moisture from condensing in the windings during shutdown	keep the lube oil warm for quick starting
2293	Decreasing the frequency in a capacitive circuit while maintaining a constant circuit voltage will result in a/an _____.	decrease in circuit current	increase in apparent power	decrease in capacitive reactance	decrease in total impedance
2294	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 be done as long as the motor is running under a light load.	The starter must be placed in the STOP position to stop the motor.	The three line connections in the motor terminal box must be disconnected and tagged.
2295	The frequency of an AC generator is adjusted by means of the _____.	equalizing reactor	exciter field rheostat	main alternator field rheostat	prime mover governor control
2296	AC and DC generators are similar because they _____.	are constructed at the same physical size for the same kilowatt rating	both generate alternating voltages	both supply three-phase power	both rectify the voltage before delivery

# MANAGEMENT ENGINE

2297	The first normal step in troubleshooting a transistor circuit card is to _____.	give the circuit an initial test with a signal generator	visually inspect the card	test for continuity with a low voltage DC supply	carefully remove the transistors from the card
2298	When an alternator is to remain idle for even a few days, _____.	energize the heater circuit	open the equalizing bus disconnect switch	lift the brushes and disconnect the pigtails	insulate the collector rings with strips of cardboard
2299	The standard method of controlling the output voltage of a 440 volt, 60 Hz, AC generator is accomplished by adjusting the _____.	alternator field excitation	number of poles	load on the alternator	prime mover speed droop
2300	Cleaning of electrical insulation should be _____.	performed whenever the electrician is not otherwise busy	accomplished every 12 months	done every six months	determined by need and not by the calendar
2301	One method of troubleshooting digital circuits in a console is to _____.	supply alternate logic levels at the input(s) and test for change of state conditions at the output	ground all inputs and test for a logic "1" at the output	open all inputs and test for a logic "0" at the output	vary each input smoothly from 0-10 volts and test for similar variance at the output
2302	Which of the following meters uses a shunt connected in series with the load, but parallel with the meter movement?	Voltmeter	Ammeter	Power factor meter	Wattmeter

# MANAGEMENT ENGINE

2303	Electrical machinery insulation will break down more rapidly due to _____.	high temperatures and vibration	high operating frequencies	low loading of motors and generators	frequent megger testing
2304	When troubleshooting console circuit card suspected of being faulty; first, check for proper voltages to the card and then _____.	blow any accumulated dust from the card with at least 30 psi air from the ship's service air system	de-energize the card and check the printed circuit traces for continuity with an ohmmeter	pull the card, clean the sliding connections with a pencil eraser, and remove accumulated dust	test transistors or integrated circuits for gain and compare with manufacturer's specifications
2305	A device which can be used to check the calibration of a circuit breaker is a ____.	standard digital multimeter	portable low voltage high current testing unit	clamp-on voltmeter	500 volt megohmmeter
2306	Excessive heat in an operating motor controller can result from ____.	low motor starting torque	missing arc chutes	a closed starter contact	loose connections
2307	Which of the listed conditions will occur if dirt and grease are allowed to accumulate between the commutator segments of a motor?	Misalignment of the motor shaft.	A dead short circuit.	Overspeeding of the motor.	A partial short circuit.
2308	A split-phase induction squirrel-cage motor will not come up to speed ,even though the rated voltage, rated frequency, and rated load are supplied. The suspected trouble could be due to _____.	all choices are correct	a faulty centrifugal switch	broken rotor bars	worn bearings

# MANAGEMENT ENGINE

2309	Which of the listed conditions might contribute to very rapid wearing of a DC machine's commutator bars?	Using improper grade of carbon brushes	A grounded commutator bar	Aligning the front and rear mica V-rings improperly	An open circuit in the armature
2310	If a single-phase induction fails to start, the problem may be ____.	a shorted shunt field	low circuit frequency	a closed centrifugal switch	an open in the main winding
2311	Voltage failure of an AC generator may be caused by ____.	short circuit in the stator coils	a tripped bus circuit breaker	an open in the rotor field circuit	high mica segments on the stator bus bar
2312	A loss of field excitation to an AC generator while operating in parallel will cause it to ____.	lose its load due to the inherent speed droop built into the governor	lose its load, begin to motorize, trip out on reverse power delay, and possibly overspeed	smoke and overload due to field flashover as residual field flux changes polarity	absorb more and more load due to decreased armature reaction
2313	A device which can be used to check the calibration of a circuit breaker is a ____.	portable low voltage high current testing unit	500 volt megohmmeter	standard digital multimeter	clamp-on voltmeter
2314	Excessive heat in an operating motor controller can result from ____.	low motor starting torque	missing arc chutes	a closed starter contact	loose connections
2315	Which of the listed conditions will occur if dirt and grease are allowed to accumulate between the commutator segments of a motor?	A dead short circuit.	Misalignment of the motor shaft.	A partial short circuit.	Overspeeding of the motor.

# MANAGEMENT ENGINE

2316	A split-phase induction squirrel-cage motor will not come up to speed ,even though the rated voltage, rated frequency, and rated load are supplied. The suspected trouble could be due to ____.	broken rotor bars	worn bearings	all choices are correct	a faulty centrifugal switch
2317	Which of the listed conditions might contribute to very rapid wearing of a DC machine's commutator bars?	Using improper grade of carbon brushes	A grounded commutator bar	Aligning the front and rear mica V -rings improperly	An open circuit in the armature
2318	If a single-phase induction fails to start, the problem may be ____.	an open in the main winding	a shorted shunt field	a closed centrifugal switch	low circuit frequency
2319	Voltage failure of an AC generator may be caused by ____.	high mica segments on the stator bus bar	a tripped bus circuit breaker	an open in the rotor field circuit	short circuit in the stator coils
2320	A loss of field excitation to an AC generator while operating in parallel will cause it to ____.	absorb more and more load due to decreased armature reaction	lose its load, begin to motorize, trip out on reverse power delay, and possibly overspeed	smoke and overload due to filed flashover as residual field flux changes polarity	lose its load due to the inherent speed droop built into the governor
2321	During maintenance of circuit breakers, ____.	never pass more than rated breaker current through the overload heater element	always apply a thin film of oil on contact surfaces	always smooth roughened contact surfaces with a file	inspect for wear and misalignment of main contacts

# MANAGEMENT ENGINE

2322	What is the caused of sparking of DC motor brushes?	An open commutating winding	An open interpole	Many mechanical, electrical or operating faults	A close interpole
2323	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 capacitance of the winding	an open in the winding being tested	weak batteries in the meter	the absence of current along the surface of clean insulation
2324	Regarding battery charging rooms, ventilation should be provided _____.	at the highest point of the room	horizontally near the batteries	only when charging is in progress	at the lowest point of the room
2325	The brushes in a generator must be positioned in the neutral plane to avoid sparking. Where is its proper position?	Between brushes and yoke	Between the brushes and the commutator	Attached to the field pole windings	Between brushes and Armature windings
2326	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
2327	To perform an insulation resistance test of an individual electric motor coil, the megohmmter should be connected to _____.	one end of the coil and the frame of the machine	armature brush pigtail and the input line lead	the input line lead and one end of the coil	both ends of the coil
2328	Periodic testing of circuit breakers is necessary to assure that a correct rated and properly installed unit ____.	will continue to provide the original degree of protection	can trip faster as it increases installed unit ____.	does not exceed its interrupting capacity	be able to withstand at least 125% of applied voltage
2329	A generator has been exposed to water and is being checked for its safe operation. Therefore, it is necessary to_____.	check for shorted coils with a growler	take moisture readings with a hydrometer	ground the commutator, or slip rings and run it at half load for 12 hours	test insulation values with a megger

# MANAGEMENT ENGINE

2330	To determine the state of charge of a wet cell nickel-cadmium battery, you should ____.	check no load voltage	check voltage under nominal load	use the constant specific gravity method	check the electrolyte with a hydrometer
2331	A hydrometer indicates specific gravity by comparing the ____.	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	mass of substance measured with the density of the same substance
2332	What might be the cause of abnormal temperature rise in an electric motor ball bearings?	Excessive load	Excessive speed	Excessive grease	Insufficient grease
2333	When a megohmmeter is used to test insulation, what is the caused of gradual rise of the pointer reading as a result of continued cranking?	The leakage of current along the surface of dirty insulation	The dielectric absorption effect of the insulation	The inductive reactance of the windings	Good conductor resistance
2334	While standing watch underway at sea in the engine room, there is a complete loss of electrical power. When power is restored, the steering gear pimp motor will ____.	have to reset before restarting	have to be restarted form the steering gear room	trip via the overload relay	restart automatically because it utilizes an LVR controller
2335	To determine the state of charge of a nickel-cadmium battery, you would use a/an ____.	potentiometer	voltmeter	hydrometer	ammeter
2336	A split-phase induction squirrel-cage motor will not come up to speed ,even though the rated voltage, rated frequency, and rated load are supplied. The suspected trouble could be due to _____. I. a faulty centrifugal switch II. broken rotor bars II. worn bearings	II and III only	I and II only	I, II and III	I only

# MANAGEMENT ENGINE

2337	The state of charge of a lead-acid battery is best indicated by the ____.	electrolyte specific gravity	individual cell voltage	ampere-hour capacity	total cell voltage
2338	Which of the following problems is indicated if a lead-acid battery begins to gas violently when it is first placed on charge?	insufficient compartment ventilation is being provided	a short circuit exists in one of the battery cells	The battery is undergoing its normal charging rate	An excessive charging rate is being applied to the battery
2339	Moisture absorbed in the winding or condensed on the surface of electrical machinery insulation ____	reduces the amount of current supplied or drawn by the machine so horsepower is limited	lowers insulation value and is a common cause of fault grounds in the idle machines	Will enhance insulation resistance only if it is fresh water and contains no salt	is good for long term preserving since most insulation is organic and contains some amount
2340	The specific gravity of the electrolyte solution in a lead acid battery ____.	gives an indication of the state of charge of the battery	remains the same during discharge	is not effected during charging	would read close to 1.830 when discharged

# MANAGEMENT ENGINE

2341	What might be the cause if the electric motor on an electric driven compressor fails to start?	Control line leak	Leaking unloader	Tripped circuit breaker	Defective pop valve
2342	Which of the listed conditions could indicate the need for cleaning electrical insulation?	Low operating temperature	Low megger readings	Low ambient temperature	High dielectric strength
2343	If a magnetic controller contactor fails to pick up when the operating coil is energized, one possible cause may be ____.	dirty contact faces	the residual magnetism of the contact force	low spring pressure	low voltage to the coil
2344	The type of feature afforded auxiliaries vital to the operation of propelling equipment, where automatic restart after a voltage failure would not create a hazard, is termed ____.	low voltage protection	high amperage release	high amperage protection	low voltage release

# MANAGEMENT ENGINE

2345	Relative to the secondary winding of a step-up transformer, the primary winding will have_____.	Fewer turns	More turns	Half as many turns	Twice as many turns
2346	An open occurring within the field rheostat of an AC generator can be detected by short circuiting its terminals and observing a_____.	negative deflection of the wattmeter pointer	positive deflection of the wattmeter pointer	buildup of alternator voltage	low, but constant alternator voltage
2347	Which of the following precautions should be taken when troubleshooting various power circuits using an electronic solenoid type voltage tester?	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	Always verify that the power source frequency is compatible with the instrument before using it to troubleshoot electrical equipment	Never connect the device to circuits where potentials are greater than 120 volts	Never use the tester on circuits of 60 Hz, as the tester may not register the voltage
2348	An open shunt field in a direct current machine may be located by connecting the field circuit to an external power source, equal to the rated field voltage or less, and tested with a voltmeter from_____.	any suitable ground to any available line lead	one line terminal to each coil lead in succession	any field pole to each field coil lead	one field coil to each adjacent field coil in turn
2349	Motor starter or controller contacts may become welded together if the contacts_____.	close under excessive starting current	open or close too quickly	open too quickly and arc	close under excessive pressure
2350	Motor controller or started contacts may become pitted and welded together if the contacts_____.	close quickly with proportionate pressure	open under loaded conditions	open too quickly and arc	close slowly with light pressure

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2351	A three-phase, induction motor experiences an open in one phase. Which of the listed automatic protective devices will prevent the machine from being damaged?	Overspeed trip	Three-pole safety switch	Magnetic blowout coil	Thermal overload relay
2352	The function of a fuse breaker is to isolate the defective circuit from the system so as to protect it from _____.	Overcurrent	Overload	Overvoltage	Close circuit
2353	What is the use of commutators and brushes in DC generators?	Supply a small voltage to the commutating poles	Provide a path for transient currents in the armature	Convert the induced sine wave to DC output	Maintain the proper frequency to the external circuits
2354	Two paralleled alternators are operating near rated load. If one trips out mechanically, which of the listed actions should be taken FIRST?	Strip the board of all nonvital circuits.	Restart the tripped machine immediately.	Start the emergency generator.	Transfer all vital loads to the emergency bus.
2355	Moisture accumulating in electric motors and generator windings having a cold insulation resistance greater than 50,000 ohms may be baked out with internal heat. This heat can be developed by _____.	feeding current into the windings at low voltage	short circuiting the field windings and passing current through the armature	obtaining current from a DC source such as an electric welder and feeding it into the armature while running the motor at full speed	short circuiting the armature and field windings
2356	A single-phase induction motor starts, comes up to about 75% rated speed, slows down to a lower speed, and accelerates again. The problem is most likely in the _____.	starting winding	running centrifugal switch	starting capacitor	running winding
2357	Which of the following methods should be used to test for an 'open' coil in an AC motor stator?	Test with an ohmmeter, one test lead on the shaft, and the other test lead to the stator leads.	Use a growler, listening for noise and vibration to diminish when over an open coil.	Test with an ohmmeter with the test leads on the disconnected stator coil leads.	Use a growler, listening for noise and vibration to increase when over an open coil.
2358	The state of charge of a lead-acid storage battery is best indicated by the _____.	ampere hour capacity of the battery	specific gravity of the electrolyte	testing of the individual cell voltages	total cell voltages

# MANAGEMENT ENGINE

2359	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
2360	An alternator 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 paralleled with the bus?	a portable phase sequence indicator must be used to verify the information from the lamps	The breaker should be closed when the synchronizing lamp is dark and the other is bright	The breaker should be closed when both synchronizing lamps are bright	The frequency meter should be used to determine that the incoming alternator frequency is slightly higher than the bus
2361	Which of the following problems will most likely occur if the starting winding of a split-phase induction motor failed to cutout once the motor was in continuous operation?	The motor will run at a reduced speed	A time delay will stop the motor	The winding will burn out	The motor will overspeed
2362	A short in the shunt field of a DC motor is best located by_____.	visual inspection of the commutator	applying AC voltage to each field coil and measuring the voltage drop across each field coil	isolating each coil from the others and using a megohmmeter	using a growler and hacksaw blade

# MANAGEMENT ENGINE

2363	Routine maintenance of dry-type transformers should include ____.	cleaning the windings if accessible with a vacuum cleaner or very low pressure air	making sure that the units are close to bulkheads or corners to protect them from damage	periodic cleaning of the winding insulation with an approved solvent	measuring and recording the winding temperature with an accurate mercury thermometer
2364	Which of the following precautions should be taken when troubleshooting various power circuits using an electronic voltage tester?	Always check a known power source of the same type and voltage before using it to troubleshoot electrical equipment	Never use this tester on circuits greater than 60 HZ as the tester may not register	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
2365	What is the purpose of thermal strip heaters provided in DC main propulsion motors?	To prevent the rotor from warping	To provide an additional means of starting resistance	To prevent moisture buildup in windings	To maintain a relatively constant temperature in the motor enclosure
2366	Why should high pressure compressed air not be used to clean electric motors or controller equipment?	The surrounding area may need additional cleaning	A mask and respirator would be required	It may embed metallic particles into coil insulation	The air blast dries out insulation quickly

# MANAGEMENT ENGINE

2367	On large generators space heaters are used to _____.	maintain rotor and stator winding temperature above the dew point to prevent the formation of condensation	prevent electrolytes due to condensation in the bearings	keep the machine at ambient temperature of the machinery space	prevent condensation in the lube oil
2368	Which of the following statements concerning the general maintenance of a brushless generator is correct?	High pressure air should be used to blow out carbon dust	Paint should be applied to insulating surface on an annual basis	Hot soapy water should be used to remove dust and grime from windings	Accessible generator parts should be wiped with a clean dry rag on a periodic basis
2369	Which of the following statements concerning the maintenance of solid-silver contacts in relay and auxiliary control circuits is correct?	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	When necessary they should be spray painted with electrical shellac
2370	While standing at sea watch onboard a DC diesel-electric drive ship you notice sparking of the brushes on the DC drive motor. You should first_____.	trip the circuit breaker for that motor	immediately take a megger reading on the motor	do nothing as this is normal	notify the bridge that you will need to slow down

# MANAGEMENT ENGINE

2371	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.	Disconnect the brush pigtails from their contacts and circulate air through the units.	Lift the brushes from commutator collector rings and circulate cool dry air through the units.	Disconnect the brush pigtails from their contacts and discharge carbon dioxide into the units to keep them dry.
2372	Which of the following statements is true concerning the operation of modern marine electric drive DC propulsion motors?	The cycloconverter is used to increase the voltage applied to the motor until it reaches the desired speed	The silicon - controlled rectifiers in the power converter are used to control the voltage and current applied to the motor armature	The rotor follows the frequency and phase sequence rotation of voltage applied to the motor until it reaches the desired speed	The source and load converters respond to a small reference voltage increasing the frequency applied to the motor until it reaches the desired speed
2373	Which of the methods listed is used to maintain the division of load between two compound-wound DC generators operating in parallel?	The shunt field rheostat are interconnected	The series fields of both generators are connected in series	The equalizer connection parallels the series fields of all machines	The shunt fields are interconnected
2374	The pitting of controller contacts can be caused by _____.	insufficient contact pressure	excessive spring pressure	all of these choices	continuous motor overload
2375	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

# MANAGEMENT ENGINE

2376	If a 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 _____.	eliminate the individual circuits one by one until the ground detecting system no longer indicates any grounds	examine the main bus bars for signs of overheating	change over generators	check each circuit with a megohmmeter
2377	Before working on an electric cargo winch on master switch or controller you should _____.	drain condensate from the box	spray the gasket surface with a solvent	open the circuit breaker in the power supply and tag-out	heat the switch box to remove any moisture
2378	The good characteristics of an auto transformer as compared to other types of transformer are _____ I - _____ II and III Efficiency is extremely high II - Short circuit current is high III - Physical size is very small		I II and III	I and II	I and III
2379	An AC diesel generator incapable of being paralleled with the main bus normally employs an isochronous governor in order to _____.	increase or decrease engine speed upon load demand	increase speed droop in proportion to load	prevent attempts to parallel	maintain a frequency of 60 cycles per second
2380	A self-excited DC generator fails to come up to its normal 440 volts. The cause may be _____.	low armature speed	low rheostat resistance	excessive brush tension	excessive residual magnetism
2381	Which equipment should be checked visually for cleanliness and all contacts checked for burning overheating wear erosion and misalignment?	Oil mist Detector	Ship Ring	Circuit Breaker	Safety Valve
2382	An increase output voltage from AC generators is obtained most practically by increasing the _____.	Number of turns in the armature coils	prime mover speed	size of the exciter generators	current to the magnet coils

# MANAGEMENT ENGINE

2383	Main engine room console alarms are to be of the self monitoring type, meaning that an open circuit to a particular alarm circuit will _____.	secure power to the indicator	cause an alarm condition	automatically reclose within 10 seconds	secure power to the monitoring device
2384	Electrically operated machinery should be isolated from which of the following?	Power-Supply	Indication Lamp	Power Chief	Supply Air
2385	A generator has been exposed to water and is being checked for its safe operation. Therefore, it is necessary to _____.	check for shorted coils with a growler	take moisture readings with a hydrometer	Check insulation	test insulation values with a megger
2386	If a shipboard AC generator experiences voltage failure, the cause may be due to _____.	missing slip ring	an open in the rotor field circuit	a rotating slip ring	excessive locked-rotor current
2387	When you use a megohmmeter to test insulation, good insulation will be indicated by _____.	a gradual rise in the pointer reading at the outset	no movement from the pointer reading	a downward dip followed by gradual climb to the true resistance value	slight kicks of the neesle down scale
2388	The minimum permissible resistance value of an electric motor is _____.	0.4 megohm	1.0 megohm	0.6 megohm	0.2 megohm
2389	Most generators can withstand an overload of _____.	25 percent	30 percent	35 percent	15 percent

# MANAGEMENT ENGINE

2390	A device which can be used to check the calibration of a circuit breaker is a ____.	clamp-on voltmeter	standard digital multimeter	portable low voltage high current testing unit	500 volt megohmmeter
2391	Generators are designed for an ambient temperature of _____.	150 F	75 F	100 F	50 F
2392	The type of circuit that does not provide a complete path for the flow of current.	an open circuit	as series circuit	a grounded circuit	a closed circuit
2393	Excessive heat in an operating motor controller can result from ____.	low motor starting torque	loose connections	missing arc chutes	a closed starter contact
2394	To effectively clean a commutator in good physical condition, you should use ____.	a commutator stone	trichloride ethylene	a canvas wiper	kerosene
2395	What is the effect if dirt and grease are allowed to accumulate between the commutator segments of a motor?	Overspeeding of the motor	Misalignment of the motor shaft	A dead short circuit	Partial short circuit
2396	A split-phase induction squirrel-cage motor will not come up to speed ,even though the rated voltage, rated frequency, and rated load are supplied. The suspected trouble could be due to ____.	all choices are correct	broken rotor bars	worn bearings	a faulty centrifugal switch
2397	The type of circuit that has infinite resistance is called ____.	All of the options	a short	a ground	an open

# MANAGEMENT ENGINE

2398	When insulation failure produces a low resistance current path between two conductors, the resulting condition is called _____.	a short circuit	a ground	a surge	an open
2399	Which of the listed conditions might contribute to very rapid wearing of a DC machines commutator bars?	An open circuit in the armature	Aligning the front and rear mica V-rings improperly	A grounded commutator bar	Using improper grade of carbon brushes
2400	If only one brush on commutator is sparking excessively, what should you look for?	A high commutator bar	Copper imbedded in the brush	a loose commutator bar	flux in the commutating zone
2401	Sustained high temperature in lead-acid batteries causes _____.	a breakdown of the water	increased current	a lower specific gravity	lead sulphate
2402	One diode of a full-wave rectifier has burned out in a shorted condition. Therefore, the output will be _____.	a rectified full-wave	zero	equal to the AC input	a rectified half-wave
2403	What will you use to avoid AC generator circuit malfunctions due to prime mover power loss?	reverse current relays	a separate battery backup	main bus disconnect links	reverse power relays
2404	Under what situation should you NOT permit an electrical cable bus from doing?	a service	concealed work	exposed work	branch circuits

# MANAGEMENT ENGINE

2405	If a single-phase induction fails to start, the problem may be ____.	an open in the main winding	a shorted shunt field	low circuit frequency	a closed centrifugal switch
2406	Voltage failure of an AC generator may be caused by ____.	a tripped bus circuit breaker	high mica segments on the stator bus bar	an open in the rotor field circuit	short circuit in the stator coils
2407	To test if rectifier is good or bad, its forward and reverse resistance are measured. A good rectifier has a reading of _____.	above 1500 ohm	above 1000 ohm	above 100 ohm	above 10 ohm
2408	A loss of field excitation to an AC generator while operating in parallel will cause it to _____.	lose its load, begin to motorize, trip out on reverse power relay, and possibly overspeed	absorb more and more load due to decreased armature reaction	lose its load due to the inherent speed droop built into the governor	smoke and overload due to field flashover as residual field flux changes polarity
2409	The equipment not fitted to the generator trouble detecting system	ACB abnormal trip indicator	Overcurrent trip device	ACB non-close indicator	Overvoltage trip device
2410	Any restriction in the instrument air piping of a pneumatic control system will _____.	Increase the transmitted air signal intensity	reduce the transmitted air signal value	accelerate transmission of the air signal	delay transmission of the air signal
2411	What is the source of electrical failures in motors caused by the breakdown of insulation?	dirt overheating and penetration of moisture	accumulation of dirt	penetration of moisture	overheating

# MANAGEMENT ENGINE

2412	What is the outcome when a lead-acid storage battery being discharged?	Both plates change chemically to ammonium chloride	Acid becomes weaker	Acid becomes stronger	Hydrogen gas is liberated
2413	Common nickel-cadmium and nickel-iron storage batteries utilize _____.	acid secondary cells	alkaline secondary cells	acid primary cells	alkaline primary cells
2414	The proper way to mix the electrolyte for a battery is to add _____	acid to alkaline water	acid to distilled water	alkaline water to acid	distilled water to acid
2415	When charging a nickel-cadmium battery, _____.	overcharging should be avoided	add distilled water just prior to charging to insure proper mixing	the specific gravity of the electrolyte will be unaffected by the state of charge	the charging rate should lessened when gassing commences
2416	When a nickel-cadmium battery begins gassing while connected to the battery charging circuit, you should _____.	increase the charging rate	add potassium hydroxide to each cell to increase the specific gravity of the electrolyte	add distilled water to each cell reduce the specific gravity of the electrolyte	do nothing as this is a normal condition when charging
2417	Commutating windings in D.C. motor construction are wound on _____.	interpoles	adjacent main poles	opposite main poles	the rotor core
2418	Which of the following is the function of a voltage regulator of a direct current generator ?	Lowering the armature circuit resistance	Increasing the compensating field resistance	Varying the shunt field resistance	Adjusting the voltage

# MANAGEMENT ENGINE

2419	Why is there a need for maintenance of transformer?	Testing of insulation resistance	Testing of insulation resistance	Air tightness seal	Maintain conductive operation
2420	What do common nickel cadmium and nickel iron storage batteries utilize?	Acid primary cells	Alkaline secondary cells	Acid secondary cells	Alkaline primary cells
2421	An important factor in reducing DC motor commutator wear is _____.	All of these choices	Keeping the ambient temperature as low as possible	Ensuring a very low brush current density	Establishing the copper oxide surface film
2422	Discoloration of the motor bars in a squirrel-cage motor is typical evidence of _____.	Overheating	All of these choices	Moisture	Vibration
2423	On a main switchboard, if all three ground detection lamps burn with equal intensity when the test button is depressed, which of the listed conditions is indicated?	the voltage to the dark lamp is less than that of the system	The bulbs are operating properly	All three phases are grounded	there are grounds in two of the three phases
2424	In preparing to take insulation resistance readings on a main generator, why is there a need to ground the windings for about 15 minutes prior to the test?	Help the windings to cool to ambient temperature	Help the windings to cool to the same temperature as the ground test connection	Allow accurate zeroing of the meter	Release any residual capacitive charge from the windings
2425	What is the function of the capacitance in an AC circuit?	Rectify the current	Allow current flow in the only one direction	Oppose any change in the circuit voltage	Stop current flow once the capacitors is fully charged
2426	Why is it necessary to reduce the charging rate of a lead-acid battery when it is near full charge?	Reduce lead sulfate deposits	Increase lead peroxide formation	Prevent damaging battery plates	Allow equalization of cell voltages

# MANAGEMENT ENGINE

2427	From among the choices, when precise speed control and varying load are needed, what should be used?	Electronic motor	Direct current generator	Alternating current generator	All of the above
2428	Which of the following is the most important during maintenance of circuit breakers?	Never pass more than rated breaker current through the overload heater element	Always smooth roughened contact surfaces with a file	Inspect for wear and misalignment of main contacts	Always apply a thin film of oil on contact surfaces
2429	The RPM of an AC generator can be measured with a/an _____.	vibrating reed meter	voltmeter	synchroscope	ammeter
2430	To determine if a stator coil is grounded, you should use a/an _____.	ammeter	megger	ground detection lamp	magneto
2431	Which of the meters listed should only be used after a circuit has been electrically de-energized?	Wattmeter	Ammeter	Ohmmeter	Frequency meter
2432	The charge of an alkaline battery can be determined with _____.	Ammeter	Voltmeter	Potentiometer	Hydrometer
2433	Which of the following electrical instrument is the safest to use in taking the current even without switching off or opening the circuit?	Ammeter	Multi tester	Meager tester	Clamp meter
2434	The Wheatstone bridge is a precision measuring instrument utilizing the principle of changes in _____.	inductance	amperage	resistance	capacitance

# MANAGEMENT ENGINE

2435	The voltage of a battery is equal to the _____.	Voltage of single cell times the number of cells in the series	Amperage of single cell times the number of cells in the series	Efficiency of the number of cells times the resistance	Voltage of a single cell times the number of cell in parallel
2436	What specifies the state of charge of a lead-acid storage battery?	Total cell voltage	Specific gravity of the electrolyte	Testing of the individual cell voltages	Ampere-hour capacity of the battery
2437	Which of the following devices are protected from being motorized by a reverse-power relay?	Amplidyne	Wave guides	Alternators	Exciters
2438	Electrical circuits are protected against overheating by means of a/an ____.	circuit breaker	amplifier	capacitor	diode
2439	What are the compositions of solders?	An alloy of silicon and selenium	An alloy of beryllium and antimony	An alloy of copper and lead	An alloy of tin and lead
2440	What do you plug into a flame jack to test a flame control scanner?	A micro ammeter	An ammeter	An ohmmeter	A voltmeter
2441	What prevents the diesel driven emergency generator from being paralleled with the ships service generators?	An electrical interlock system	he reverse current relay	The synchronizing oscilloscope	An automatic paralleling trip switch

# MANAGEMENT ENGINE

2442	For routine cleaning of a commutator, you should apply ____.	a fine tooth file to the commutator while running	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
2443	What could be the result of an increase in clearance between reaction blade tips and the turbine casing?	increase in rotor vibration	an increase pressure drop across the blades	a decrease in rotor torque	an increase in rotor thrust load
2444	If you disconnect a conductor cable, an indicated ohmic value between the ends of a single conductor would indicate _____.	the presence of partial ground	continuity of the conductor	an infinite resistance	that the conductor is not short circuit
2445	An open primary coil in a simple transformer will be indicated by which of the listed conditions?	No voltage on the output of the secondary coil.	An infinite resistance value on the secondary coil.	Low resistance value on the primary coil.	Overloaded secondary coil.
2446	Which of the following is used to obtain 115 volt DC from a 240-volt DC generator _____.	a balance relay	a balance coil	None of the stated options	an inverter
2447	When insulation failure produces a low resistance current path between two conductors, the resulting condition is known as ____.	a surge	an open	a short circuit	a ground

# MANAGEMENT ENGINE

2448	Which of these is the sign of sparking at the brushes of a running motor?	Many mechanical, electrical or operating faults	All of these choices	An open commutating winding	An open interpole
2449	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 ____.	weak batteries in the meter	an open in the winding being tested	the absence of current along the surface of clean insulation	the capacitance of the winding
2450	Polarization of a cell supplying electrical energy is caused _____.	formation of hydrogen gas on its positive plate	an opposing EMF set up in the cell	an alternating of material of the electrode	gradual increase in concentration of the electrolyte
2451	When checking the specific gravity of battery electrolyte with a hydrometer, which of the following statements is true?	The hydrometer reading will be inaccurate if taken immediately after water is added to the cell	Temperature has no effect on hydrometer readings	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
2452	What should be done FIRST when testing for blown fuses in a three-phase supply circuit to a motor?	Apply the megger across the tops of the line fuses	Ensure the circuit is de-energized, and then use a continuity tester	All of the above	Apply an ammeter diagonally across the top of the first line fuse and the bottom of the third line fuse
2453	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	secure the electrical supply	apply foam extinguisher

# MANAGEMENT ENGINE

2454	What is the proper way to apply plastic electrical tape to an electric cable splice?	apply the tape in one non-overlapping layer only	apply tape to the braided cover, but avoid touching it	heat the tape with a soldering iron for good bonding	wind the tape so that each turn overlaps the turn before it
2455	What should do first when testing for blown fuses in a three-phase supply circuit to a motor?	Ensure the circuit is de-energized, and then use a continuity tester	Apply the megger across the tops of the line fuses	Apply an ammeter diagonally across the top of the first line fuse and the bottom of the third line fuse	None of the above
2456	When required to work in an area where explosive gases may accumulate, you should use hand tools which are _____.	fixed with a ferrous cover	high carbon steel	approved by the Coast Guard	nonferrous
2457	Describe how to make an insulation resistance test? Connect one terminal of the megger to the winding and the other to _____.	frame of the machine	variable resistor	armature	power supply
2458	Before testing insulation with a megohmmeter, the windings of large machines should be grounded for about 15 minutes prior to the test, because the _____.	armature will have a greater number of leakage paths	static charge of the machine may give a false reading	insulation may be damaged	insulation may be covered with moisture
2459	The brushes in a generator must be positioned in the neutral plane to avoid sparking between the brushes and the _____.	Armature windings	Field pole windings	Commutator	Yoke

# MANAGEMENT ENGINE

2460	Part of the insulation of practically all electrical machinery is in the form of organic compounds which contain some amount of ____.	water	asbestos	fibre	plastic
2461	How is the trickling charge of battery is being carried - out as the standard procedure for maintaining the charge in an emergency diesel starting battery?	At least once each week	Continuously	Whenever the charge falls to 75% of full charge	Whenever the electrolyte specific gravity falls to 1.250 or lower
2462	The brushes in a generator must be positioned in the neutral plane to avoid sparking. Where is its proper position?	Between brushes and Armature windings	Between the brushes and the commutator	Between brushes and yoke	Attached to the field pole windings
2463	When do you consider a lead-acid battery fully charged?	Electrolyte gasses freely	Terminal voltage reaches a constant value at a given temperature	Battery charger indicates a positive reading	Specific gravity of all cells reaches the correct value and no longer increases over a period of 1 to 4 hours
2464	Violent gassing from a lead-acid battery while it is being charged, indicates that the ____.	battery compartment ventilation is inadequate	plate separators are grounded	charging rate us too high	electrolyte specific gravity is too low
2465	Before touching a small capacitor connected to a de-energized circuit, or even one that is completely disconnected, you should ____.	short circuit the terminals to make sure that the capacitor is discharged	be equipped with an insulated fuse puller	tag it with a de-energized tag	gently tap the body with a screwdriver
2466	A nickel-cadmium battery receiving a normal charge and gases freely. What should the charging current be?	Remain the same	Decrease	Increase	Cut off and the battery allowed to cool

# MANAGEMENT ENGINE

2467	When a lead-acid battery begins gassing freely while receiving a normal charge, What should the charging current be?	Increase	Remain unchanged	Shut off	Decrease
2468	What will be the outcome in an alternator if field excitation is suddenly lost when operating in parallel?	operate at the same load, but with reduce voltage	become overloaded and slow down	lose its load and tend to overspeed	supply excessive current to the bus
2469	Which of the following represents the accepted method of cleaning dust and foreign particles from electrical equipment while limiting damage to electric components?	Using carbon tetrachloride as cleaning solvent to clean the components	Using vacuum cleaner to remove debris from the components	Carefully using soft copper bristle brush	Blowing a high velocity stream of compressed air rapidly across the components
2470	Controller contacts should be routinely cleaned by_____.	wiping with a clean dry cloth	blowing with compressed air	filing with a bastard file	dressing with crocus cloth
2471	What to look for it if an electric motor fails to starts is _____.	broken discharge unloader	leaking discharge valve	jammed suction valve	tripped overload relay
2472	Load is added and motor cannot attained rated speed. What might be the problem?	Broken part of rotor	Bearing failure	Broken part of stator	Centrifugal switch
2473	How can a chattering of the slip ring brushes on a generator be rectified?	Brush holders lubrication	Reinsulating the brushes	Increasing the length of pigtail	Cleaning the slip rings
2474	To adjust the voltage generated by a constant speed DC generator, what would you change?	Slip rings	Stator	Field current	Brushes
2475	Which of the following would you not normally find on a DC generator?	Slip rings	Brush holder	Binding wires	Air gap

# MANAGEMENT ENGINE

2476	The effects of induce electromotive force in a DC generator are neutralized by the _____.	brushes	armature windings	armature reaction	commutating poles
2477	Reserve buoyancy is _____.	also called GM	the watertight portion of a vessel above the waterline	affected by the number of transverse watertight bulkheads	the void portion of the ship below the waterline which is enclosed and watertight
2478	A vessel is tender if cargo weight is _____.	concentrated low and the double bottoms empty	evenly distributed vertically with the double bottoms full	concentrated and with the double bottoms full	concentrated high and the double bottoms empty
2479	The purpose of the inclining experiment is to _____.	determine the lightweight center of gravity location	verify the hydrostatic data	determine the location of the metacenter	verify data in the vessel's operating manual
2480	Metacentric height is an indication of a vessel's stability _____.	all of the above	for small angles of inclination	for all angles of inclination	for large angles of inclination
2481	Transverse stability calculations require the use of _____.	hydrostatic curves	hog or sag calculations or tables	general arrangement plans	cross-sectional views of the vessel
2482	Which statement is true regarding the free surface effect?	It decreases at increased angles of heel due to pocketing when a tank is 90% full.	In practice, the correction is considered to be a virtual reduction of KG.	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.

# MANAGEMENT ENGINE

2483	Which will be a result of removing on-deck containers?	KG will increase	Reserve buoyancy will decrease	KB will increase	Metacentric height will increase
2484	In order to minimize the effects of a tender vessel, when carrying a cargo of lumber, you should _____.	keep the vessel's frame spaces free from lumber	distribute lumber so that those stowing most compactly per unit of weight are in the upper holds	maximize your deck load	place the heaviest woods in the lower holds
2485	Which is an indication of reserve buoyancy?	Righting moment	Metacentric height	Rolling period	Freeboard
2486	Which action will affect the trim of a vessel?	All of the above	Moving a weight forward	Adding weight at the tipping center	Moving high weights lower
2487	If a vessel is sagging, what kind of stress is placed on the sheer strake?	Compression	Tension	Thrust	Racking
2488	What will happen when cargo is shifted from the main deck into the lower hold of a vessel?	All of the above	The metacenter will move upward	The center of buoyancy will move upward	The GM will increase.
2489	What do you call the curvature of deck in a longitudinal direction measured between the deck height at midships and the particular point on the deck?	Sheer	Tumblehome	Rake	Flare

# MANAGEMENT ENGINE

2490	A special grade steel with an "H" marking is used by the classification societies to denote _____.	hot rolled steel	higher tensile steel	hot area/surface	higher value
2491	What do you call the curvature of deck in a longitudinal direction measured between the deck height at midships and the particular point on the deck?	Tumblehome	Rake	Sheer	Flare
2492	A special grade steel with an "H" marking is used by the classification societies to denote _____.	higher value	higher tensile steel	hot area/surface	hot rolled steel
2493	The Torrey Canyon grounding off the coast of the United Kingdom in 1967 spilled more than how much quantity of oil into the sea _____.	80,000 MT	120,000 MT	100,000 MT	60,000 MT
2494	In the absence of external forces, where is the center of gravity of a floating vessel is located?	Above the center of flotation	Directly above the geometric center of the displaced volume	Above the metacenter	Amidships
2495	Stability is determined principally by the relationship of the center of gravity and the _____.	keel	aft perpendicular	center of flotation	center of buoyancy
2496	Which abbreviation represents the height of the center of buoyancy?	KB	CB	BM	BK

# MANAGEMENT ENGINE

2497	The water in which a vessel floats provides vertical upward support. What do you call the point through which this support is assumed to act?	Center of buoyancy	Center of flotation	Center of effort	Center of gravity
2498	What do you call the center of volume of immersed portion of the vessel?	Metacentric height	Center of gravity	Center of buoyancy	Center of flotation
2499	In small angle stability, when external forces exist, the buoyant force is assumed to act vertically upwards through the center of buoyancy and through_____.	metacentric height	center of flotation	center of gravity	metacenter
2500	Longitudinal stability indicates the tendency of a ship to resist a_____.	change in mean draft	change in list	change in the period of roll	change in trim
2501	The inner bottom of a ship is the_____.	compartment between the tank top and skin of the ship	factor of safety involved with the hog and sag characteristics of the hull	watertight boundary formed by the skin of the ship	doubler plating installed over the flat keel plate
2502	For an upright vessel, draft is the vertical distance between the keel and the_____.	Plimsoll mark	waterline	amidships section	freeboard deck
2503	If fuel oil is taken from only the starboard tanks, what will happen to the the ship?	List to port	List to starboard	Trim by the stern	Go down by the head
2504	In merchant ship construction, what is the term 'scantlings' refers to?	Designed size of the beams, stiffeners, and shell plating	Hull girder strength in terms of the standard model	ICE strength classification of the hull	Doubler plating installed over the flat keel plate
2505	Vessel bilge keels are designed primarily for what purpose?	Provide strengthening of the bilge plating through the mid-body	Reinforce the bilge knuckle in way of double bottom tanks	Assist in reducing rolling	Improve vessel steering response

# MANAGEMENT ENGINE

2506	What is the result of flooding of any compartment in a ship, resulting in a serious loss of reserve buoyancy?	Decrease the heeling moment	Cause a serious permanent list	Reduce ship stability	Increase ship stability
2507	With regards to metacentric height, which of the following statement is true?	It is measured vertically above the center of buoyancy.	Its determination is the objective of the inclining experiment.	It is located below the center of buoyancy.	It is used to indicate the quality of initial stability.
2508	A vessel should normally behave as if all of its weight is acting downward through the center of gravity and all of its support is acting upward through the _____.	center of buoyancy	tipping center	amidships section	keel
2509	Which of the listed initials is used to represent the indicator of initial stability?	GM	KM	GZ	KG
2510	The quality of initial stability is indicated by _____.	GM	KM	Deck load	Maximum allowed KG
2511	A stiff wind has caused a difference to occur between the port and starboard drafts. What do you call this condition?	Trim	Flotation	Heel	List
2512	Pitching is angular motion of the vessel about which axis?	Longitudinal	Transverse	Vertical	Centerline
2513	Yawing is the angular motion of the vessel about what axis?	Centerline	Transverse	Longitudinal	Vertical
2514	Pitching is the rising and falling motion of the bow of a ship oscillating about what axis?	Centerline	Transverse	Longitudinal	Vertical

# MANAGEMENT ENGINE

2515	The value of the maximum righting arm is dependent upon the position of the center of buoyancy and the _____.	transverse center of gravity	longitudinal center of gravity	vertical location of the center of gravity	downflooding angle
2516	What is the stability term for the distance between the center of gravity (G) to the Metacenter (M)?	Metacentri height	Metacentric radius	Height of the metacenter	Righting arm
2517	What is termed as horizontal fore and aft motion of a vessel while underway?	Surge	Sway	Pitch	Roll
2518	What do you call the angular movement of a vessel about a horizontal line drawn from its bow to its stern?	Swaying	Heaving	Pitching	Rolling
2519	When flooding occurs in a damaged vessel, what happened to the reserve buoyancy?	Remains the same	Shifts to the low side	Decrease	Increase
2520	While on a voyage, the vessel's master observed that the vessel touched bottom, what should he immediately do?	Request for drydocking	File a marine protest and underwater examination	Request for divers	Request for surveyor
2521	Many uninspected vessels require load lines to indicate the maximum _____.	reserve buoyancy under any condition	freeboard for the light ship displacement	amidship's draft to which a vessel can be lawfully submerged	angle of reduced freeboard for subdivision calculations
2522	The construction of vessel made of steel should have a grade in accordance with what guidelines?	Rules of the classification society	Rules of the shipyard	Shipping law	Admiralty law

# MANAGEMENT ENGINE

2523	The construction of vessel made of steel should have a grade in accordance with the _____.	Grade steel certificate	Rules of the shipyard	Rules of the classification society	Rules of S.M.E. Code
2524	What is the purpose of swash bulkheads?	Used whenever the 'gray' water drain system connection is located in a bulkhead	Reduce liquid movement and surging within a tank	Restrict flooding within a tank	Separate cargoes in a common tank
2525	What do you call a vessel having a concentration of weight toward the top of the vessel?	Neutral	Stiffbuoyant	Stiff	Tender
2526	Angular motion about the vertical axis of a vessel is known as _____.	surge	hog	yaw	roll
2527	What effect will transferring fuel oil from #1P double bottom to #3P double bottom have on the trim of a vessel?	The mean draft will increase.	The after draft will decrease.	The mean draft will decrease.	The forward draft will decrease.
2528	What is the usual effect of moving weight from low in the vessel to above the main deck?	The draft is increased.	The stability is increased.	The reserve buoyancy is decreased.	The stability is decreased.
2529	What is the usual effect of moving weight from the main deck to a position lower in the vessel?	The stability of the vessel is increased.	The vessel will list in proportion to the volume of the cargo shifted.	The stability of the vessel is significantly decreased.	The trim of the vessel is increase.
2530	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 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	all cofferdams, double bottoms, and wing tanks that are slack
2531	Why are helical gears preferred over spur gears for reduction gear units?	They produce less noise and vibration	They prevent torsional stress	They eliminate pinion deflection	Easier to lubricate at high speed
2532	What do you call a distance between the bottom of the hull and the waterline?	Tonnage	Reserve buoyancy	Freeboard	Draft
2533	Rolling is the angular motion of the vessel about what axis?	Centerline	Longitudinal	Transverse	Vertical

# MANAGEMENT ENGINE

2534	Reserve buoyancy is the _____.	difference between buoyancy in salt and fresh waters	excess of the buoyant force over gravitational force	volume of intact space above the waterline	unoccupied space below the waterline
2535	What is the condition of a vessel trimmed down by the bow?	Greater draft aft than forward	Zero trim	Low mean draft	Greater draft forward than aft
2536	A vessel would most likely develop a list if you were_____.	using water from two equally sized tanks on either side of the centerline simultaneously	burning fuel from the centerline tank	using water from the fore peak tank	using fuel from tanks on the port side only
2537	If a vessel loses its reserve buoyancy it will_____.	most likely sink	float upright with the main deck awash	capsize and float on its side	remain unaffected if the hull remains intact
2538	In the absence of external force adding weight to one side of a floating vessel will cause the vessel to_____	list until the center of buoyancy is aligned vertically with the center of gravity	trim to the side opposite TCG until all moments are equal	heel until the angle of loll is reached	decrease draft at the center of floatation
2539	Where should you expect to find striking plates on liquid storage tanks?	On the cofferdam manhole	Under the counter above the propeller blade tips	In the bow of the ship at the waterline	On the bottom of a fuel or ballast tank under the sounding tube
2540	If additional weight is placed on the main deck of the vessel shown in the_____.	K will rise	G will rise	KB will go down	GM will increase
2541	Heave is the motion of a vessel along the_____.	centerline axis	longitudinal axis	vertical axis	transverse axis
2542	The value of the maximum righting arm is dependent upon the position of the center of buoyancy and the_____.	position of the center of gravity	longitudinal center of waterplane area	transverse center of waterplane area	downflooding angle
2543	When a vessel is floating upright the distance from the keel to the metacenter is called the_____.	height of the baseline	height of the metacenter	metacentric differential	righting arm

# MANAGEMENT ENGINE

2544	The horizontal distance between the vertical lines of the gravitational and buoyant forces is called the_____.	height of the center of buoyancy	metacentric radius	righting arm	metacentric height
2545	If a vessel rolls to the starboard side and there are no movable or moving weights onboard the center of gravity will_____.	stay in the same position	move directly down	move to starboard	move to port
2546	Portable power hand tools are usually grounded to the_____.	switch	armature	field	body
2547	To avoid excessive pressures in the fuel oil filing system during bunkering you should_____.	reduce the loading rate when topping off	close the tank filing valves quickly	fill completely all tanks to less than 95 percent	top off all tanks at the same time
2548	Before disconnecting a joint in a pipeline you should_____.	ensure no pressure exists on the line	determine the size of the gasket	hang a bucket below the joint	have a first aid kit on hand
2549	Safety is dependent on orderliness and cleanliness that may be maintained by_____.	disposing of worn out items	storing all items in its proper place	tagging all items according to their age and then storing them together	storing all items in a common storage area
2550	Before you enter a good approach to personnel safety is to make sure that all tanks are_____.	completely empty	fully loaded	clean	gas-freed
2551	After disassembly the safest way to remove carbon deposits from air compressor inlet and discharge valves is to use_____.	naphtha	gasoline	automotive diesel oil	ammonia
2552	Before entering an enclosed space what precautions should be done? I. Entry permit must be approved by the master II. The space be thoroughly ventilated III. Sufficient flammable gasses be present	I and II only	I II and III	II and III	I and III
2553	Before you enter a pumproom the first thing you should do is_____.	Inform chief officer	inform Master	fill-up entry permit checklist	ventilating fan running

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2554	To safeguard the operator and other personnel working on or near hoisting operation which of the following precautions should be observed?	Have one man keep a hand on the load to steady it	Keep load on the hoist until all personnel are finished working	Ensure that the lifting gear capacity is not exceeded	Set the load on a movable vehicle when transportation may be needed
2555	Which of the following safety measures should be taken to prevent personal injury when you are replacing a section of heavy piping on deck?	Attach lines to the end of the pipe so they can catch it if it falls	Position several men under the pipe so they can catch when it falls	Place an old mattress under the pipe to prevent it from hitting the deck	have a first aid kit at the job site
2556	Which of the actions listed and instituted on your part will have the greatest lasting effect on the crew with respect to safety?	Showing video tapes of actual accidents	Posting posters illustrating practices	Incorporating safety practices in daily routine	Publishing comprehensive safety rules
2557	Your vessel is damaged and listing to port. The rolling period is long, and the vessel will occasionally assume a starboard list. Which action should you take FIRST?	Press up a slack centerline double bottom tank	Fill an empty double bottom tank on the starboard side	Transfer all possible movable weights from port to starboard	Pump out ballast from the port and starboard double bottom tanks
2558	A tank which carries liquid is dangerous to the stability of a vessel when it is:	low in the vessel	slack	completely full	completely empty
2559	A vessel having a concentration of weight toward the top of the vessel is said to be:	Stiff	Neutral	Tender	Buoyant
2560	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
2561	A vessel would most likely develop a list if you were:	using water from two equally sized tanks on either side of the center line simultaneously	burning fuel from a centerline tank	using water from the fore peak tank	using fuel from tanks on the port side only

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2562	Your vessel rolls slowly and sluggishly. This indicates that the vessel _____.	has poor stability	is taking on water	has off-center weights	has a greater draft forward than aft
2563	Your tank vessel is loaded down to her marks, and you find that she has too much trim by the stern. To adjust the trim, you may _____.	shift bunkers forward	load more cargo forward	add ballast forward	All of the above
2564	Which one of the listed requirements regarding the stability of inflatable liferafts do not correspond to present regulations? The stability of inflatable liferafts shall be such that:	it can be towed with full complement at speeds up to 3 knots	in the event of capsizing it will automatically attain a position providing an above water escape	when floating in the inverted position it can be righted by one person	it is stable in a seaway when fully inflated and floating with the canopy uppermost
2565	Which of the following will improve stability	loading cargo on deck	consuming fuel from a full tank	closing watertight doors	pumping the bilges
2566	Heave is the motion of a vessel along the:	longitudinal axis	vertical axis	transverse axis	centerline axis
2567	Horizontal fore or aft motion of a vessel while underway is known as:	Sway	Pitch	Roll	Surge
2568	If the result of loading a MODU is an increase in the height of the center of gravity, there will always be an increase in the:	vertical moments	metacentric height	righting arm	righting moment
2569	If your vessel has a starboard list after taking on fuel, you would transfer fuel.	to starboard	to port	aft	forward
2570	Which is the principle which states that buoyant force acting on a body partially or completely immersed in a fluid is equal to the weight of fluid displaced?	Parallelogram	Advance coefficient	Principle of transmissibility	Archimedes principle
2571	When the height of the metacenter is less than the height of the center of gravity, a vessel has what type of stability?	Neutral	Stable	Unstable	Positive

# MANAGEMENT ENGINE

2572	When discharging a tanker, how can list be controlled?	By using wing tanks near the longitudinal center, discharging as necessary	By using the after peak tank, loading as necessary	By shoreside personnel	By using a center tank near the bow, discharging as necessary
2573	What would be prima facie evidence of unseaworthiness?	Overloading	Overstowage	Overcarriage	Overbooking
2574	Which abbreviation represents the height of the center of buoyancy?	BK	KB	CB	BM
2575	Which action is most important concerning the stability of the vessel when you are fighting a fire below the main deck of your vessel?	Close and secure all deck openings	Maneuvering the vessel so the fire is on the lee side	cut the power off in the fire area	Draining fire-fighting water and pumping it overboard
2576	Which action will affect the trim of a vessel?	Moving a weight forward	Adding weight at the tipping center	All of the above	Moving high weights lower
2577	Which formula can be used to calculate metacentric height?	$KM - GM$	$KB + BM$	$KM - KG$	$KM + GM$
2578	Which of the ff. value of mass density of fresh water is used for purposes of calculating ships density?	1000 kg/cu.m.	960 kg/cu.m.	990 kg/cu.m.	1025 kg/cu.m.
2579	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.	Absorbs machinery vibration.	Prevents valve stem over travel.	Provides landing surface for the sounding bob of a tank sounding tape.

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2580	Which of the following does not affect the value of the free surface correction?	Width of the tank	Registered tonnage	Specific gravity of the liquid in the tank	Length of the tank
2581	Which of the following statement regarding the trimming of grain is/are TRUE? I. In any filled compartments the bulk grain be trimmed so as to fill all spaces under the deck and hatch covers to the maximum extent possible. II. Loading all free grain space	both I and II	I only	II only	neither I nor II
2582	A MODU is required to carry an Oil Record Book, and must maintain the book on board for:	four years	one year	two years	three years
2583	A tank which carries liquid is dangerous to the stability of a vessel when it is:	slack	low in the vessel	completely empty	completely full
2584	A virtual rise in the center of gravity of a MODU may be caused by:	emptying a partially filled tank	filling a partially filled tank	using an onboard crane to lift a freely swinging heavy object	transferring pipe from the setback area to the pipe rack
2585	Angular motion about the vertical axis of a vessel is known as:	Hog	Surge	Roll	Yaw
2586	At all angles of inclination the metacenter is located:	vertically above the center of gravity	at the intersection of the upright vertical centerline and the line of action of the buoyant force	vertically above the center of buoyancy	geometric center of the underwater volume
2587	Between the side frames of a MODU, support for the deck beams is provided by:	deck stringers	web frames	brackets	stanchions
2588	Deck beams on a MODU are generally spaced at equal intervals and run:	longitudinally	transversely	intermittently	vertically
2589	In MODU construction, beam brackets are triangular plates joining the deck beam to a:	frame	bulkhead	stanchion	deck longitudinal

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2590	What will you observe when a vessel is taking ballast water with non equal flow of ballast in?	She will automatically transfer the ballast to other tanks	One of the ballast valve is defective	She will automatically stop ballast.	She will be listing in one side
2591	What will be observed of a ship that navigated from open sea with a high water density when it enters a river with a low water density?	Draft will decrease	Ship will list	Ship will heel	Draft will increase
2592	The value of the maximum righting arm is dependent upon the position of the center of buoyancy and the:	position of the center of gravity	down flooding angle	longitudinal center of water plane area	transverse center of water plane area
2593	The stability term for the distance between the center of gravity (G) to the Metacenter (M), when small angle stability applies is known as the:	metacentric height	righting arm	height of the metacenter	metacentric radius
2594	The part of the vessel that maintain watertight integrity by covering the whole vessel structure together is the _____ plates.	Hull	Bilge keel	Shell	Main deck
2595	The end joint formed plates in a hull plating strakes is properly identified as a:	bracket	butt	search	seam
2596	The draft is called _____ when the vessel is complete with water in boilers but without crew, bunkers, fresh water, stores and other load.	Initial draft	Light draft	Minimum draft	Maximum draft
2597	The difference between the forward and aft drafts of a vessel would be the _____.	flotation	heel	trim	list
2598	The difference between the height of the metacenter and the height of the center of gravity is _____.	KM	KG	KB	GM
2599	The difference between the initial trim and the trim after loading is known as _____.	trim	change of trim	change of draft	final trim

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2600	The difference between the initial trim of a vessel and the trim after a new load condition is known as _____.	change of trim	angle of list	change of draft	angle of trim
2601	The difference between the starboard and port drafts caused by a transverse shift in weight is called _____.	squat	trim	flotation	list
2602	The difference between the starboard and port drafts due to wind or seas is called _____.	flotation	trim	list	heel
2603	The excessive free surface in tanks carrying liquid cargo should be avoided in order to	All of these	Prevent oil pollution	Maintain hog and sag	Maintain good stability
2604	The geometric center of the underwater volume of a floating vessel is the center of _____.	hydrodynamic forces	gravity	flotation	buoyancy
2605	The important initial stability parameter GM is the _____.	metacentric height	height of the metacenter above the keel	height of the center of buoyancy above the keel	height of the center of gravity above the keel
2606	The inclining experiment conducted on a merchant ship is the method for determining the exact location of the _____.	ships displacement in seawater	position of the ships center of buoyancy	position of the ships metacenter	position of the ships center of gravity
2607	Reducing the free surfaces within a vessel, reduces the:	metacentric height	uncorrected height of the center of gravity	natural roll period	water plane area
2608	Rolling is the angular motion of the vessel about what axis?	Centerline	Vertical	Transverse	Longitudinal
2609	The horizontal port, or starboard movement of a vessel is called:	Yaw	Sway	Heave	Surge

# MANAGEMENT ENGINE

2610	The hulls of most modern towing vessels constructed today are fabricated from:	mild steel	wrought iron	high alloy steel	corrosion resisting steel
2611	The mutual action between parts of a material to preserve their relative positions when external loads are applied to the material, which tends to resist deformation when subjected to external forces, is known as:	stress	strain	shear strength	ultimate tensile strength
2612	The physical data term on a Material Safety Data Sheet (MSDS) describing whether a liquid is lighter or heavier than water is:	flotation point	Solubility	viscosity	specific gravity
2613	The stability term for the distance between the center of gravity (G) to the Metacenter (M), when small angle stability applies is known as the:	height of the metacenter	metacentric radius	metacentric height	righting arm
2614	Vessel stability is greatly affected when water or fuel tanks are partially filled as a result of the:	free communication effect	decrease in draft	free surface effect	increase of buoyancy
2615	When the height of the metacenter is the same as the height of the center of gravity, the upright equilibrium position is:	Neutral	Negative	Positive	Stable
2616	When the longitudinal strength members of a MODU are continuous and closely spaced, the vessel is:	longitudinally framed	transversely framed	intermittently framed	web framed
2617	Which spaces are required to be segregated from cargo tanks carrying grades A, B, C, or D cargoes?	Cofferdams	Pump rooms	Navigation spaces	Enclosed deck spaces
2618	A vessel would most likely develop a list if you were:	using fuel from tanks on the port side only	using water from the fore peak tank	burning fuel from a centerline tank	using water from two equally sized tanks on either side of the centerline simultaneously

# MANAGEMENT ENGINE

2619	A vessel with a large GM will:	have a small amplitude of roll in heavy weather	be less likely to have cargo shift	tend to ship water on deck in heavy weather	be subject to severe racking stresses
2620	A vessel trimmed by the stern has a:	set	list	sheer	drag
2621	A vessel has the least submersion on which loadline marking?	Summer water line	Fresh water line	Free board line	Load line
2622	A vessel aground may have negative GM since the:	decrease in KM is equal to the lose of draft	displacement lost acts at the point where the ship is aground	virtual rise of G is directly proportional to the remaining draft	lost buoyancy method is used to calculate KM, and KB is reduced
2623	A slow and easy motion of a vessel in a seaway indicates:	a large GZ	a low center of gravity	a high center of gravity	a small GZ
2624	A quick and rapid motion of a vessel in a seaway indicates:	a low center of gravity	a large GZ	a small GZ	a high center of gravity
2625	A perpendicular drawn where the aft side of the rudder post meets the summer load line is the _____.	Length between perpendicular	Stern perpendicular	Forward perpendicular	Aft perpendicular
2626	A disk with a horizontal line through its center, equivalent to the summer load line, is called the:	plimsoll mark	tonnage mark	maximum allowable draft mark	deadrise mark
2627	An acceptable method of temporarily sealing a crack formed in the hull of a vessel is to:	shore-up the crack with welded brace	drive the wedge	apply a patch of sheet packing backed by a hole and shoring	doubler - plate to be fitted
2628	When a vessel is in dry-dock, the vessels engineers should _____.	inspect the hull for hogging or sagging	install new docking plugs in all cofferdams	chip and paint all hull protection zincs	examine the condition of the propeller
2629	When a vessel is inclined at a small angle, the center of buoyancy will _____?	move towards the low side	move towards the height of the metacenter	remain stationary	move towards the high side
2630	When a vessel is inclined due to an external force such as the action of seas which no cargo shifts the tendency of the vessel to return to its original position is caused by the:	center of floatation	center of gravity	center of buoyancy	metacentric radius

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2631	When a vessel is inclined, the tendency for it to return to its original position is caused by the _____.	movement of the center of buoyancy toward the low side of the vessel	movement of the center of gravity	increased free surface in the buoyant wedge	upward movement of the center of flotation
2632	When a vessel is inclined, the tendency to return to its original position is caused by the _____.	Increase free surface in the buoyant wedge	Movement of the center of gravity	Upward movement of the center flotation	Movement of the center of buoyancy
2633	When a vessel is stationary and in a hogging condition, the main deck is under what type of stress?	shear	compression	racking	tension
2634	When a vessel loses its reserve buoyancy, it will _____.	most likely to sink	capsize and float on its side	none of the above	float upright w/ the main deck a wash
2635	When completing the ballasting operation of a contaminated tank, which of the following problems must be guarded against?	Insufficient pump pressure when topping off	Back flow of contaminated water	Loss of pump suction	Motor overload due to high discharge head
2636	When counter flooding to correct a severe list aggregated by an off-center load, your vessel suddenly takes a list or trim to the opposite side. You should:	continue counter flooding in the same direction	immediately stop counter flooding	deballast from the lowside	continue counter flooding but in the opposite direction
2637	What will happen to the center of buoyance when a vessel is inclined at a small angle?	none of the above	It will move toward the low side	It will remain stationary	It will move toward the high side
2638	What will happen to the draft of the vessel if it passes from sea water to fresh water?	The vessel will rise lower in the water, because of less buoyance force of the lighter water	The vessel will rise higher in the water, because of less buoyance force of the lighter water	The draft remain the same	The vessel will be unstable
2639	When a tow is trimmed by the stern it is said to _____.	hog	list	sag	drag
2640	Uneven distribution of weight all along the entire length of the vessel is called results in stress known as _____?	Shearing	Torsion	Hogging	Sagging
2641	Vertical support members used to strengthen bulkheads are called _____.	stiffeners	panels	stanchions	brackets

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2642	The abbreviation GM is used to represent the _____.	height of the metacenter	metacentric height	righting arm	righting moment
2643	Which of the following safety measures should be taken to prevent personal injury when you are replacing a section of heavy piping on deck?	Place an old mattress under the pipe to prevent it from hitting the deck	Position several men under the pipe so they can catch when it falls	Attach lines to the end of the pipe so they can catch it if it falls	have a first aid kit at the job site
2644	Before opening any part of refrigeration system for maintenance, what precaution must be taken?	Defrost line to remove frost on coils to ensure visibility of parts to be maintain	Prevent entrance of moisture since positive pressure exists in the system	Set high pressure cut-out on manual to prevent automatic starting	Pump down the system before doing maintenance work
2645	Before performing any maintenance on a hydraulic system storing energy in an accumulator, you should _____.	pressurize the system to test for leaks	bleed off all pressure within the system	operate the machine until it reaches normal temperature	disconnect the pump pressure control switch
2646	Before doing any work on a hydraulic system equipped with accumulators, you should _____.	bleed off all stored energy from the accumulators	completely charge the accumulators to prevent system energy loss	pump the hydraulic fluid into the accumulators to prevent fluid loss	drain the accumulators and purge with oxygen
2647	To prevent overheating and scoring of the shaft after repacking the stuffing box, which of the following procedures should be carried out?	Lubricate the packing with cylinder oil before installing new turns of packing.	Tightening the gland in all the way and then backing it off slightly.	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.
2648	When replacing a steam pressure reducing valve, what information is required for the selection?	inlet pressure	Maximum and minimum inlet pressures	outlet pressure	inlet and outlet temperature
2649	Centrifugal pump shaft and casing damage is usually prevented by _____.	wear rings	internally flooded lantern rings	a hardened sprayed metal coating	renewable sleeves

# MANAGEMENT ENGINE

2650	A pump shaft that is bent or distorted should normally be _____.	replaced with a satisfactory spare	repaired by a suitable welding process	straightened by applying heat and torsion	reconditioned by metallizing and machining
2651	When conducting a hydrostatic test on the distillate cooler shell of a flash type evaporator, liquid appears well inside one of the tubes. In order to correct this, you should _____.	all of the above would be considered satisfactory as a temporary repair until permanent	plug the tube	seal weld the tube	reroll the tube
2652	When replacing ball bearings on an electric motor shaft, you should _____.	tap the outer race with a mallet	apply even pressure to the outer race	apply even force to the inner race	apply pressure evenly to both the inner and outer races
2653	When troubleshooting electronic equipment, you should use a high impedance multimeter _____.	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	to prevent excess current flow through the meter that would damage it
2654	How many months interval is the appropriate time in drawing lube oil sample from the system of the diesel generator engine on board for the complete test as means of cost saving and a good maintenance system?	8	5	7	3
2655	What control procedures must be done before putting into operation a steam driven cargo pumps?	Steam lines to be thoroughly drained	Clutch to be engaged	Warping heads to be balanced	Exhaust valve to be closed
2656	If it becomes necessary to clean the spray holes in a diesel engine fuel injector, what should you use aside from a suitable size piano wire?	gasoline	carbon solvent	degreasing compound	strong detergent

# MANAGEMENT ENGINE

2657	After disassembly, the safest way to remove carbon deposits from air compressor inlet and discharge valves is to use _____.	naphtha	gasoline	ammonia	diesel oil
2658	You are installing new piston rings on a single acting diesel engine piston. To check the ring gap clearance, Where should the rings be placed?	Center of the cylinder	At the lower point	At the point of minimum cylinder wear	Point of maximum cylinder wear
2659	A high water level in a deaerating feed heater will cause the automatic dump valve to drain condensate to the _____.	Atmospheric drain tank	Auxiliary condenser	Main condenser	Reserve feed tank
2660	How will you secure nuts of main bearings, connecting rod bolts and all other moving parts?	By split pins or other effective means	By hardened steel nut locks	By cotter pins made of spring steel	By hydraulic nuts as commonly found on large low speed engines
2661	Operating a reciprocating air compressor without an air filter will cause _____.	a clogged air intake	carbon deposits on valves and pistons	excessive wear on valves and cylinder liners	excessive compressor discharge pressure
2662	How can an engineer confirm a suspected leak in an operating fuel oil heating coil?	Check the pH of heating coil returns	Check the drain inspection tank	Conduct a soap test	Conduct a blotter spot test
2663	What may cause a persistent gland packing leakage on a reciprocating steam pump?	A loose tappet collar	An open sniffer valve	Clogged suction strainers	Misalignment of the crosshead guide
2664	The engine room high level bilge alarm keeps sounding every few minutes even though the bilge is empty. What action would you take?	Check the function of the high level alarm switch and the printed circuit board for this alarm group	Change the setting on the alarm printed circuit board	Start the bilge pump	Disconnect the alarm and see if it helps
2665	What is the best emergency repair to a crack forming in the vessel's hull?	Weld a doubler plate over the crack	Drive wedges into the crack	Weld a metal box over the crack and applying air pressure	Drill the ends of the crack and apply a concrete patch

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2666	The cylinder liner forming the cylinder wall and the inside of the water jacket is called a _____.	wet liner	dry liner	jacket liner	corrugated liner
2667	When one belt of a multiple V-belt requires replacement, it will be necessary to _____.	ensure the seasoned belts are reinstalled in their proper sequence	ensure the proper belt dressing is applied	replace the entire belt set	season the new belt prior to installation
2668	What would be the best remedy if the fuel injection pump plunger or barrel becomes damaged?	Injector nozzle must be replaced	Plunger and barrel must be replaced as a unit	The plunger must be replaced only	Entire pump must be replaced
2669	With reference to overhauling of machinery before any repair or maintenance work is commenced what measure and precaution is necessary for the safety of those concerned?	Before a section of the steam pipe system is opened, all drains should be opened	Equipment under which personnel are required to work should be properly labeled	Warning notices should be posted on the working area to avoid accident to personnel	Aarm system should be isolated with the initiative of the personnel working
2670	What may cause by improper fireside water washing of a steam boiler?	Erosion of tubes and drums	Loss of ductility in boiler tubes	Sulphuric acid corrosion	Decreases heat transfer capabilities
2671	Integral water jacket liners use O-rings near the bottom of the liner. These O-rings serve to _____.	form a water seal between the liner and engine block	prevent the escape of lubricating oil from the crankcase	ensure proper temperature flow between the liner and engine block	allow for slight misalignment of the liner
2672	Which of the conditions listed could cause a boiler economizer to leak?	high stack gas temperature	low feedwater pressure	high feedwater temperatures	water hammer
2673	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	II only	both I and II	I only	neither I nor II
2674	What should you do to ensure that a refrigeration unit will not start while undergoing repairs?	Secure and tag the electric starter panel	Inform all persons in the area not to start the unit	Place a crow bar in the flywheel of the unit	Persons in the area should leave immediately
2675	When changing a lube oil purifier from a separator to a clarifier, what should you do?	Install a smaller inside the diameter ring dam	Install a seal ring at the top	Change all the discs	Install a larger inside the diameter ring dam
2676	Which of the diesel engine cylinder liners listed has internal cooling water passages?	Internally finned liner	Wet liner	Integral water-jacket liner	Externally finned liner

# MANAGEMENT ENGINE

2677	Which of the following maybe the possible cause for a turbo-charged four-stroke cycle diesel engine to have a high exhaust gas temperatures from all cylinders?	Low scavenge air pressure	Leaking exhaust valves	Inadequate fuel supply	Inoperative turbocharger
2678	If the salinity indicator located in the main condensate pump discharge piping causes an alarm to sound there is a danger of _____.	salting up the boilers	contaminating the distilled tank	low condensate temperature	low condensate depression
2679	After disassembly, which is the safest way to remove carbon deposits from air compressor inlet and discharge valves?	ammonia	naphtha	lube oil	diesel oil
2680	Which of the listed items should be secured before performing any maintenance on a solenoid operated air start valve?	Hydraulic switch and engage jacking gear	Motor drain and pneumatic control system power	Lube oil standby pump and control air	Electric power and starting air
2681	In a single-acting diesel engine. The cylinder liner area that is most difficult to lubricate is the _____.	major thrust side	top circumference	bottom circumference	minor thrust side
2682	During a maintenance inspection of a turbogenerator, the integral turbine wheels are tapped with a hammer. What condition may be indicated by a dull non-resonating sound?	Improper rotor support	A cracked turbine wheel	Normal structural solidity	Overstressed blade shrouding
2683	During an inspection of the main turbine, you notice flow marks or discoloration across the diaphragm joints. What does this condition indicate?	Improper seating of the diaphragm joint	Normal wear for a high temperature unit	Water carryover between stages	Excessive chemical treatment of the boiler water
2684	Failure to use the turning gear prior to warming up a main turbine will damage the _____.	gland sealing system	thrust bearings	rotor assembly	nozzle located in the diaphragm
2685	What is the best way to recondition a defective fuel injector?	Lap the needle to its seat with metal polish	Overhaul, clean and lap with grinding compound	Overhaul and clean each parts	Send to the nearest authorized repairer

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2686	Which of the following should be replaced when the capacity of a centrifugal pump decreases gradually over a long period of time?	Wearing ring	Packing glands	Mechanical seals	Lantern ring
2687	What is the FIRST thing to do to ensure that a refrigeration unit will not start while undergoing repairs?	Inform all persons in the area not to start the unit	Secure and tag the electrical circuit	Make a log book entry	Place a crow bar in the flywheel of the unit
2688	Which of the listed procedures is the most important factor to take into consideration when making repairs to the refractory surrounding the burner openings?	Design refractory cone angle must be maintained.	Plastic firebrick must be used.	Finished repair surfaces must be smooth.	All cracks must be completely filled.
2689	A properly honed diesel engine cylinder liner will _____.	appear slick and glazed	prevent cylinder liner glazing	shorten the ring break-in period	prevent piston ring wear
2690	What calibrations are taken to determine piston ring wear on a diesel engine?	Radial and axial thickness of ring.	Ring groove clearance and butt gap in unworn cylinder.	Radial thickness of ring and butt gap in unworn cylinder.	Internal diameter when positioned in unworn cylinder.
2691	When the automatic combustion control fails, what should you do to control the air supply to a boiler?	open the forced draft fan crossover damper	manually control the fan inlet damper position	reduce the firing rate	manually control the fan discharge damper position
2692	What will happen to governor if there is a friction in the moving parts, linkage, and control valve?	Remain in the neutral positions	Fail to react to small speed changes	Have excessive sensitivity to small speed changes	React with insufficient speed droop
2693	On a diesel main engine, 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?	Remove rotor assembly and fit the sealing plate.	Run the engine at lower speed with the turbine drains open.	Open turbine drains and tell the duty engineer to pay special attention for abnormalities.	Shut off cooling water and run at reduced rpm.
2694	Failure to remove the carbon ridge from the top of the cylinder when replacing the piston rings, will result in _____.	deformed piston skirts	damaged cylinder liners	damaged upper piston rings and/or ring lands	scored piston walls

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2695	When the timing gear backlash for a Roots-type blower has become excessive, how is problem properly repaired?	Renew the drive gear	Renew the driven gear	Seat in more slowly	Renewing both driving and driven gears as a set
2696	Scuffed cylinder liner surfaces in a diesel engine can result from _____.	knurling the piston skirt	using scuff resistant piston rings	starting the engine hot	operating an overheated engine
2697	The minimum feedwater inlet temperature to a boiler economizer is determined by the _____.	surface area of the third stage heater	dew point temperature of the stack gas	superheater outlet tempetaure	radiant heat transfer in the furnace
2698	What preventative maintenance should be done frequently to diesel engine starting air receivers?	drain the accumulated moisture	test the relief valves	watch the temperature to prevent fluctuations in pressure	clean the interior to remove oil and foreign matter
2699	If the foundation bolts of a reciprocating air compressor are loose, which of the conditions below will occur?	the unloaders will jam shut	the compressor will vibrate	the drive belts will squeal	the intercooler will leak
2700	The rate of cylinder lubricating oil metered to each cylinder of a large, low-speed, main propulsion diesel engine is _____.	adjusted during each hour of operation while at constant RPM	the same, whether at sea, or during maneuvering	lower at sea than while maneuvering	reduced during periods of low load operation
2701	One advantage of a vacuum feed sight glass indicator used on cylinder lubricators over the discharge side liquid filled type sight glass is _____.	there are fewer moving parts	better visual metering adjustment	a lower grade of cylinder oil may be used	adjustments are not required
2702	A dirty intercooler on the ship's service air compressor will result in _____.	unloader malfunction	water in the lubricating oil	higher than normal power consumption	decreased compression ratio

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2703	Once the thrust collar is scored, marks can be removed by machining acid polishing. To what extent an allowance is left to the collar thickness?	Up to about 25% above the design thickness.	Up to about 15% above the design thickness.	Up to about 50% above the design thickness.	Up to about 75% above the design thickness.
2704	If an operating propulsion unit requires excessive quantities of gland sealing steam, you should suspect a _____.	Worn or damaged labyrinth packing	Vacuum leak in the condenser shell	Flooded main condenser hotwell	Restriction in the gland leak off piping
2705	Which of the precautions listed should to be observed when working with oxy-acetylene welding equipment?	Bottles should be labelled air and gas.	Keep gas cylinders supported so that they cannot tip over.	Keep cylinders away from exposure to cold temperatures.	Keep oxygen regulators and valves coated with a light film of oil.
2706	Which of the following practices is considered to be safe for the handling and use of compressed gas cylinders?	Cracking the valve on a hydrogen cylinder to clear dust and dirt.	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.
2707	In oxy-acetylene welding outfit each cylinder has a regulator and two pressure gages. One pressure gage indicates cylinder pressure and the other gage is used to indicate_____.	upstream pressure	tip pressure	arc pressure	hose pressure
2708	An acetylene pressure regulator should never be adjusted to maintain pressures exceeding 15 psig (103.4 kPa) because _____.	the fusible plug will blowout	rapid deletion of acetylene is hazardous	the relief valve will lift	this gas become extremely unstable under this condition
2709	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 psig	fusible plug will blow out	relief valve will lift
2710	Which of the following listed pressures is the maximum acetylene gas pressure that can be safely used in gas welding?	15 psi	25 psi	10 psi	35 psi

# MANAGEMENT ENGINE

2711	When gas welding or burning the acetylene working pressure must be kept below 15 psi (103.4 kPa) to prevent a possible_____.	torch flameout	torch backfire	explosion	acetone fire
2712	Which statements describes the function of the filler material used in acetylene cylinders?	It reduces the danger of explosion.	It neutralizes the gas to render it harmless.	It chemically reacts with acetone to produce acetylene.	It is fire resistant and reduces fire hazards.
2713	Which of the factors listed governs the intensity of heat required for any given welding job?	The strength of the bond only.	The type of metal being joined only.	The type of metal being joined and the welding process being used.	The strength of the bond and the welding process being used.
2714	Protective equipment to be used while carrying out oxy-acetylene welding should always include _____.	tinted goggles	ear plugs	non-sparking tools	steel toe safety shoes
2715	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.	All of the above.	Braze welding is an acceptable method of repairing malleable iron and mild steel.	Repairs to containers used in chemical processes especially strong alkaline solutions are effectively accomplished with braze welding.
2716	Which of the following procedures would be correct when first lighting-off an oxy-acetylene torch?	Open the oxygen valve wide open and the acetylene valve slightly to light-off.	Open the oxygen valve very slightly to light off and then open and adjust the acetylene valve.	Open the acetylene valve very slightly to light-off and then open and adjust the oxygen valve.	Open the acetylene valve very slightly and the oxygen valve the same amount to light-off.

# MANAGEMENT ENGINE

2717	Cracks may be prevented from developing at the corners of welded plating inserts by_____.	plug welding the corners	squaring the corners	slot welding the corners	rounding the corners
2718	The steam soot blower piping should be thoroughly drained before operating to prevent_____.	feedwater loses	erosion of refractory	nozzle plugging	accidental flameout
2719	You should never watch the arc generated during electric arc welder with the naked eye because_____.	serious flash burns will result	arc blow will burn our face	the fumes are highly toxic	slag and metal splatter will get in your eyes
2720	What is the purpose of an air vent installed on some reduction gear casings?	Decrease the possibility of corrosion	Avoid the accumulation of flammable oil vapors	Admit cooling air to the gearing	Release air pressure build up
2721	To drill a hole in round stock perpendicular to the axis of the piece the stock should be mounted in a_____.	clamp	V-block	collet	morse sleeve
2722	What basic dimensions are used in describing machine bolts?	Diameter head size and shoulder length	Diameter and length only	Diameter and cross section only	diameter length and number of threads per inch
2723	Pinning is often caused by_____.	dropping the file	chalking the file	bearing too hard on the file	cleaning the file

# MANAGEMENT ENGINE

2724	To commence cutting threads with a metal lathe you should engage the_____.	split or half-nut	feed-change lever	back gear lever	thread-chasing dial
2725	Which of the following statements is correct concerning welding sequences?	Make a weld across an unwelded plate joint in adjoining members	Each successive welded part should be restrained to lock in stresses and avoid cracking	First weld attachments which will restrain the points of maximum contraction	First weld the joints that will tend to contract the most
2726	When metal is tempered it becomes_____.	harder	less flexible	more brittle	less brittle
2727	The temper is likely to be drawn out from a chisel edge when you_____.	grind the cutting angle too small	hold it next to a wet grinding wheel	grind it for long periods of time with excessive pressure	soak it in hot oil for lengthy periods
2728	Following the withdrawal of the tail shaft which non-destructive test could be used to locate cracks? I. liquid penetrant dye II. magnetic flux	Both I and II	I only	Neither I nor II	II only
2729	An excessive power loss in a straight reaction turbine is commonly caused by_____.	Abnormal tip leakage	Improper nozzle angle	Leaking diaphragm packing	Excessive fluid friction
2730	Stainless steel is an alloy composed mainly of_____.	chromium and steel	copper and steel	brass and steel	iron and steel
2731	The main difference between a common lathe dog and a safety lathe dog is that the latter_____.	allows for misaligned center holes	is more easily centered	has a spring loaded catch	has a headless set screw
2732	Which of the following statements represents the function of the center groove machined on a double-helical gear?	It is used to distribute oil to the gear teeth	It allows a path for oil to escape regardless of the direction of rotation	It allows the gears slight axial movement without gear damage	It prevents excessive axial thrust loads from developing on the teeth
2733	To set the dividers to the proper radius you should use a_____.	scribing circle	micrometer	callipers	steel rule
2734	A thirty pound steel plate would be_____.	3/4 inch thick	1/2 inch thick	3/8 inch thick	1 inch thick

# MANAGEMENT ENGINE

2735	The repair list with supporting material supplied by the company is normally grouped into how many parts?	3 parts	2 parts	6 parts	4 parts
2736	How often should the compressor side of the turbo charger be washed?	At least once a week	At least once a month	Daily	At least once every second week
2737	Which statement represents the function of insulating brick?	Acts as a gas-side layer at high temperature areas in D-type boilers	Acts as back-up insulation behind firebrick plastic refractory or castable refractory	Provides structural stability	Provides the first layer at the inside
2738	The pitch of a screw is the _____.	angle of taper formed by the centerline	number of threads per inch	distance between corresponding points on adjacent threads	angle formed by the adjacent flanks of thread
2739	What are generally used to avoid a porous brittle weld defects in an electric arc welding?	Flux Coated Electrodes	Bare or Uncoated Electrodes	D.C. Supply	A.C. Supply
2740	In the absence of the manufacturer's instructions a good procedure in reassembling a high pressure boiler gage glass is to tighten the nuts in pairs and _____.	start at the top and work down	begin with the center bolts and work toward the ends	begin with the end bolts and work toward the center	start at the bottom and work up
2741	Boiler fuel oil atomizer parts should be cleaned by soaking in tip cleaner or diesel fuel and _____.	brushed with a steel brush	scraped with a modified table knife	polished with emery cloth	scraped with a non-abrasive tool
2742	What would you do next after adding grease to a ball bearing with a hand held grease gun?	Run the machine with the bearing housing drain plug open for a short while	Close the bearing housing drain and add a little extra grease to compensate for air pockets in the bearing	Save the used grease for chemical analysis	Remove the grease fitting and leave open to allow excess grease to escape

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2743	Which of the following material is unaffected by steam petrol paraffin fuel oil and lubricants but health safety hazard?	Rubber	Cotton	Asbestos	P.T.F.E
2744	Boiler survey is conducted every how many years?	Every two and one half years	Every year	Every five years	Every four years
2745	What is called a welding process which does not require any pressure but requires a filler metal and a flux?	Rivet process	Fusion welding process	Resistance welding	Forge welding process
2746	Any welding process which requires pressure and does not usually require filler metal or flux is called_____.	rivet process	fusion welding process	forge welding process	electric welding process
2747	If it becomes necessary to clean the spray holes in a diesel engine fuel injector you should use a suitable size piano wire and _____.	gasoline	strong detergent	carbon solvent	degreasing compound
2748	Electric arc welding using AC supply is usually more popular for which of the following reason? I-Higher efficiency II - Less initial cost and requires less maintenance III - No danger in operation	I and III only	I and II only	II and III only	I and II
2749	What is the proper maintenance for a lube oil pump?	Inspect the telltale holes for leakage	Lubricate once a month	Weekly check-up of lube oil level	Check lube oil temperature
2750	On tank vessels which of the listed valve types is most commonly used in conjunction with hydraulically actuated controls?	nonreturn valve	butterfly valve	gate valve	globe valve
2751	What is the best way to recondition a defective fuel injector?	Overhaul clean and lap with grinding compound	Lap the needle to its seat with metal polish	Send to the nearest authorized repair provider	Overhaul and clean each parts

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2752	The oil in a cargo winch gear box should be sampled periodically to _____ .	prevent the gear box from leaking	make sure it has not become contaminated	prevent the oil from becoming inflammable	make sure the motor bearings are lubricated
2753	Cylinder oil is used for:	gasoline engine	4-stroke and 2 stroke engine	4-stroke engine	2-stroke engine
2754	Diesel engine piston ring ends can be machined in different shapes. The step-cut ring end offers the advantage of:	a decreased possibility of ring seizure	having the least amount of ring expansion	best control of ring tension	a decreased break- in period
2755	Ductility of steel can be increased by:	Hardening	Soaking	Annealing	Carbunizing
2756	During seven-day period, the minimum standard rest of an officer in charge of the engineering watch must be:	60 hours	70 hours	None of the stated options	50 hours
2757	For mild steel and general work, the correct angle of a drill point is _____ degrees.	118	120	121	119
2758	Governors used on diesel engines to limit the load must be equipped with:	pivotless centrifugal flyballs	a fixed maximum fuel stop	a proportional action compensation mechanism	a variable maximum fuel stop
2759	How long the cooling process will take to obtain a full anneal of steal if done im the furnace.	24 to 36 hours	One hour for each inch of sectional thickness	16 to 18 hours	16 to 20 hours
2760	If a higher than normal water level is observed through the inspection port of a flash evaporator, you should suspect:	a clogged desuperheater water strainer	a leak in the feed water heater	a malfunctioning brine pump	improper vacuum
2761	If a refrigeration system compressor crankcase is sweating, you should:	adjust the float valve to the proper holding pressure	adjust the thermal expansion valve to the proper setting	open the hand expansion valve	add refrigerant to the system

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2762	If the fuel oil temperature flowing to the burners is too low, the:	oiler will produce dense white smoke	fuel service pump will lose suction	fuel service strainers will become clogged	boiler will produce heavy black smoke
2763	If your ship burns 8 tons of fuel per hour at 15 knots, how many tons per hour will it burn at 20 knots?	21.7 tons	27.0 tons	22.4 tons	19.0 tons
2764	If your ship burns 8 tons of fuel per hour at 15 knots, how many tons per hour will it burn at 21 knots?	22.0 tons	20.3 tons	26.1 tons	29.4 tons
2765	If your vessel burns 6 tons of fuel per hour at 22 knots, how many tons per hour will it burn at 17 knots?	1.7 tons	2.8 tons	4.6 tons	3.9 tons
2766	If your vessel burns 8 tons of fuel per hour at 15 knots, how many tons per hour will it burn at 19 knots?	16.3 tons	12.8 tons	10.6 tons	10.1 tons
2767	In pressure measurement, absolute pressure is defined as the difference in pressure between, what?	atmospheric pressure and barometric pressure at a given point	gage pressure and ambient atmospheric pressure	any two pressures measured with respect to a common reference	a perfect vacuum and the total pressure at a given point
2768	Insufficient air for combustion in a boiler furnace could result in a:	high flame temperature	white incandescent flame	black stack smoke emission	0% carbon monoxide level
2769	One simple laboratory analysis of used lube oil that can be carried out aboard ship is called the:	blotter test	paraffin test	stability test	spectrographic test
2770	The process used to reduce stresses, induce softness, change ductility, or refine the grain structure of a metal is called:	Tempering	Soaking	Annealing	Hardening

# MANAGEMENT ENGINE

2771	What is an example of an antifriction bearing?	rubber cutlass strut bearing	ball bearing	line shaft or spring bearing	Kingsbury thrust bearing
2772	What is the cross sectional area of a rubber o-ring packing whose inside diameter is 64 mm.	1422.52 mm <sup>2</sup>	1335.21 mm <sup>2</sup>	1352.13 mm <sup>2</sup>	1331.25 mm <sup>2</sup>
2773	What is the minimum diameter of a round stock necessary to make a square key 5 on each side?	9.5 inches	8.01 inches	7.07 inches	9 inches
2774	What is the ultimate stress of mild steel used in boiler plates?	30 tons/sq.m	25 tons/sq.m	35 tons/sq.m	20 tons/sq.m
2775	What procedure must be formed before doing any maintenance on a hydraulic system, i.e. there is still stored energy in the accumulator?	Disconnect the pump pressure control switch	Pressurize the system to test the leaks	Bleed off the energy stored in the accumulator	Operate the machine until its reaches normal temperature
2776	What size circular bar is required to make a hexagonal nut of 16mm sides along the circumferences?	18 mm	16 mm	17 mm	19 mm
2777	When using a hand held hacksaw the correct maximum rate of speed for cutting should be:	70 to 80 strokes per minute	10 to 20 strokes per minute	40 to 50 strokes per minute	80 to 100 strokes per minute
2778	Which of the listed devices could be used as a ring groove cleaning tool during preparation for the installation of new rings if a piston ring cleaning tool was not available?	A section of the removed compression ring	Fine emery cloth or steel wool	A case hardened scraper	Steel brush
2779	White smoke exhausting from an operating diesel engine may indicate.	an overloaded engine	a cracked liner	insufficient combustion air	burning lube oil
2780	Which leadership style always demands respect from people being served?	bureaucrat	traditional	participative	dependable

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2781	Which is a method whereby managers and employees define goals for every department, project and person and use them to monitor performance?	management system	management by objective	maslows hierarchy of needs	function of management
2782	When a Chief Officer follows the manual exactly. Which type of leadership style is practiced?	participative	dependable	example	bureaucrat
2783	Which NOT including in maintaining the main engine in its top platform?	Take out corresponding starting valve.	Ascertain that the action of the spindle is free.	Check valve clearance between the adjusting nuts and levers.	Take out corresponding injection valve.
2784	What is the meaning of the word calibrated?	Adjust the opening	Seized the operation	Drain the pail	Measured the bore
2785	In stopping the engine the lube oil supply is gradually _____.	Reducibly	Reduced	Reduces	Reduce
2786	During the manoeuvres the reserving gear must be _____.	Exclaimned	Explain	Explained	Examined
2787	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?	Machine reaming operation	Threading operation	Boring operation	Tapping operation
2788	Which of the following hand taps are recommended to use to cut internal threads on a blind hole?	Pilot and Bottoming	Pilot and Intermediate	Plug and Bottoming	Pilot and Bottoming
2789	To increase the frequency of an operating AC generator, you should_____.	Increase the speed of the prime mover	decrease the field excitation	Increase the field excitation	Increase the number of magnetic pole

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2790	When working on high voltage circuit, you should always have another person present with you. this person should have a good working knowledge of_____.	all options are correct	the circuit being worked on and location of all switches and circuit breakers controlling it	first aid techniques for treating electrical shock	cardio pulmonary resuscitation
2791	e temperature of jacket cooling water is closely controlled to avoid thermal shocking and damage to engine, it is usually maintained at about_____deg. celsius.	78-82	85-95	65-72	72-78
2792	What contaminant of heavy fuel oil is responsible for burning of exhaust valve at deg. Celsius?	asphaltene	sulpur	vanadium	sodium
2793	Which steering mode is the rudder angle pre-set manually and kept in position automatically?	non-follow up	combination follow up and non-follow up	follow up	auto pilot mod
2794	Which mechanism ensures that the actuator is fixed with the ordered rudder angle until another rudder angle command is given?	hunting gear mechanism	transmission mechanism	safety mechanism	directional valve mechanism
2795	Which of the following situation s below may cause the need for emergency steering?	bridge out of function	failure on the autopilot	failure on the follow-up system	mechanical damage to the rudder
2796	According to international regulations, steering gear should relieve shock through_____.	chock pads	relief valves	springs	shock pads

# MANAGEMENT ENGINE

2797	In a swash plate type variable delivery pump, if you reverse the tilting angle of the swash plate, what would be the result?	increased pump capacity	decrease pump capacity	flow direction of oil remains constant	flow direction of oil is reversed.
2798	In a helleshaw pump, if you reverse the concentric position of the floating link, what would be the result?	flow direction of the oil remain constant	decrease pump capacity	flow direction of oil reversed.	increase pump capacity
2799	In a control system of a steering gear, air in the hydraulic line would result in what condition?	hunting of rudder and gear when helm is stationary	fast response of the rudder	excessive movement of the steering wheel before the gear moves	rudder movement too slow
2800	According to the SOLAS rules the rudder angle velocity should be at least 35-0-30 degrees in maximum 28 second, which type of vessel this applied for?	all cargo ships above 10,000 DWT or passenger ships carrying more than 50 passenger	regular ships. other requirements for special ships	all ships using one steering gear power unit	tanker vessel only
2801	The main purpose of an electric space heater installed in a large AC generator is to_____.	Prevent acidic pitting of the slip ring	Prevent the windings from becoming brittle	Keep the lube oil warm for quick starting	Prevent moisture from condensing in the windings during shutdown
2802	A turbine is said to have an axial discharge when the steam leave the blade tip at _____ - to the direction of the blade motion.	60	270	90	180
2803	Binary, analog and digital are examples of _____.	electrical instruments	variable values	instrument signals	variable transmitter

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2804	In Carrying out Machinery maintenance as required by Classification Society, CMS means what?	Controlled Main System	Continuous Main engine Survey	Continuous Machinery Survey	Central Machinery System
2805	Class Annual Survey is carried out at what period?	annually after first drydocking	annually after first expiration of safety equipments	Annually after its first building.	annually after 2 years from first building.
2806	Which of the following is the most logical step when lighting a torch, for safety reasons, before squeezing the spark lighter under the torch tip?	open the acetylene valve fully	Check the igniter if it is functioning to causes a spark for lightning the torch	Open the acetylene valve slightly	Ensure the oxygen torch valve is closed
2807	What will be the most logical thing to do after identifying the hazards in your work place such as the machine shop?	Follow rules and regulations	Wear protective equipment (PPE)	Control the hazards	Evaluate and eliminate the hazards
2808	Which of the following wrenches is best used for fast and quick tightening or loosening of bolt and nuts with different sizes?	Adjustable wrench	Combination wrench	Box or close wrench	Pipe wrench
2809	What is the basic alloy composition of brass?	aluminum and nickel	lead and antimony	copper and tin	copper and zinc
2810	What do you call an alloy bronzes containing copper, tin and phosphorus?	Cunifer	phosphor bronze	gun metal	Nickel aluminum bronze

# MANAGEMENT ENGINE

2811	What do you call an alloy bronzes containing copper, tin and phosphorus?	Cunifer	phosphor bronze	Nickel aluminum bronze	gun metal
2812	How is tempering process done?	By slowly heating the material at a prescribed temperature and time inside the furnace and then applying abrupt cooling	By melting the material in the furnace and then allowing it to cool inside the furnace	By heating the material at a prescribed temperature and time in a furnace and finally allowing it to cool in still air.	By reheating the material in a furnace at a lowerrange of temperature and finally aallowing it to be quenched or to cool slowly.
2813	What is the end-product of smelting iron ore in a blast furnace?	pig iron	converter	cast iron	pig beds
2814	Which material is extensivelt used for electrical fittings and as a base metal fot many alloys.	Aluminum	Copper	Brass	Iron
2815	This rolled ingot has asquare across section with a min. size of 6 by 6 in. (150 by 150 mm). What is this?	slab	iron	bloom	billet
2816	What do you call a tall, cylindrical smelting furnace for reducing iron ore to pig iron; the blast of air blown to solid fuel increases the combustion rate?	open heart furnace	Blast furnace	soaking pits	foundry

# MANAGEMENT ENGINE

2817	What do you call a solid metal casting suitable for remelting or working?	solid block	ingot	logot block	bigot
2818	What furnace employs carbon electrodes which strikes an arc on to the charge of molten pig iron?	electric arc furnace	open-heart furnace	Bessemer furnace	basic oxygen furnace
2819	When a mixture of steam and water in a boiler has reached the point at which NO further change in state can occur with the addition of heat, the mixture is considered to have reached its _____.	vaporization end point	supercritical end point	saturation end point	critical point
2820	At atmospheric pressure, water will boil at _____.	100F	50-60C	75C	100C
2821	What will happen if steam generation is faster than the amount of feed water you can supply?	Low water level	High water level	High steam pressure	Low steam pressure
2822	The equipment used to blow away carbon deposits and the other products of combustion is called _____.	soot blower	air blower	scrubber	swirler
2823	Why is there a surface blow valve in a boiler system?	To remove light impurities from water line surface	To partially empty the boiler	To remove heavy impurities from bottom of boiler	To blow air from water line surface
2824	For proper air temperature control in an air conditioning system using chilled water circulation, which condition should remain constant regardless of load changes _____.	compressor discharge temperature	squirrel cage fans are used	chilled water system supply temperature	compressor suction pressure
2825	Before doing any work on	drain the	completely	bleed off all	pump the

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	a hydraulic system equipped with accumulators, you should_____.	accumulators and purge with oxygen	charge the accumulators to prevent system energy loss	stored energy from the accumulators	hydraulic fluid into the accumulators to prevent fluid loss
2826	The first step when beginning to set the slide valves on a duplex reciprocating pump is to_____.	open the relief valve to prevent accidental starting	center the steam pistons in the cylinders	ensure the balance piston is on the downstroke	measure the present port openings to ensure reassembly will be the same
2827	To safely remove the piston rod packing from the steam end of a reciprocating pump, you should_____.	do nothing, as this type of pump utilizes O-rings in lieu of packing	open the steam chest and pry the packing loose with a scraper	use a packing hook	open the throttle valve and "blow" the old packing out
2828	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
2829	When fire safe or fire resistant fluid is to be used in a hydraulic system, it is important that _____.	the fluid does not dissipate too much heat	the resultant pressure, due to the increase in fluid viscosity, is not excessive	separate lube oil supply be furnished for the hydraulic pump	the fluid be compatible with all seal materials used
2830	To properly remove packing from a valve stuffing box, you should use a _____.	sharpened rod of silver solder	chisel and hammer	packing puller	screw driver
2831	When replacing ball bearings on an electric motor shaft, you should _____.	apply pressure evenly to both the inner and outer races	apply even pressure to the outer race	tap the outer race with a mallet	apply even force to the inner race
2832	To remove a hand held right-handed straight cut reamer after it has gone all the way through a hole, you should _____.	turn the tap wrench clockwise, simultaneously raising the reamer	work the reamer side to side to dislodge it	turn the tap wrench counterclockwise, simultaneously raising the reamer	tap the reamer out with a softfaced hammer
2833	An acetylene pressure regulator should never be adjusted to maintain pressures exceeding (15psig) 103.4 kPa because_____.	the fusible plug will blowout	rapid depletion of acetylene is hazardous	this gas become extremely unstable under this condition	the relief valve will lift
2834	When securing a flash-type evaporator for an extended period of time, you should_____.	fill the unit with descaling compound	tightly seal the unit to exclude air	fill the unit with saltwater	completely drain the unit

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2835	Why should a person performing maintenance on an air compressor wire and tag the system valves closed?	To prevent escape of water	To protect the operator and the equipment.	To prevent escape of air	To protect the valves
2836	Some engines are using auxiliary electrically driven blowers, which is continuously running during maneuvering. At what scavenging air pressure or load these blowers will automatically cut-off?	50%	80%	25%	60%
2837	Before opening any part of refrigeration system for maintenance, what precaution must be taken?	Pump down the system before doing maintenance work	Prevent entrance of moisture since positive pressure exists in the system	Set high pressure cut-out on manual to prevent automatic starting	Defrost line to remove frost on coils to ensure visibility of parts to be maintain
2838	Which of the following precautions should be observed when taking on a diesel fuel?	Secure all lighting to the main deck	Provide a portable fan to blow away fumes	Display a black triangle during the daylight hours	Prohibit smoking in the area
2839	Which of the following aspects that ergonomist should consider the psychological aspect of a person?	Personality	The physical environment	The senses, especially vision, hearing and touch	The stresses and strains on muscles, joints, nerves
2840	Who is responsible for reporting a casualty for a mobile offshore drilling unit?	The engineer	The owner	The pilot	The surveyor
2841	What is an occupational injury?	A body injury caused when having shore leave	A body injury which is caused by extension of contract	It is a body injury or illness which is caused by a work accident	A body injury or illness which is caused by a leisure accident
2842	Which of the following events shall be conducted during a fire and boat drill?	All watertight doors which are in use while the vessel is underway shall be operated	All lifeboat equipment shall be examine	Fire pumps shall be started and all exterior outlets opened	All of the above

# MANAGEMENT ENGINE

2843	Regarding battery charging rooms, where should the ventilation be located?	horizontally near the batteries	at the lowest point of the room	at the highest point of the room	only when charging is in progress
2844	For the protection of personnel, moving parts of rotating machinery are required to be fitted with _____.	bright lights	audible alarms	cover guards	reflective tape
2845	What should you do before any work is done on a burner in an automatically fired auxiliary boiler?	Allow the boiler to cool completely	Close all manually operated fuel valves	Block all control valves	Lock all safety interlock switches closed
2846	When taking over the engine room watch, what should you check concerning the operational lubricating oil purifier ?	Check whether throughput is minimum, check the overflow pipe, check whether the alarm is activated.	Check whether throughput is on maximum, check the water seal, check the overflow/water flow off pipe, check inlet temperature and back pressure.	Check the setting of the timers, check the inlet temperature, the back pressure, the bearing temperatures.	Check the Ferodo coupling, the bearing temperatures, the inlet temperature and the back pressure.
2847	Which safety valves have four times the discharge capacity of an ordinary spring-loaded valve?	Consolidated Safety Valves	Lese-type Safety Valve	Full-Bore Safety Valves	Crosby Safety Valve
2848	All exposed and dangerous areas machinery, such as gears and rotating parts, shall be properly protected with _____.	cover, guard, and rail	cover and rail	guard and rail	cover and guard
2849	Before any work on electrical or electronic equipment is performed, which of the following precautions should be carried out?	Bypass the interlocks	Station a man at the circuit supply switch	Secure and tag the supply circuit breaker in the open position.	De-energized the applicable switchboard bus.
2850	What should you do before disconnecting a joint in a pipeline?	Have a first aid kit on hand	Hung a bucket under the joint	Determine the size of the gasket	Ensure no pressure exist in the line

# MANAGEMENT ENGINE

2851	Which of the actions listed and instituted on your part will have the greatest lasting effect on the crew with respect to safety?	Publishing comprehensive safety rules	Showing video tapes of actual accidents	Incorporating safety practices in daily routine	Displaying posters illustrating safety practices
2852	Before you enter a pumproom what is the first thing you should do?	Run ventilating fan	Inform Master	Inform chief officer	Fill-up entry permit checklist
2853	Which of the following aspects that ergonomist should consider the psychological aspect of a person?	Mental abilities	Fitness and strength	The social environment	Body, size, and shape
2854	When is the most critical time for preventing an accidental oil spill during bunkering?	fuel begin to enter tank	Tanks are being topped-off	hoses are being disconnected	hoses are being blown
2855	Which of the following conditions can contribute to accidents?	Unsafe conditions	Good housekeeping	Intelligent work habits	Inspections
2856	Fire doors are released by a/an_____.	pneumatic heat sensor	spring-loaded catch that automatically lifts to release the door in the event of the presence of a fire	hydraulic directional valve that automatically releases the door in the door in the event of a disruption to the control power system	method that automatically releases the door in the event of a disruption of control system power
2857	Which of the following is an example of biological hazards? I. Exposure to high temperatures, too high levels of relative humidity II. Zoonotic diseases III. Fungal diseases	I, II and III	I and III	II and III	I and II

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2858	How can ergonomics improve health and safety to the work place? I. reduces the potential for accidents II. reduces the potential for injury and ill health III. improves performance and productivity	I, II, and III	I and II	I and III	II and III
2859	Which of the following aspects that ergonomist should consider to assess the fit between person and their work? I. the job being done and the demands on the worker II. the equipment used III. the senses, especially vision, hearing and touch	II and III	I, II and III	I and II	I and III
2860	Which of the following is/are the typical ergonomics problems found in the workplace like display screen equipment? I. The screen is poorly positioned - it is too high/low/close/far from the worker, or is offset to one side. II. The mouse is placed too far away and requires stretching to use. III. Chairs are properly adjusted to fit the person, forcing awkward and comfortable postures.	I, II, and III	I and II	I and III	II and III
2861	Some of the hazardous of working with electric power tools may be avoided if the operator insures that _____. I. they are properly grounded II. Eye shields and gloves are worn III. Loose clothing and jewelry are not worn	I only	II & III	I, II & III	I & II

# MANAGEMENT ENGINE

2862	Some of the hazards associated with air-operated power tools may be avoided if the operator would_____. I. inspect the hoses for cracks and other defects II. Remove jewelry and loose clothing III. Bleed air pressure from the lines before breaking the connections	I & II	I only	II & III	I, II & III
2863	Fire prevention during welding or burning aboard any vessel should include_____. I. Posting a fire watch in the immediate area II. Providing an extinguisher which is ready for immediate use III. Requiring the fire watch to remain on post for an adequate cool down period after the completion of welding of burning	I, II & III	I only	I & II	II & III
2864	A fire and boat drill on a tank vessel shall, by regulation, include which of the following? I. starting the fire pumps II. Checking fireman's outfits and other personnel rescue equipment III. Checking relevant communications equipment	I, II & III	I only	I & II	II & III
2865	Regulations require gears, coupling, flywheels, and all rotating machinery capable of injuring personnel to be_____.	Protected with adequate covers or guards	conspicuously identified as to their particular hazard	identified by yellow and black warning signs	located where they may not be easily contacted
2866	Why is it that a good housekeeping on a vessel prevents fires?	It allows better access in an emergency	It eliminates trip hazards	It improves personnel qualifications	It eliminates potential fuel sources

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2867	Some engines are using auxiliary electrically driven blowers, which is continuously running during maneuvering. At what scavenging air pressure or load these blowers will automatically cut-off?	25%	50%	80%	60%
2868	Before opening any part of refrigeration system for maintenance, what precaution must be taken?	Pump down the system before doing maintenance work	Prevent entrance of moisture since positive pressure exists in the system	Set high pressure cut-out on manual to prevent automatic starting	Defrost line to remove frost on coils to ensure visibility of parts to be maintain
2869	Which of the following precautions should be observed when taking on a diesel fuel?	Display a black triangle during the daylight hours	Prohibit smoking in the area	Provide a portable fan to blow away fumes	Secure all lighting to the main deck
2870	Which of the following aspects that ergonomist should consider the psychological aspect of a person?	The stresses and strains on muscles, joints, nerves	The physical environment	The senses, especially vision, hearing and touch	Personality
2871	Who is responsible for reporting a casualty for a mobile offshore drilling unit?	The owner	The engineer	The surveyor	The pilot
2872	What is an occupational injury?	A body injury which is caused by extension of contract	It is a body injury or illness which is caused by a work accident	A body injury or illness which is caused by a leisure accident	A body injury caused when having shore leave
2873	Which of the following events shall be conducted during a fire and boat drill?	All watertight doors which are in use while the vessel is underway shall be operated	All lifeboat equipment shall be examine	Fire pumps shall be started and all exterior outlets opened	All of the above
2874	Regarding battery charging rooms, where should the ventilation be located?	only when charging is in progress	horizontally near the batteries	at the lowest point of the room	at the highest point of the room

# MANAGEMENT ENGINE

2875	For the protection of personnel, moving parts of rotating machinery are required to be fitted with _____.	reflective tape	cover guards	audible alarms	bright lights
2876	What should you do before any work is done on a burner in an automatically fired auxiliary boiler?	Allow the boiler to cool completely	Block all control valves	Close all manually operated fuel valves	Lock all safety interlock switches closed
2877	When taking over the engine room watch, what should you check concerning the operational lubricating oil purifier ?	Check the Ferodo coupling, the bearing temperatures, the inlet temperature and the back pressure.	Check whether throughput is on maximum, check the water seal, check the overflow/water flow off pipe, check inlet temperature and back pressure.	Check whether throughput is minimum, check the overflow pipe, check whether the alarm is activated.	Check the setting of the timers, check the inlet temperature, the back pressure, the bearing temperatures.
2878	Which safety valves have four times the discharge capacity of an ordinary spring-loaded valve?	Full-Bore Safety Valves	Consolidated Safety Valves	Crosby Safety Valve	Lese-type Safety Valve
2879	All exposed and dangerous areas machinery, such as gears and rotating parts, shall be properly protected with _____.	cover and rail	guard and rail	cover and guard	cover, guard, and rail

# MANAGEMENT ENGINE

2880	Before any work on electrical or electronic equipment is performed, which of the following precautions should be carried out?	Bypass the interlocks	De-energized the applicable switchboard bus.	Secure and tag the supply circuit breaker in the open position.	Station a man at the circuit supply switch
2881	What should you do before disconnecting a joint in a pipeline?	Ensure no pressure exist in the line	Determine the size of the gasket	Have a first aid kit on hand	Hung a bucket under the joint
2882	Which of the actions listed and instituted on your part will have the greatest lasting effect on the crew with respect to safety?	Displaying posters illustrating safety practices	Showing video tapes of actual accidents	Publishing comprehensive safety rules	Incorporating safety practices in daily routine
2883	Before you enter a pumproom what is the first thing you should do?	Fill-up entry permit checklist	Inform chief officer	Inform Master	Run ventilating fan
2884	Which of the following aspects that ergonomist should consider the psychological aspect of a person?	Mental abilities	Fitness and strength	The social environment	Body, size, and shape
2885	When is the most critical time for preventing an accidental oil spill during bunkering?	hoses are being disconnected	fuel begin to enter tank	hoses are being blown	Tanks are being topped-off
2886	Which of the following conditions can contribute to accidents?	Inspections	Intelligent work habits	Good housekeeping	Unsafe conditions

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2887	Fire doors are released by a/an_____.	hydraulic directional valve that automatically releases the door in the event of a disruption to the control power system	method that automatically releases the door in the event of a disruption of control system power	pneumatic heat sensor	spring-loaded catch that automatically lifts to release the door in the event of the presence of a fire
2888	Which of the following is an example of biological hazards? I. Exposure to high temperatures, too high levels of relative humidity II. Zoonotic diseases III. Fungal diseases	I, II and III	II and III	I and III	I and II
2889	How can ergonomics improve health and safety to the work place? I. reduces the potential for accidents II. reduces the potential for injury and ill health III. improves performance and productivity	I, II, and III	I and III	II and III	I and II
2890	Which of the following aspects that ergonomist should consider to assess the fit between person and their work? I. the job being done and the demands on the worker II. the equipment used III. the senses, especially vision, hearing and touch	I and III	I, II and III	I and II	II and III

# MANAGEMENT ENGINE

2891	<p>Which of the following is/are the typical ergonomics problems found in the workplace like display screen equipment? I. The screen is poorly positioned - it is too high/low/close/far from the worker, or is offset to one side. II. The mouse is placed too far away and requires stretching to use. III. Chairs are properly adjusted to fit the person, forcing awkward and comfortable postures.</p>	I, II, and III	II and III	I and II	I and III
2892	<p>Some of the hazardous of working with electric power tools may be avoided if the operator insures that _____. I. they are properly grounded II. Eye shields and gloves are worn III. Loose clothing and jewelry are not worn</p>	I, II & III	II & III	I & II	I only
2893	<p>Some of the hazards associated with air-operated power tools may be avoided if the operator would _____. I. inspect the hoses for cracks and other defects II. Remove jewelry and loose clothing III. Bleed air pressure from the lines before breaking the connections</p>	I only	I & II	II & III	I, II & III

# MANAGEMENT ENGINE

2894	<p>Fire prevention during welding or burning aboard any vessel should include_____. I. Posting a fire watch in the immediate area II. Providing an extinguisher which is ready for immediate use III. Requiring the fire watch to remain on post for an adequate cool down period after the completion of welding or burning</p>	I & II	II & III	I only	I, II & III
2895	<p>A fire and boat drill on a tank vessel shall, by regulation, include which of the following? I. starting the fire pumps II. Checking fireman's outfits and other personnel rescue equipment III. Checking relevant communications equipment</p>	I, II & III	I only	I & II	II & III
2896	<p>Regulations require gears, coupling, flywheels, and all rotating machinery capable of injuring personnel to be_____.</p>	identified by yellow and black warning signs	Protected with adequate covers or guards	located where they may not be easily contacted	conspicuously identified as to their particular hazard
2897	<p>Why is it that a good housekeeping on a vessel prevents fires?</p>	It allows better access in an emergency	It eliminates trip hazards	It improves personnel qualifications	It eliminates potential fuel sources

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2898	To safeguard the operator and other personnel working on or near a hoisting operation, which of the following precautions should be observed?	Ensure that the lifting 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 may be needed	Keep a load on the hoist until all personnel are finished working
2899	To prevent oily rags from spontaneously igniting, what should you do?	kept in paint locker	Kept in well-ventilated area and discarded as soon as possible	Cleaned thoroughly for reuse	Kept in a non-metal container
2900	The knife edges and gaskets of watertight doors should be _____.	lightly coated with tallow	coated with petroleum jelly	clean and uncoated	painted to prevent weathering
2901	Before the seas get rough, it is good safety practice to _____.	make a visual inspection of all engine spaces and secure loose gear	move quickly about the ship	increase all engine space lighting	shutdown auxiliary equipment
2902	When a ship is expected to encounter rough seas, it is a good safety practice to _____.	maintain a negative trim on the vessel	check for items which may become adrift and secure loose gear	move quickly about the ship	make available extra survival gear
2903	Which of the following must be eliminated to prevent accidents?	Good work habit/practices	Orderliness	Unsafe actions	Frequent inspections
2904	You are replacing a section of heavy piping on deck and using a chain fall to lift the pipe. Which of the following 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	have a first aid kit at the job site	Position several men under the pipe so they can catch it if it falls

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2905	Which of the listed conditions can be considered as the single greatest cause of accidents?	Excitement	Speed	Excessive knowledge or skill	Human error
2906	Safety is dependent on orderliness and cleanliness. Order may be maintained by _____.	storing all items in a common storage container except those ready-for-sea	disposing of used items	storing items in their assigned place	tagging all items according to their age and then storing them together
2907	Which of the following actions is required to be carried out during a fire drill on board?	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.	An inspection and inventory of fire hoses is to be made
2908	What do all portable electric tools require a ground connection?	To prevent burning the motor from an overload	To prevent grounding the plastic case through a short	To prevent overloading the motor	To prevent electric shock if the tool is shortened
2909	Which of the following statements represents the FIRST precaution to be taken prior to working in any installed electrical component?	Groups the case of the machine before beginning any repairs	Open the supply circuits and tag the switches.	Use only approved nonconducting tools	Water rubber gloves and boots
2910	Which practices should be followed at all times when using an electric bench grinding machine?	Wear goggles, keep support rest clearance properly adjusted to the wheel and replace grinding wheels that are chipped or unbalanced	Wear goggles or face shield	Replace grinding wheels that are chipped or unbalanced.	Keep the support rest clearance properly adjusted to the wheel.
2911	Which practices should be followed at all times when using an electric grinding machine?	Be properly trained in the use of this tool	Each of the above practices	Be certain that the frame is properly grounded.	Wear goggles or face shield.
2912	When should you wear safety glasses aside from when using a hand portable grinder and scraping paint with a hand scraper?	II & III	During port state inspection	Using a hammer and a chisel	While in port

# MANAGEMENT ENGINE

2913	Machinery driving fuel oil transfer and fuel oil service pumps must be fitted with a remote means of stopping the machinery. Where is its location?	Outside the space concerned	Within the space concerned	The throttle station	Within the fireroom
2914	Each operation involving the transfer of oil or oily mixture that requires an entry in the OIL Record Book shall be fully recorded_____.	within 24 hours of completion of the project	none of the choices	without delay	within 12 hours of completion of the operation
2915	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?	Apply butterfly strips and cover with a sterile dressing.	Wrap a tight bandage around the wound.	Use temporary stitches of sail twine.	Gently close the wound and while holding it closed apply a compressor bandage.
2916	Which of the following symptoms may be observed in a victim of cardiac arrest as a result of electric shock?	All of the above symptoms	Respiration is weak or has stopped	Flushed face	Weak pulse at wrist or neck
2917	A fire door that is held open by magnets may be found in the_____.	engineroom	galley	wheelhouse	stairway enclosure
2918	An insulating flange should be used in a cargo hose connection instead of a bonding wire_____.	when pumping LNG only	when the terminal is equipped with a cathodic protection system	during cold weather	when static electricity may be generated
2919	When giving first aid you should understand how to conduct primary and secondary surveys in addition to_____.	the limits of your capabilities	which medications to prescribe	how to diagnose an illness from symptoms	how to set broken bones

# MANAGEMENT ENGINE

2920	Which of the following precautions should be taken when treating burns caused by contact with dry lime?	The burned area should be immersed in water	The entire burn area should be covered with ointment	Water should be applied in a fine spray.	Before washing with water the lime should be brushed away gently and removed from skin contact
2921	When handling petroleum products static electricity is generated by moving machinery and_____.	the flowing petroleum liquids	a grounded person	stray electric currents	a short circuit
2922	A crew member suffering from generalized hypothermia is be given_____.	a large meal	a brisk rub down	a small dose of alcohol	treatment for shock
2923	Persons who have swallowed a non-petroleum based poison are given large quantities of warm soapy water or warm salt water to_____.	absorb poison from the blood	increase the digestive process and eliminate the poison	induce vomiting	neutralize the poison in the blood
2924	How can the build up of static electricity be prevented so that a static spark does not ignite flammable vapors?	Each machine and hose involved in the operation should be grounded.	A dehumidifier used in spaces containing flammable liquids will significantly reduce the possibility of static charges being generated.	Static neutralizers can be used to reduce ionization in the air.	All electrical circuits near and around the fueling operations should be opened.
2925	Portable power hand tools are usually grounded to the _____.	body	armature	field	switch

# MANAGEMENT ENGINE

2926	To avoid excessive pressures in the fuel oil filling system during bunkering you should _____.	fill completely all tanks to less than 95 percent	top off all tanks at the same time	reduce the loading rate when topping off	close the tank filling valves quickly
2927	Before disconnecting a joint in a pipeline you should _____.	determine the size of the gasket	ensure no pressure exists on the line	have a first aid kit on hand	hang a bucket below the joint
2928	Safety is dependent on orderliness and cleanliness that may be maintained 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 its proper place	disposing of worn out items
2929	Before you enter a good approach to personnel safety is to make sure that all tanks are _____.	completely empty	gas-freed	fully loaded	clean
2930	After disassembly the safest way to remove carbon deposits from air compressor inlet and discharge valves is to use _____.	automotive diesel oil	gasoline	ammonia	naphtha

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2931	Before entering an enclosed space what precautions should be done? I. Entry permit must be approved by the master II. The space be thoroughly ventilated III. Sufficient flammable gasses be present	I and III	II and III	I II and III	I and II only
2932	Before you enter a pumproom the first thing you should do is _____.	Inform chief officer	inform Master	ventilating fan running	fill-up entry permit checklist
2933	To safeguard the operator and other personnel working on or near hoisting operation which of the following precautions should be observed?	Have one man keep a hand on the load to steady it	Ensure that the lifting gear capacity is not exceeded	Set the load on a movable vehicle when transportation may be needed	Keep load on the hoist until all personnel are finished working
2934	Which of the following safety measures should be taken to prevent personal injury when you are replacing a section of heavy piping on deck?	Place an old mattress under the pipe to prevent it from hitting the deck	have a first aid kit at the job site	Attach lines to the end of the pipe so they can catch it if it falls	Position several men under the pipe so they can catch when it falls
2935	Which of the actions listed and instituted on your part will have the greatest lasting effect on the crew with respect to safety?	Incorporating safety practices in daily routine	Showing video tapes of actual accidents	Posting posters illustrating practices	Publishing comprehensive safety rules
2936	Some engines are using auxiliary electrically driven blowers, which is continuously running during maneuvering. At what scavenging air pressure or load these blowers will automatically cut-off?	50%	25%	60%	80%

# MANAGEMENT ENGINE

2937	A bypass line provided around a waste heat auxiliary boiler in a diesel engine exhaust system, may be used to avoid boiler:	erosion at high engine loads	corrosion at low engine loads	scaling at all exhaust temperatures	overload at low engine loads
2938	A continuous fluctuation of the speed, due to over control by the governor, is known as:	sensitivity	promptness	speed droop	hunting
2939	A diesel engine experiences a sudden loss in speed, accompanied by black exhaust smoke, with the fuel rack at maximum, and the speed remaining below normal. The probable cause is:	engine overload	leaky valves	low air injection pressure	stuck or broken piston rings
2940	A photoelectric cell installed in an automatically fired auxiliary boiler burner management system:	must be bypassed at low firing rates	opens the burner circuit upon sensing aflame failure	requires mechanical linkage to secure the burner fuel supply	detects a flame failure by monitoring radiant heat from glowing refractory
2941	A substantial increase in crankcase pressure could be an indication of a/an:	worn cylinder liner	faulty cylinder relief valve	excessive lube oil pressure	excessive scavenge air pressure
2942	After starting the main lube oil pump in a gravity-type lube oil system, you should verify that the gravity tanks are full by:	sounding the gravity tanks	looking at the overflow sight glass	observing the flow from the bearings	sounding the lube oil sump

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2943	Air bubbles in a hydraulic governor can cause:	sensitivity increase	speed droop variations	sluggish response	isochronous governing
2944	Air in the fuel lines of a diesel engine can cause:	blue smoke	oxygen corrosion of the fuel lines	ignition failure	the pistons to seize
2945	An aligning punch is commonly used to:	remove snap rings	loosen jammed bolts	tighten tapered pins	line up corresponding holes in adjacent symmetrical parts
2946	An increase in rotor clearance in a rotary pump will:	decrease pump capacity	decrease pump cavitation	increase discharged pressure	decrease reaction ring clearance
2947	An oil film of a lubricant is affected by the:	thicker grade of oil	thinner grade of oil	working temperature of the engine	higher grade of oil
2948	An oil fog lubrication system is recommended for:	heavily loaded and high- speed ball bearings	high speed continuous operation of roller bearings	gear shaft bearings	low and moderate speed ball bearings

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2949	An operating diesel engine may gradually lose output power due to a/an:	restricted turbocharger air intake filter	low fuel viscosity	dribbling injector	pressure increase in the air manifold
2950	An operating diesel engine that suddenly loses power, is due to a/an:	dribbling injector	oil leak into the turbocharger	restricted turbocharger air intake	low fuel viscosity
2951	An operating turbocharged diesel engine that suddenly loses power, is due to a/an:	restricted turbocharger air intake	oil leak into the turbocharger	dribbling injector	low fuel viscosity
2952	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?	An orifice	A nozzle valve	A steam pressure reducing valve	A constant quantity regulating valve
2953	At the beginning of the prepurge period on an automatic auxiliary boiler equipped with a programmed control system, the unit will not restart if airflow is not sensed and:	water pressure is not sensed	the damper is not sufficiently opened	oil pressure is not sensed	the damper is not fully closed
2954	Before the turning gear is engaged, precaution should be taken to:	close the inlet and outlet valves of cooling water	shut off the starting air supply and open the indicator cocks	transfer M/E control to emergency control console of the engine	stop the fuel oil service pump
2955	Before using a boiler compressed air soot blower system, you should:	decrease the forced draft fan speed	lower the water level	drain the soot blower pneumatic operating lines	reduce the boiler pressure
2956	Before using the steam soot blowers of boiler at sea, you should:	decrease the firing rate	raise the water level	lower the water level	increase the firing rate
2957	Bilge suction lines led through tanks, without using a pipe tunnel, must be:	fabricated of schedule 80 pipe	fitted with gate valves at the bilge manifolds	coated with coal tar epoxy, or similar corrosion resistant substance	fitted so as to not allow for expansion

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2958	Bottom blow valves are installed on auxiliary water-tube boilers to:	completely drain the boiler in an emergency situation	prevent hardened scale deposits in the water drum	remove floating impurities from the boiler water surface	remove suspended and precipitated solids from the boiler water
2959	How will you secure nuts of main bearings, connecting rod bolts and all other moving parts?	By hardened steel nut locks	By hydraulic nuts as commonly found on large low speed engines	By cotter pins made of spring steel	By split pins or other effective means
2960	Personnel servicing refrigeration systems and subject to the exposure to commonly used refrigerants should wear what type of personal protective equipment?	goggles and gloves	a respirator	rubber soled shoes	an all purpose gas mask
2961	Protective equipment while carrying out oxyacetylene welding should include the use of:	wool jackets	goggles	cotton gloves	trousers with deep pockets
2962	To minimize the possibility of an explosion caused by the discharge of static electricity, the vessel should:	have its electrical equipment insulated from its structure	be electrically grounded to shore piping	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
2963	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?	0.05% blood alcohol level (BAC)	0.01% blood alcohol level (BAC)	0.03% blood alcohol level (BAC)	0.07% blood alcohol level (BAC)
2964	Which of the actions listed and instituted on your part will have the greatest lasting effect on the crew with respect to safety?	Displaying posters illustrating safety practices	Incorporating safety practices in daily routine	Publishing comprehensive safety rules	Showing video tapes of actual accidents
2965	Which of the following statements is CORRECT concerning welding a sequence?	Each successive welded part should be restrained to look in stresses and avoid cracking	Make a weld across an unwelded plate joint in adjoining members	First, weld attachments which will restrain points of maximum contraction	First, welds the joints that will tend to contact the most

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2966	After lighting off a cold, automatically fired, auxiliary boiler, as steam begins to form, you should:	close the air cock	give the boiler a bottom blow	completely open the steam stop	test the safety valve
2967	Which of the following actions should be taken first if one 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.
2968	When securing an oxyacetylene cutting outfit for an extended period, what should you close?	cylinder valves and close torch valves when pressure in hoses and regulators is zero	hand valves on the torch only	cylinder valves only	cylinder valves and close torch valves with 4 to 5 pounds of pressure in the hoses
2969	The most practical way of detecting an overload in one cylinder of an operating large, low-speed, main propulsion diesel engine is to:	listen for combustion knock in that cylinder	check the cylinder exhausts for black smoke	check the cylinder exhaust temperature frequently	isolate each cylinder and inspect the injector
2970	Heat damage to fuel injection nozzles on small high-speed diesel engines, can be prevented by:		ensuring good metallic contact between nozzles and cylinder heads	preventing hard carbon deposit on nozzle tips	employing fuel oil as a cooling medium
2971	For the protection of personnel, moving parts of rotating machinery are required to be fitted with:	cover guards	reflective tape	bright lights	audible alarms
2972	Clogged or partially obstructed exhaust ports on a diesel engine can cause:	over speeding of the engine	no effect of engine performance	high exhaust temperatures	failure of the engine to shut down

# MANAGEMENT ENGINE

2973	Before an explosion can occur in a boiler furnace, there must be an accumulation of unburned fuel, sufficient air to form an explosive mixture, and a:	source of ignition for the explosive mixture	space large enough for the explosion to occur	ground in the burner ignition electrode	high steam demand on the boiler
2974	An overheated bearing in the main propulsion unit is indicated by:	high temperature of the lube oil leaving the bearing	bubbles in the sight flow glasses	high level in the lube oil sump	sludge in the lube oil strainers
2975	An increase in diesel engine crankcase pressure generally indicates excessive:	scavenge air pressure	piston ring blow-by	compression pressure	lube oil header pressure
2976	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	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 only a filter consisting of a treated paper element
2977	Air leaks through the inner or outer casings of a boiler will:	improve fuel combustion	cause boiler panting	reduce boiler efficiency	decrease stack temperatures
2978	After removing an old set of rings, which of the following conditions is indicated if a bright spot is found on each end of a broken piston ring?	Excessive diametrical tension	Insufficient ring pressure	Improper lubrication	Insufficient gap clearance
2979	A suspected leak in an operating fuel oil heating coil is normally confirmed by:	checking the drain inspection tank	checking the pH of heating coil returns	conducting a soap test	conducting a blotter spot test
2980	A sudden drop in compression pressure in one cylinder of a diesel engine can be caused by:	a clogged air filter	excessively early fuel injection	malfunctioning valves	a leaking fuel injector nozzle

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2981	A sudden decrease in the diesel engine lube oil viscosity could be an indication of:	carbon deposits in the lube oil	loss of additives from the lube oil	excessive centrifuging	excessive fuel dilution
2982	A result of operating a diesel engine with excessively low cooling water temperature is:	increase fuel economy	increase fuel knock	decrease ignition lag	reduce lube oil viscosity
2983	A centrifugal pump vibrates excessively during operation. Upon disassembling the pump it is found that the impeller is out of balance. Without an available spare, you should:	drill holes through the heavy side of the impeller until it balances	acid wash and scrape the heavy side until it balances	weld counterweights to the light side of the impeller	remove metal from the heavy side by machining in a lathe
2984	A burner producing black smoke in an automatic auxiliary boiler, would be caused by a/an:	incorrect electrode setting	grounded high tension lead	defective solenoid valve	incorrect primary air setting
2985	A bright shiny appearance of the sealing surfaces on diesel engine compression rings indicates:	properly functioning rings	insufficient cylinder cooling	combustion gas blow-by	excessive lubrication
2986	A burned exhaust valve may be detected by a higher than normal:	becoming lodged under the intake valves	firing pressure	cooling water temperature	exhaust temperature from a particular cylinder
2987	A cracked cylinder head in an operating engine may be indicated by:	a steady flow of water from the expansion tank vent	water draining from the fuel leak off lines	combustion gases venting at the expansion tank	lower temperature at the cylinder head water discharge
2988	A diesel engine fails to start because of water in the fuel. In order to start the engine, you should:	use ether to start the engine with blow down valves open	drain filters and strainers and bleed off water at each injection pump	turn engine with jacking gear	blow through the cylinders and fuel lines with a drying agent
2989	A diesel engine may fail to start when being cranked, due to:	insufficient compression	high cetane number	low lube oil viscosity	high lube oil pressure
2990	A diesel engine will lose power if fuel injection	fuel will ignite before top dead	fuel will not be properly	maximum fuel expansion will	ignition will be delayed due to

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	occurs too early because the:	center	atomized in the cylinder	occur on the compression stroke	low ignition temperature
2991	A diesel engine will lose power if fuel injection occurs too late in the cycle, because the:	maximum expansion of the burned fuel cannot take place in the cylinder	compression pressure will be too low to cause fuel ignition	fuel droplets will burn as they leave the fuel injector	fuel will not be properly atomized in the cylinder
2992	A machinery vibration monitoring program can be used to identify bearing defects by:	thermal radiography	frequency spectrum analysis	pressure differential analysis	measuring output torque
2993	A shortage of refrigerant in the refrigeration system is indicated by:	the compressor short cycling	bubbles in the sight glass	high suction pressure	high head pressure
2994	A sudden flame failure in an operating auxiliary boiler, equipped with an automatic combustion control system and burning light fuel, could be attributed to a:	dead or malfunctioning step up transformer	rapid fuel viscosity increase	loose connection on the photocell	faulty ignition cable connector
2995	After starting a diesel engine, which of the listed operating conditions should be checked FIRST?	Exhaust temperatures	Air box pressure	Lube oil pressure	Raw water pressure
2996	After the installation of new impeller wear 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
2997	After the main engine has reached full sea speed, which of the following conditions could cause the water level in the boiler steam drum to keep falling?	Feed pump discharge pressure is set too low.	Feed pump recirculating valve is close	Open cutout valves on the boiler gage glasses.	Condensate recirculating line is excessively open.

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

2998	Air in the fuel lines to the fuel injection nozzles of a diesel engine will cause the engine to:	overheat without smoking	run away without load	operate with reduced power or stop	burn excessive amounts of lube oil
2999	Air in the fuel lines to the fuel injection nozzles of a diesel engine will result in:	lower compression pressures	failure to start	a run away without load	overheating without smoking
3000	Air is normally bled from a diesel engine fuel system by:	blowing down the air tanks	changing fuel filters	pumping down the day tanks	loosening the compression nuts at the injectors
3001	An excessive lost motion in the valve mechanism of a duplex reciprocating pump will cause the:	pump to operate sluggishly	pistons to stop in mid-stroke	cushioning valves to wear	pump to short stroke continuously at both ends of the stroke for both cylinders
3002	An immediate repair is required if a leak occurs in the high pressure fuel piping between the injection pump and fuel nozzle because of the:	poor combustion which will occur in that cylinder	serious fire hazard	pollution hazard	high cost of fuel
3003	An increase in clearance between reaction blade tips and the turbine casing will result in:	decrease in rotor torque	increase in rotor vibration	an increase in rotor thrust load	an increased pressure drop across the blades
3004	An indication of a diesel engine air intake being partially clogged, is:	low firing pressure and high exhaust temperatures	high firing pressure and high exhaust temperatures	low firing pressure and low exhaust temperatures	high firing pressure and low exhaust temperatures
3005	An indication of a faulty superheater soot blower element is a:	high superheater outlet temperature	low stack temperature	low superheater outlet temperature	low fuel oil consumption

# MANAGEMENT ENGINE

3006	An indication of a moderate leak existing in a desuperheater is:	reduced feed water consumption	low auxiliary steam temperature	high auxiliary steam pressure	a sudden increase in make-up feed
3007	An indication of an overloaded main propulsion diesel engine is:	blue smoke in the exhaust	sparks in the exhaust	white smoke in the exhaust	high exhaust gas pyrometer readings
3008	An indication of excessive soot accumulation on boiler water tubes and economizer surfaces is:	low stack temperature	high feed water temperature	lower feed water flow	high stack temperature
3009	An indication of high salinity in the distillate discharged from a low pressure distilling plant can be the result of:	leaks in the demister baffles	venting of the saltwater heater drain pump	maintaining the proper distilling plant heat balance	carrying the brine level below normal
3010	An internal leak in a fuel oil heater can result in:	water contamination of the fuel oil	carbon buildup in the heater	oil contamination of the heater drains	fluctuating fuel oil pressure
3011	An obstruction in the top connection of a boiler gage glass will cause the:	gage glass to overheat and break	water level to rise slowly in the glass	water level to remain constant in the glass	gage glass to be blown empty
3012	An O-ring seal in a hydraulic system will begin to leak when it has lost its interference fit due to:	high fluid flow	low fluid pressure	compression set or wear	low fluid temperature
3013	As an operating engineer, which action should you normally take during each watch when the auxiliary boiler is operating?	clean all duplex oil strainers	lift the safety valves by hand	inspect and clean burner oil solenoid valve	observe general boiler performance
3014	As part of a safe and effective maintenance onboard, the first valve to be opened first after the complete assembly of a newly overhauled and clean big luboil cooler is the:	Luboil inlet	Luboil outlet	Sea water outlet	Sea water inlet

# MANAGEMENT ENGINE

3015	Before any work is to be carried out on a burner in an automatically fired auxiliary boiler, you should always:	close all manually operated fuel valves	lock all safety interlock switches closed	block all control system relays closed	allow the boiler to cool completely
3016	Before boring a blind tapered hole, a good shop practice to follow is to:	bore a straight hole	drill to the large diameter of the taper	use a tapered reamer	drill to the small diameter of the taper
3017	Before carrying-out maintenance to the engine, one should:	close the fuel oil valve	shut-off the jacket cooling heating	through a solenoid operated valve	engage turning gear and switch off power
3018	Before drilling a hole in a piece of metal, the location of the hole center should be:	blued	marked with chalk	scribed	center punched
3019	Before installing rings on a diesel engine piston, you should check the ring:	gap clearance	radial thickness	diametrical tension	outside diameter
3020	Before opening any part of refrigeration system for maintenance, what precaution must be taken?	Pump down the system before doing maintenance work	Defrost line to remove frost on coils to ensure visibility of parts to be maintain	Set high pressure cut-out on manual to prevent automatic starting	Prevent entrance of moisture since positive pressure exists in the system
3021	Before starting a diesel engine that has an engine driven lube oil pump, the engineer should:	cut in the lube oil cooler	pressurize the lube oil system with the prelube pump	open the bypass line	top off the expansion tank
3022	Before starting a diesel engine, you should always:	change the fuel oil strainers	check the pyrometer	check the crankcase oil level	clean the air filter

# MANAGEMENT ENGINE

3023	Before welding is permitted on a fuel tank, what must be certified or declared?	safe for personnel	safe for hot work	not safe for hot work	not safe for personnel
3024	Boiler water hardness is increased by:	zero alkalinity in the water	improper operation of the DC heater	scale forming salts in the feed water	dissolved gases in the water
3025	Burning fuel with entrained saltwater, will cause a glassy slag formation on furnace refractory. This slag will:	form a protective coating thus increasing its life	seal refractory joints thereby improving its function	increase the furnace efficiency because of reduced firebox turbulence	expand at a different rate and result in damaged refractory
3026	Centrifugal pump shaft and casing damage is usually prevented by:	wear rings	internally flooded lantern rings	a hardened sprayed metal coating	renewable sleeves
3027	Combustion knock can occur in the cylinders of a diesel engine under any condition permitting:	excess fuel in the combustion chamber	rapid vaporization of injected fuel droplets	a lean fuel/air mixture	a shortened ignition delay period
3028	Cylinders diameters greater than 230 mm require additional safety devices when the scavenging spaces are openly connected to the cylinders. Which of the following devices will be used to protect such spaces?	Quick release expansion joints	Tri-knock fittings	Explosion relief valves	Stacked plate type inlet check valves
3029	If the fire goes out in an automatically fired auxiliary boiler and the burner continues to supply fuel, there is a potential danger of:	spalling damage to the brickwork	overpressure and dry firing	heat damage to the atomizer	a severe furnace explosion
3030	When you use the compressed air reservoir connected to an air compressor as an aftercooler, the reservoir must be:	frequently drained of condensed water	fitted with a manhole	fitted with a moisture trap at the inlet	fitted with a sight glass

# MANAGEMENT ENGINE

3031	Which precaution should be observed to prevent damage to the fuel oil service pump when warming up the fuel service system?	Heat the fuel oil in the settlers to the atomization temperature.	Bypass the fuel oil meter so that recirculating oil does not register.	Close the recirculating valve when the proper atomization temperature is reached.	Strip all water from the fuel oil settlers.
3032	A refrigeration system compressor crankcase is sweating or unusually cold. This is an indication of _____.	air in the system	a shortage of oil in the crankcase	a shortage of refrigerant in the system	an accumulation of liquid refrigerant in the crankcase.
3033	In a low pressure air compressor, the loss of volumetric efficiency normally results from _____.	inaccurate valve timing	heating of the air leaving the cylinders	adiabatic compression in the intercooler	constant enlargement of the clearance expansion volume
3034	If one of the bilge system manifold valves does not properly seat, the _____.	bilge well aft connected to that valve will siphon its contents to the forward bilge wells	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	all of the above
3035	If you suspect that a gage is sticking and giving an inaccurate reading, you should _____.	remove the gage bezel and slightly move the needle	replace the gage or have it calibrated	blow out the gage line with compressed air	tap the gage body with a wrench
3036	For the proper control of the air temperature in an air conditioning system using chilled water circulation, which of the listed conditions should remain constant regardless of load changes?	Compressor suction pressure.	Chilled water system supply temperature	Compressor discharge temperature.	Chilled water system return temperature.

# MANAGEMENT ENGINE

3037	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
3038	A dirty intercooler on the ship service air compressor will result to _____.	unloader malfunction	higher than normal power consumption	decreased compression ratio	water in the lubricating oil
3039	The purpose of an air compressor unloading device is to _____.	delay the compression process until the motor is up to speed	drain water from the cylinders	drain water from the air receiver	check pump alignment
3040	A centrifugal pump vibrates excessively during operation. Upon disassembling the pump it is found that the impeller is out of balance. Without an available spare, you should _____.	acid wash and scrape the heavy side until it balances	drill holes through the heavy side of the impeller until it balances	weld counterweights to the light side of the impeller	remove metal from the heavy side by machining in a lathe
3041	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.	Lubricate the packing with cylinder oil before installing new turns of packing.	Tightening the gland in all the way and then backing it off slightly.	Tighten the packing in small increments while the pump is operating.
3042	One of the main functions of wear rings as used in a centrifugal pumps, is to _____.	prevent wear of the pump casing and/or impeller	absorb all impeller shaft end thrust	maintain radial alignment between the pump impeller and casing	prevent water leakage to the atmosphere
3043	Which of the following problems occurring in a hydraulic system can be caused by the use of an oil having a viscosity lower than specified?	Increased power consumption	Fast response and hunting	Oil film breakdown	Seal deterioration
3044	Which of the following actions should be taken first if one bilge well of a multiple suction bilge system is unable to be pumped out?	Open the bilge pump for inspection.	Remove each of the suction manifold valves.	Attempt to pump out another bilge well to determine if the entire system is affected.	Remove only the suction manifold valve to the affected bilge well.
3045	Excessive leakage and premature failure of valve packing is a result of _____.	opening a valve too quickly	a scored valve stem	low pressure fluid flow through the pipeline	jamming a valve in the closed position

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

3046	The operation of a thermostatic steam trap depends upon the _____.	position of a float	tendency of hot water to flash into steam	flow characteristics of a liquid as it passes through an orifice	thermal expansion of a fluid
3047	The pump packing gland has been repeatedly tightened by small increments until the gland has bottomed. Which of the actions listed should be carried out next if the leakage continues to be excessive?	Replace with larger cross sectional turns of packing.	Continue to add more turns of packing.	Replace the soft packing with packing turns that are covered with lead wrap.	Replace all of the packing.
3048	One cause of leaky valves in a low pressure air compressor may be attributed to _____.	excessive discharge pressure	running with an air filter element different from that required by the original manufacturer's	excessive operating hours without carrying out preventive maintenance	the compressor running too fast
3049	To maintain design discharge pressure from a centrifugal pump, the design clearance must be maintained between the _____.	casing and impeller wearing rings	shaft and impeller	motor and pump shaft	motor and pump shaft
3050	If the foundation bolts of a reciprocating air compressor are loose, which of the conditions below will occur?	The intercooler will leak	The compressor will vibrate	The unloaders will jam shut	The drive belts will squeal
3051	The clearance volume for a single stage compressor is defined as the space created between the _____.	piston and head, including the space around the piston to the top of the upper ring and under the valves, with the piston at TDC	bottom of the piston and bottom side of the head at TDC, regardless of upper ring location and valve placement	top of the piston and bottom side of the head at TDC as compared to that which exists between the top of the piston and bottom side of head at BDC	top of the piston and bottom side of head, with the piston at BDC
3052	If one hydraulic pump of an electro-hydraulic steering unit fails, the vessel's steering can be initially and best maintained by using the _____.	telemotor	accumulator	standby pump	trick wheel

# MANAGEMENT ENGINE

3053	A centrifugal pump may fail to deliver water when first started if the_____.	impeller is flooded	water seal pipe is plugged	pump is not primed	seal ring is improperly located
3054	Water leaking from a pump packing gland is kept away from the bearing housing by the use of _____.	shaft sleeves	water seals	lantern rings	water flingers
3055	If a centrifugal pump vibrates and is noisy when operating, the cause could be_____.	worn wearing rings	a bent shaft	worn gland sealing shaft	reversed pump coupling
3056	What is the indication of distortion on the spray pattern of a nozzle or injector?	Cooling water temperature rise	High firing pressure	Overload of that particular cylinder	Smoky exhaust
3057	What causes the possibility of non-atomized fuel dripping from the fuel injection nozzles after injection of the fine fuel mist has finished?	Defective fuel injector	Cut-off of fuel supply too late after injection	Adjustment of injection pressure too early	Momentary increase in the pressure of the oil confined with the pressure piping
3058	How can a leak in a heating coil in a fuel oil storage tank should be detected quickly?	Observing oil on the contaminated evaporator steam coils	The sputtering of burners in the boilers	An increase in fuel oil temperature	The presence of fuel oil in the inspection tank
3059	What indicates the crackling noise coming from the centrifugal pump housing?	Excessive suction lift	Badly leaking unloaders	Reversed pump rotation	Insufficient packing
3060	What is the possible cause why a lube oil pump fails to build up discharge pressure?	bypass valve is closed	suction vacuum is high	discharge valve is open	Suction valve is closed
3061	What is the action by the chief engineer when your vessel is underway in a channel and all of a sudden the vessel runs a ground?	Change over to do supply	Stop main engine and engage turning gear	Check tank sounding to determine damages	Standby engine for any order from the bridge

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

3062	What does an unusual or new vibration in the hull or propeller shafting indicate?	Clutch slippage	High engine speeds	Propeller unbalance	Overheated bearings
3063	What could be the possible cause why a diesel generator engine freely turns over but fails to ignite properly?	Cold lube oil	Water in the starting air system	Air in the fuel line	Late fuel injection
3064	What procedure may cause piston seizure?	Poor cooling of cylinder walls	Contaminated lubricating oil	Excessive piston to liner clearance	Scored piston walls
3065	What can cause dirt in a fuel oil system to the diesel engine?	Damage to strainers	Overspeeding of the engine	Injector damage	Excessive cooling of the engine
3066	Which of the listed adjustments must be made to a naturally aspirated four-stroke/cycle diesel engine if a turbocharger is to be installed?	Increase the ignition lag.	Decrease the amount of exhaust and intake valve overlap.	Increase the exhaust and intake valve overlap.	has a crown-face
3067	What is caused by restrictions occurring in the small orifices of pneumatic control system components?	Insufficient lubrication of the system components	Excessive dryness in the compressed air supply	Pressure surging in the compressed air receiver	Moisture in the compressed air supply
3068	Which of the following could be the direct cause of crankcase explosion in a diesel engine?	Excessive lube oil in the crankcase	An overheated bearing	Extremely hot scavenge air.	High cooling water temperature
3069	Regarding the thermo hydraulic feedwater regulator, what caused the formation of steam in the outer tube?	Heat transfer from the inner tube	Heat radiated through the radial fins	Pressure of the boiler water	Pressure of the water in the outer tube
3070	If the main propulsion turbine begins to vibrate severely while you are increasing speed, what should you do?	Hold the turbine at that speed until vibration stops	Immediately slow the turbine to see if the vibration will stop	Stop the turbine and not answer any more bells	Open the throttle wider to pass through the critical speed

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

3071	In what way does lubricating oil supply to the crankpin bearings in a marine diesel engine?	Splash lubrication	Immersion in oil	Injection lubrication	Internal crankshaft passages
3072	Which of the following could be the possible reason if the pump fails to deliver liquid?	Relief valve jammed	Speed too high	Impeller blocked or damaged	Air or vapor in suction line
3073	What cause an excessive power loss in a straight reaction turbine?	Leaking diaphragm packing	Improper nozzle angle	Abnormal tip leakage	Excessive fluid friction
3074	When inspecting piston rings through the ports of a two-stroke/cycle diesel engine, what indicates black areas on the sealing surfaces.	Blow-by	improper piston cooling	The intake valve opening is advanced and the exhaust valve closing is retarded.	insufficient lubrication
3075	When is the cylinder lubrication oil for low speed main propulsion diesel engines admitted to each cylinder?	At low load operation only	In the power stroke	During compression stroke	During period of standby
3076	Which of the following causes a cylinder line to cracked?	Operating the engine at low loads.	Restricted cooling water passages.	Insufficient lubrication.	Worn piston rings.
3077	Visual inspection of a fuel injection valve, removed during overhaul, shows heat discoloration of the lower end of the valve. What does this indicate?	Insufficient valve lift	Valve leakage	Choking of nozzle holes	Return check valve leakage
3078	A fuel leak occurs in the high pressure fuel piping between the injection pump and fuel nozzle. Why is this required immediate repair?	It can cause poor combustion which will occur in that cylinder	It entails high cost of fuel	It is a serious fire hazard	There is possibility of pollution

# MANAGEMENT ENGINE

3079	Which of the following conditions could contribute to the cracking of a diesel engine cylinder head?	Blocked cooling water passages to the head	Leaking seal ring	Insufficient heat transfer from the exhaust valves	Excessive scavenging air provided to the engine
3080	When taking out the fuel injector from cylinder head, which of the following is the most advisable to do?	Lever the injector body from side to side to break the carbon seal and then to lever the injector from the bore in cylinder head	A threaded rod with sufficient length welded to a spare injector cap can be used with a simple bridge piece to withdraw the injector from the bore	A chain block with suitable shackle and wire rope will do	Lap the needle to its seat with metal polish
3081	What is caused by excessively low air pressure in the intercooler of reciprocating air compressor?	Leaky discharge valves on the HP cylinder	Low ambient air pressure	Insufficient intercooler cooling	Leaky discharge valves on the LP cylinder
3082	What is the effect of air in the fuel lines to the fuel injection nozzles to a diesel engine?	A run away without load	Overheating without smoking	Failure to start	Lower compression pressures
3083	When a DC motor that fails to start, what is the first thing to check?	Motor windings for signs of burns	Overload motor	Fuses and circuit breaker	Motor controller leads for continuity
3084	What can cause by a crack in a cylinder liner?	Restricted cooling water passages	Operating the engine at low loads	Installation of undersized piston rings	Worn piston rings
3085	What is the result of excessive oxygen in boiler water?	Leaks in the system water pipe	Pitting in the boiler tubes	Priming and foaming in the drum	Overdosing with boiler compound

# MANAGEMENT ENGINE

3086	What indicates air blowing from the intake air filter of an operating air compressor?	Broken discharge valves	Overloading of the air distribution system	Pulsation in the air distribution system	Broken inlet valves
3087	A restrictor valve in a hydraulic hatch cover system does which of the following?	Controls the hatch cover movement speed	Restricts backflow to the actuators	Prevents overheating of the hydraulic pump	Prevents oil flow to a closed hatch cover
3088	What do you call a gear on which the teeth are cut parallel to the axis of the shaft?	Lobe gear	Screw gear	Spur gear	Pinion gear
3089	Visual inspection of chrome-plated piston compression rings reveals a black ring face at the position of the cylinder liner ports. What is this ring condition indicated?	Excessive blow-by	Smooth, shallow grooved, chrome surface	Good condition	exceeds wear limits through normal wear
3090	If the engineer on watch has reason to doubt the accuracy of the water level shown in the boiler gauge glass, What should he do first?	Replace the gauge glass	Start the standby feed pump	Open the auxiliary line	Blow down the gauge glass
3091	Which immediate action should you take when the temperature of one line shaft bearing increases above its normal operating temperature?	Stop the unit and replace the bearing	Stop the unit and carefully inspect the bearing	Slowdown the engine	Check for proper water circulation to the lube oil coolers
3092	When a fuel injection nozzle overheats, which of the problems listed below can be expected?	The fuel metering will vary	The engine will stop	The cylinder head will crack	The fuel will explode

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

3093	If an operating bilge pump is developing good vacuum, but it is unable to discharge any water. Which of the following problems listed below is the most probable cause?	The discharge valve is clogged	The suction strainer is clogged	The shaft is worn	The wearing rings are excessively worn
3094	What may cause a low discharge pressure in a refrigerating compressor?	Leaky discharge valve	Too much liquid in the receiver	Clogged condenser	Leaky suction valve
3095	Fuel injection nozzles are usually of the multi-orifice type with the number and placement of the holes arranged according to the _____.	type of piston rings	design of the combustion chamber	size of the pump plunger spring	pressure of the fuel system
3096	What could be the cause of heavy soot accumulations in an auxiliary boiler?	Improper burner maintenance	excessive cycling	high fuel oil pressure	water in the fuel oil
3097	When it is necessary to bypass the flow from the fuel oil meter in the fuel oil service system?	When transferring fuel from storage to settler tank to avoid erroneous fuel consumption readings	When conducting programmed routine maintenance of the meter while underway	When finished with engine is given by the bridge	When warming the oil in the burner headers by recirculation prior to boiler light off
3098	The possibility of damage from operating a diesel engine at critical speeds is reduced by the use of_____.	a cast iron bed plate with good flexible qualities	an isochronous governor	a vibration damper	elastic engine mounts

# MANAGEMENT ENGINE

3099	A device which prints out a permanent record of the plant operating conditions is known as the _____.	data logger	analogger	bell logger	alarm logger
3100	When the rotating shaft frequency and the natural vibrating frequency become synchronized at a particular speed that speed is known as the_____.	critical speed	breakaway speed	synchronous speed	sympathetic speed
3101	A viscous damper as used on a marine diesel is a sealed precision built device which dampens the torsional vibrations in the_____.	thrust shaft	flywheel	camshaft	crankshaft
3102	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	lightened crankshaft flywheel	definer or viscous fluid damper	engine support vibration isolator
3103	Information from a data-logger can be helpful in determining the long term probability of machinery failure if you_____.	evaluate a series of readings to obtain operating trends	secure the machine under relatively steady state conditions	evaluate only the latest logged data as this is the best indication of plant status	monitor off limit conditions only when announced by an audible and visual signal
3104	One way of non-destructive examination of surface for crack is by _____.	ultrasonic test	bend test	fatigue test	hammer test
3105	What do you call a failure of a material due to repeated stress?	Tensile	Fatigue	Brittle	Ductile

# MANAGEMENT ENGINE

3106	Which of the damages listed can occur to the components of a winch master control switch if the cover gasket becomes deteriorated?	Contamination of lube oil.	Overheating of the winch motor.	Sparking at the winch motor brushes.	Rapid corrosion of switch components
3107	Diesel engine piston ring gaps can be straight or angle cut. In comparison the angle cut ring _____.	controls piston ring tension	allows piston ring expansion	increases ring wearing quality	decreases combustion gas leakage
3108	What would be the cause of restrictions occurring in the small orifices of pneumatic control system components?	Excessive dryness in the compressed air supply	Moisture in the compressed air supply	Insufficient lubrication of the system components	Pressure surging in the compressed air receiver
3109	Pitting in the area close to the pitch line and on the same end of each gear tooth of a reduction gear unit would be caused by _____.	misalignment of the gears	excessive gear speed	dirt in the oil	corrosion on the gears
3110	Failure of the fuel oil service pump to maintain fuel oil flow to the burner could be caused by _____.	excessive fuel pump speed	a high relief valve setting	excessive return line oil pressure	dirty fuel oil strainers
3111	Oxidation of the oil is one of the major causes of its deterioration caused by high-temperature due to _____.	excessive sea water at the oil cooler	correct use of oil pre-heater for the purifier	incorrect Grade or Oil	small bearing clearances
3112	In a steaming boiler higher than normal stack gas temperature can be caused by _____.	too much excess air	low steam demand	delayed burning due to inadequate excess air	excessively high fuel oil temperature
3113	Which of the following conditions is indicated by the presence of water in the scavenging air receiver?	Leaking cylinder head gaskets	Excessively high scavenge air temperature	Leaking cooler tubes	Outside E.R. raining

# MANAGEMENT ENGINE

3114	Which type of corrosion in the boiler caused by the action of strong sodium hydroxide solution on steel is under stress?	Caustic Cracking	Fatigue Corrosion	Pitting Corrosion	General Wastage
3115	One way of non-destructive examination of surface for crack is by _____.	fatigue test	ultrasonic test	hammer test	bend test
3116	The gasket and the broken studs have been replace on a tank manhole cover. Which of the following methods listed below is satisfactory for testing the repair?	Fill the tank with water via the ballast pump until the innage reading corresponds to the maximum depth of the tank	Fill the tank via the ballast pump until water flows from the vent line opening on deck	Pressurize the tank with 10 psig air soap the repaired area watch for visible signs of leakage or bubbles	Hose test the repaired area with a minimum of 100 psig water pressure
3117	If you suspect a diesel engine is misfiring due to air leakage into the fuel system you should begin looking for the leak at the _____.	gasket surfaces of the fuel oil filters	discharge fittings of the fuel injector pumps	suction side of the fuel oil transfer pump	fuel line connections to the cylinder injection valves
3118	If it becomes necessary to clean the spray holes in a diesel engine fuel injector what should you use aside from a suitable size piano wire?	gasoline	degreasing compound	strong detergent	carbon solvent

# MANAGEMENT ENGINE

3119	What could cause a failure of the fuel oil service pump to maintain fuel oil flow to the burner?	Dirty fuel oil strainers	High relief valve setting	Excessive return line oil pressure	Excessive fuel pump speed
3120	An air conditioning system with clogged filters will have which one of the following conditions?	High suction-pressure to the compressor	No head-pressure to the compressor	Low heat transfer	Increased suction pressure
3121	A dirty fuel oil filter can be detected by _____. I. fuel oil analysis; II. observing the pressure drop across the filter.	II only	either I or II	I only	neither I nor II
3122	Which of the following problems listed below is the main source of fuel pump and injection system malfunctions?	Excessive vibration	Air in the fuel system	Improper lubrication	Coated fuel lines
3123	An incorrect spray pattern produced by a diesel engine fuel injection nozzle can be directly caused by _____.	incorrect fuel rack setting	overcooling of the nozzle	low firing pressure	excessive lube oil temperature
3124	In a trunk piston engines what is the primary cause of cylinder liner bore polishing?	Excessive carbon deposits on piston top land (crown)	Incorrect lube oil specifications	Cylinder liner temperature too low	Lube oil pressure too high

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

3125	In running on fuel with bad ignition quality and long ignition delay what is the best method to reduce this delay?	Increase scavenging temperature	Increase engine Load	Lower scavenging temperature	Increase jacket-cooling temperature
3126	Which of the procedures listed below should be followed in case sputtering is detected in the boiler fires indicating water in the fuel?	Start the standby fuel service pump	Increase the fuel service pump speed	Increase the furnace air supply pressure	Shift to the service tanks high suction
3127	The crack located in the shell plating or deck plating of the ship may be temporarily prevented from increasing in length by _____.	V-grooving and welding from both sides of the crack	drilling a hole at each end of the crack	installing welded brackets across both ends	cutting a square notch at each end of the crack
3128	What indicates heat discoloration of the lower end of the valve during visual inspection of a fuel injection valve removed during overhaul?	choking of nozzle holes	return check valve leakage	insufficient valve lift	valve leakage
3129	What can be the effect of a partially obstructed exhaust ports on a diesel engine?	A sluggish engine operation	It can cause the engine to shut down	A low exhaust temperature	An overspeeding of the engine
3130	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 _____.	leakage through the power piston oil seal	defect in the sight glass gasket	leakage through the governor drive shaft oil seal	uncovered sight glass ventilation orifice
3131	Which of the following conditions could contribute to the cracking of a diesel engine cylinder head?	Insufficient heat transfer from the exhaust valves	Excessive scavenging air provided to the engine	Leaking seal ring	Blocked cooling water passages to the head
3132	What does it signifies when the compressor in the refrigeration system runs continuously?	Defective high pressure control switch	Shortage of refrigerant	Insufficient water flowing through condenser	Leaky discharge valve

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

3133	An O-ring seal in a hydraulic system will begin to leak when it has lost its interference fit due to_____.	low fluid temperature	compression set or wear	low fluid pressure	high fluid flow
3134	When lighting off an auxiliary boiler which of the problems listed below could cause the burners to sputter?	Water in the fuel oil	Low fuel oil pressure	Low atomizing steam pressure	Cold fuel oil
3135	A diesel engine fails to start due to excessive water in the fuel. Before the engine can be started the water should be removed from the _____.	rocker arm reservoir	lube oil filter	fuel lines	crank case pump
3136	You are testing a closed fuel injection nozzle using a nozzle tester. A pressure slightly less than design valve opening pressure is applied. If no fuel appears at the spray tip. The_____.	nozzle orifices are too small	needle valve spring is defective	needle valve is operating properly	nozzle orifices are eroded
3137	What actions should be taken by the engineer on watch if he has reason to doubt the accuracy of the water level as shown in the boiler gage glass?	Blowdown the gauge glass	Speed up the main feed pump	Start the standby feed pump	Open the auxiliary feed line
3138	Any unusual or new vibration in the hull or propeller shafting can be an indication of _____.	clutch slippage	high engine speeds	propeller unbalance	overheated bearings

# MANAGEMENT ENGINE

3139	Air in the fuel lines to the fuel injection nozzles of a diesel engine will cause the engine to _____.	failure to start	overheating without smoking	lower compression pressures	a run away without load
3140	Distortion of the spray pattern of a nozzle or injector may be indicated by a/an _____.	smoky exhaust	high firing pressure	overload of that particular cylinder	cooling water temperature rise
3141	A restricted air intake to a diesel engine may result in the engine _____.	hunting or surging under light load	failing to reach rated speed	knocking under maximum load	overspeeding and running away
3142	Air in the fuel lines of a diesel engine can cause _____.	oxygen corrosion of the fuel lines	blue smoke	ignition failure	the pistons to seize
3143	Ignition failure in an automatically controlled auxiliary boiler can be caused by:	excessive return oil pressure	brickwork failure	excessive fuel oil temperature	carbon deposits on the electrode
3144	If the intake, or exhaust valve stem clearance is found to be excessive, in addition to too late little movement of the rocker arms, you should check for:	Collapsed hydraulic filters	Immediately open the automatic make-up feed bypass valve.	prepare to blow tubes	open the main condensate recirculating valve
3145	If the fuel oil temperature in the fuel oil heater attains an excessive temperature, what will happen?	Carbon deposits will build up on the heating surfaces.	The fuel oil pump will lose suction.	The fuel oil recirculating valve will automatically close.	The fuel heater relief valve will open immediately.

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

3146	If the chemical analysis of a lube oil sample taken from the main propulsion machinery indicates an increased neutralization number the _____.	tendency to foam is guaranteed to occur	acidity has increased	viscosity has decreased	demulsibility has improved
3147	During combustion, the sealing surfaces of a diesel engine piston ring are considered to be the ring area in contact with the cylinder wall, in addition to the ring area in contact with the ring groove:	side	back	bottom	top
3148	Diesel engine lube oil diluted with fuel oil is indicated by _____.	decreased pour point	increased viscosity	increased flash point	decreased viscosity
3149	Diesel engine exhaust noise can be reduced in an exhaust muffler by.	changing the direction of exhaust gas flow	increasing the exhaust gas velocity	changing the exhaust gas weight	increasing the exhaust gas static pressure
3150	Combustion knock occurring in a diesel engine can be caused by _____.	insufficient fuel	carbon buildup on the injector tips	low coolant temperature	high ambient temperature
3151	A good quality lubricating oil used in any machinery, should be _____.	additive free	capable of emulsifying	a rapid oxidizer	acid free
3152	A diesel engine using lube oil with too high a viscosity will exhibit _____.	minimal friction losses	increased oil consumption	increased starting difficulty in cold water	thickening at higher operating temperature
3153	A diesel engine fuel injection timing is changed delay the start of injection until the pistons are at the top dead center, the engine will:	Develop less power under load	leave the engine room immediately	verify the main engine lube oil coolers are functioning properly	increase the speed of the lube oil supply pump

# MANAGEMENT ENGINE

3154	A diesel engine exposed to widely varying ambient temperatures should use a lubricating oil with _____.	a high viscosity index	a low viscosity index	extreme pressure additives	no additives
3155	In a diesel engine, late fuel injection is indicated by black or gray exhaust smoke with _____.	fuel knock in each cylinder	low exhaust temperature	mechanical knock in each cylinder	low firing pressure
3156	In relieving time, the outgoing in charge of the engineering watch should:	Leave the engine room immediately	Stop the main engine before relieving time	Check that the reliever is capable to carry out watch keeping duties	None of the stated options
3157	Insufficient cooling water circulation through air ejector intercondensers and after condensers will cause:	flooding of the loop seal	overheating of the air ejector nozzles	flooding of the after condenser	decreased vacuum in the main condenser
3158	It is the most important action to be done after receiving information from the barge master that the bunkering process is already completed.	Calculate the fuel oil received	Ask for the sample	Remove the hose connection	Ask for the receipts
3159	Late fuel injection in a diesel engine is indicated by low firing smoke with _____.	high exhaust temperature	low exhaust temperature	fuel knock in each cylinder	mechanical knock in each cylinder
3160	The highest indicate lube oil pressure in a diesel engine should be expected when the engine oil is _____.	warm at full speed and no fuel dilution exists	cold and idle	warm at full speed	warm and idle

# MANAGEMENT ENGINE

3161	What indicates air blowing from the intake air filter of an operating air compressor?	Overloading of the air distribution system	Broken discharge valves	Pulsation in the air distribution system	Broken inlet valves
3162	What will be the result of badly leaking refrigeration compressor discharge valves?	Flooding of the receiver	Continues running of the compressor	Damage to the condenser	Overfeeding of the expansion valve
3163	When fuel enters the crankcase of a diesel engine, it _____.	causes sludge deposits on valve stems	forms sulfuric acid in the lube oil	causes pitting and failure of the bearings	dilutes the lube oil and reduces its viscosity
3164	Which of the following actions is required to be carried out during a fire drill on board?	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.	An inspection and inventory of fire hoses is to be made
3165	Which of the listed conditions can be used to determine lube oil has been diluted by fuel?	viscosity is lowered	pump speed is decreased	blowers speed is decreased	octane number is altered
3166	Why should you avoid increased pressure on a drill as the drill point begins to break through the bottom of the work piece?	heavy soot on tubes	overheating of the nozzle orifices	Determine the exerted pressure by watching the pressure gauge	excessive vibration
3167	If the chemical analysis of a lube oil sample taken from a diesel engine indicates an increased neutralization number the _____.	demulsibility has improved	acidity has increased	foaming is guaranteed to occur	viscosity has decreased
3168	Improper maintenance of an automatic auxiliary boiler oil burner could result in:	increased feed water consumption	fan motor failure	decreased boiler efficiency	fuel pump failure

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

3169	Friction, engine wear, and oil consumption in a diesel engine can be directly attributed to the _____.	viscosity of the oil	acidity of the oil	pour point of the oil	flash point of the oil
3170	Flame failure in an operating automatically fired auxiliary boiler can result from a:	acidity of the oil	pour point of the oil	flash point of the oil	clogged fuel nozzle
3171	Excessive wear on a centrifugal pump shaft sleeve will:	Damage the packing gland stuffing box	Cause new packing vibration at opening speed	Damage the pump casing interstage seals	Cause severe pump vibration at operating speed
3172	Early injection timing is indicated by _____.	low exhaust temperature and high firing pressure	high exhaust temperature and high firing pressure	low exhaust temperature and low firing pressure	high exhaust temperature and low firing pressure
3173	Combustion knock occurring in a diesel engine can be caused by:	excessive fuel penetration	prolonged injection lag	prolonged ignition lag	reduced ignition lag
3174	A well-lubricated bearing surface always appears _____.	highly polished	well knurled	slightly streaked	lightly glazed
3175	A diesel engine should use which type of lubricating oil?	high grade vegetable oil	detergent oil	non-detergent oil	cutting oil
3176	Late fuel injection in a diesel engine is indicated by low firing pressure with _____.	low exhaust temperature	fuel knock in each cylinder	black or gray exhaust smoke	low exhaust pressure

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

3177	Late fuel oil injection in a diesel engine can result in _____.	increased power	high exhaust temperature	fuel knock	low compression pressure
3178	Oils are usually graded by their service classification and _____.	neutralization number	fire point	flash point	viscosity
3179	One cause of diesel engine fuel ignition delay is _____.	ignition quality of the fuel oil	mechanical flexibility in the pump mechanism	low fuel booster pump pressure	high fuel rack setting
3180	Significant retardation of a diesel engine fuel injection timing will result in _____.	increased fuel economy	advanced fuel ignition	reduced engine power	smoother engine operation
3181	The pump packing gland has been repeatedly tightened by small increments until the gland has bottomed. Which of the actions listed should be carried out next if the leakage continues to be excessive?	Replace all of the packing.	Replace with larger cross sectional turns of packing.	Replace the soft packing with packing turns that are covered with lead wrap.	Continue to add more turns of packing.
3182	Two important considerations for the proper lubrication of a diesel engine include, the delivery of the oil in sufficient amount, and the _____.	pour point	cetane number	quality of the oil	viscosity temperature
3183	Under normal conditions, the main source of crankcase oil contamination is attributed to _____.	condensation of water vapors	breakdown of the lubricating oil by dilution	air when air cleaners are not used	metal particles loosened by wear
3184	When excessive fuel dilution is noted in the lube oil, the oil should be _____.	changed	centrifuged	filtered	strained
3185	When fuel oil has seriously contaminated a diesel engine lubricating oil, you should _____.	use the settler to remove the fuel oil	filter to remove the fuel oil	drain and then renew the lube oil supply	remove the fuel oil by centrifuging

# MANAGEMENT ENGINE

3186	Which of the following is the test that measures hardness by penetration into metal?	Brinell and Charpy	Brinell	Charpy	Brinell and Rockwell
3187	If you notice smoke coming from the crankcase exhaust fan outlet of an operating diesel engine, you would suspect:	a faulty head gasket	a cracked cylinder liner	broken piston rings	clogged intake ports
3188	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 _____.	develop less power under load	have high firing pressures	backfire through the air intake	lift its cylinder relief valves
3189	If a burner were inserted too far into the boiler furnace, it could cause carbon deposits on the:	burner tip	furnace opening	air cone	register doors
3190	How often should the lubricating oil of a diesel engine be changed?	after every trip	every time they are shutdown	according to manufacturers instructions	every 4000 hours
3191	High firing pressures and a low exhaust temperature in a diesel engine may result from _____.	increased exhaust system back pressure	early fuel injection timing	low scavenge air temperature	early exhaust valve opening
3192	During operating temperature changes, the ability of a lubricating oil to resist viscosity changes is indicated by a/an _____.	seconds Saybolt Universal number	viscosity index number	seconds Saybolt Furol number	API number

# MANAGEMENT ENGINE

3193	Despite troubleshooting the system, the watch engineer has been unable to transfer fuel to the settler while underway. As the settler level is becoming dangerously low, the engineer should now:	secure each propulsion boiler	utilize a portable rubber impeller transfer pump	repeat all the steps he has taken	call out other engineers for assistance
3194	Combustion knock can occur in the cylinders of diesel engine under any condition permitting_____.	excess fuel in the combustion chamber	rapid vaporization of injected fuel droplets	a shortened ignition delay period	a lean fuel/air mixture
3195	Combustion gas venting through the expansion tank can be caused by a.	leaking oil cooler	worn piston ring	leaking exhaust valve	cracked cylinder head
3196	Before the longitudinal carriage feed of a lathe is engaged, you must be certain the:	carriage clamp screw is loosened	spindle clutch is disengaged	carriage stop clamp is tightened	thread dial indicator is zeroed
3197	An inadequate reciprocating bilge pump discharge is most often caused by:	defective intake valves	clogged suction strainers	clogged drain valves	scarred cylinder walls

# MANAGEMENT ENGINE

3198	An automated diesel engine should normally shut down due to _____.	high ambient air temperature	low lube oil temperature	low lube oil pressure	high exhaust system back pressure
3199	A large, low-speed, cross head, main propulsion diesel engine using residual fuel oils must have a cylinder oil having a _____.	high alkaline reserve	low flash point	high pour point	low TBN value
3200	A cracked cylinder head in an operating engine may be indicated by.	water draining from the fuel leak off lines	lower temperature at the cylinder head water discharge	a steady flow of water from the expansion tank vent	combustion gases venting at the expansion tank
3201	In an oxygen welding outfit, which of the following applies the torch tip orifice size?	Depends on the regulator flow rate	Can be varied by rotating the tip	Determines the amount of acetylene and oxygen fed to the flames	Depends on the hose length
3202	Increasing the load on an engine equipped with a constant speed mechanical governor, will cause the engine speed to initially:	increase	decrease	fluctuate	remain constant
3203	Increasing the temperature of the feed water entering the steam drum will ultimately result in a/an:	increase in stack gas temperature	decrease in the quality of steam entering the superheated	decrease in the degree of superheat	increase in fuel consumption
3204	Low steam pressure in a operating boiler maybe cause by:	Decrease of water level in steam drum	Sudden decrease in superheated outlet temperature	Boiler water contaminants	Increase in feedwater temperature

# MANAGEMENT ENGINE

3205	One characteristic of a lubricating oil adversely affecting the result of centrifuging is _____.	low oil demulsibility	low oil neutralization number	high TBN value	low oil flock point
3206	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	increase scavenge air pressure	reduce fuel booster pump pressure	adjust the fuel rack
3207	The adverse affects of burning high sulfur fuel can be compensated for by using a cylinder oil having sufficient _____.	floc point depressive additives	alkanity	ignition quality	dispersant additives
3208	The lube oil pump used in a diesel engine is normally a _____.	volute pump	positive displacement type	centrifugal type	educator type
3209	The TBN value of diesel engine lube oil refers to its ability to _____.	resist changes in viscosity with changes in temperature	resist emulsification	resist oxidation at high temperature	neutralize acids
3210	The Total Base Number (TBN) value of diesel engine lube oil refers to its ability to _____.	neutralize acids	resist oxidation at high temperature	resist changes in viscosity with changes in temperature	resist emulsification
3211	When machining a long piece of work between centers, you must:	make sure that the lathe dog is securely jammed in the slot of the face plate	make sure the tailstock is tight against the work	correct for expansion of the work by readjusting the tailstock center	make sure that the work is only supported by the headstock center
3212	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	foam suppressors	pour point improvers

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

3213	Which of the contaminants listed would remain in the lube oil after filtering?	acid fludge	water	fuel oil	sediment
3214	Which of the following conditions will tend to increase the ignition delay period of combustion in a compression ignition engine?	Using a fuel oil with a higher cetane number	decreasing the air charge temperature	increasing the compression ratio	reducing the injected fuel oil droplet size
3215	Which of the following methods is normally used to lubricate bearings in a small high-speed diesel engine?	pressure lubrication	sight feed lubricators	mechanical lubricators	splash lubrication
3216	While standing your engine room watch at sea, you notice the D.C. heater level is gradually dropping as indicated by the remote level indicator. Which of the following actions should you take?	Immediately stop the main engine.	Immediately open the automatic make-up feed bypass valve.	Check the condensate level in both the main and auxiliary condenser hot wells.	Do nothing as this is a common marine plant occurrence.
3217	With regards to shipboard refrigeration systems, after November 14, 1994 it is illegal to _____.	intentionally vent class I or II refrigerants to the atmosphere	work on a refrigeration system without permission of the Officer in Charge Marine Inspection	mix R-12 and R-22	produce a class I refrigerant
3218	The turning moment which is the product of a tangential force and the distance it acts from the axis of the rotation:	Twisting moment	Torque	Torsion	Friction
3219	Combustion knock can occur in the cylinder of diesel engine under any condition that permits _____.	a shortened ignition delay period	a lean fuel/air mixture	rapid vaporization of injected fuel droplets	excess fuel in the combustion chamber

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

3220	A proportional band, or range adjustment of a bourdon tube pressure gage is accomplished by _____.	adjusting the effective moment arm length between the bourdon tube and the quadrant gear fulcrum	adjusting the pointer position relative to the shaft on which it is mounted	changing out the pointer pinion	flattening the cross-section of the bourdon tube
3221	The property of oil that concerns the ease with which an oil flows through the oil pipe lines and spreads over the bearing surfaces is called _____.	flash point	pour point	viscosity	flow quality
3222	The face surface appearance of a shallow groove, stainless steel, chrome plated compression ring should exhibit through its operating life a _____.	smooth surface of stainless steel	surface of gradually deepening grooves	smooth, shallow grooved, chrome surface	smooth surface displaying areas of stainless steel and chrome
3223	Combustion knock occurring in a diesel engine can be caused by _____.	insufficient fuel	carbon buildup on the nozzle holder	high ambient temperature	low coolant temperature
3224	The two most common gases used in pneumatic systems are _____.	oxygen and hydrogen	compressed air and nitrogen	oxygen and acetylene	helium and nitrogen
3225	The property of oil that concerns the ease with which an oil flows through the oil pipe lines and spreads over the bearing surfaces is called _____.	flow quality	viscosity	pour point	flash point

# MANAGEMENT ENGINE

3226	The oil separator (trap) used in a large shipboard refrigeration system would be located between the _____.	compressor discharge valve and the condenser	condenser and the receiver	receiver and the king valve	receiver and the expansion valve
3227	The compressor in an air-cooled condensing refrigeration system is short cycling on the high pressure cutout switch. A probable reason for this is the _____.	system is overcharged with refrigerant	system is low on refrigerant	discharge valves are leaking slightly	discharge valves are leaking excessively
3228	In a refrigeration system, The push-pull technique can be used for the recovery of _____.	liquid only	vapor only	both liquid and vapor	should never be used with low pressure systems
3229	Compared to a constant pitch propeller, a controllable pitch propeller _____.	produces the same torque at lower engine power	operates at a lower efficiency at a fixed speed	develops its rated power at a lower speed	more efficiently uses available engine power
3230	The compressor in an air-cooled condensing refrigeration system is short cycling on the high pressure cutout switch. A probable reason for this is the _____.	discharge valves are leaking excessively	discharge valves are leaking slightly	system is low on refrigerant	system is overcharged with refrigerant
3231	During the initial cooling down of a box temperature in a refrigeration system, which of the devices listed is used to prevent excessive gas pressure at the compressor suction?	Suction pressure hold back valve	Low pressure cutout	High pressure cutout	Solenoid valve
3232	The one in charge of the provisions onboard complained that the vegetables were rotten	5	1	-1	-5

# MANAGEMENT ENGINE

# MANAGEMENT ENGINE

	due to the right temp. was not maintained. What is the right temp. in celcius to be maintained in the vegetables room so that it will be preserved well?				
3233	In a refrigeration system, the thermal expansion valve sensing bulb is located _____.	at the solenoid valve outlet	on the liquid line strainer	near the evaporator coil inlet	near the evaporator coil outlet
3234	When torch testing malleable iron a _____ film of slag develops which is quiet and tough.	tin	medium	heavy	light
3235	The absolute pressure maintained in the shell of the salt water feed heater on most flash evaporators used on steam propelled vessels is _____.	slightly more than the supplied live steam pressure at the reducing valve outlet	slightly higher than the second stage vacuum	slightly less than the absolute pressure of the L.P. extraction	slightly lower than the first stage vacuum
3236	Foaming is recognized by the appearance of a ring of oil around the level of water in a:	safety valves	water columns	pressure gauges	gauge class
3237	The sensible heat of air is dependent upon the _____.	wet bulb temperature	dry bulb temperature	saturation temperature	water vapor superheat
3238	In a Roots-type rotary blower, the volume of air delivered is directly proportional to _____.	engine speed	engine load	brake horsepower	brake specific fuel consumption

# MANAGEMENT ENGINE

3239	Foaming of the oil in a refrigeration compressor crankcase is caused by _____.	lube oil viscosity being reduced by refrigerant dilution	liquid refrigerant flooding the compressor and system	refrigerant boiling out of solution from the lube oil	compressor suction pressure suddenly increasing
3240	A light dust trail from the storage tank vent, plus a fluctuating P-tank pressure and constant movement of the material discharge hoses indicates _____.	chunks of material are moving through the system and transfer will stop momentarily	inadequate fluidizing of the weight material	a clogged discharge line	satisfactory movement of weight material
3241	A light dust trail from the storage tank vent, plus a fluctuating P-tank pressure and constant movement of the material discharge hoses indicates _____.	chunks of material are moving through the system and transfer will stop momentarily	satisfactory movement of weight material	inadequate fluidizing of the weight material	a clogged discharge line
3242	Which of the conditions listed may be an indication of an excessive amount of refrigerant circulating through the system?	Colder than normal solenoid valve	Weeping of the purge valve	Sweating of the compressor crankcase	Frosting of the evaporator
3243	The series of events which are repeated in regular order in the operation of an engine is _____.	Cycle	Stroke	Period	Series
3244	An eroded globe valve disk can be repaired by _____.	dressing the seat with crocus cloth	scraping with a bastard file	sandblasting with light weight grit	taking a light cut in a lathe
3245	A liquid indicator sight glass is useful in determining whether or not a refrigeration system is sufficiently charged. It is generally located in the _____.	high pressure liquid line	high pressure vapor line	low pressure liquid line	low pressure vapor line