轮机英语附加题

1. **The data to be recorded on this sheet _____ the performance of the engine.**
   A. makes the experts to judge
   B. enables the experts to judge
   C. make the experts judging
   D. enable the experts to judge .

2. **Cooling _____ the engine metals retain their mechanical properties.**
   A. forces
   B. enables
   C. makes .
   D. is able to

3. **_____ that everything in the engine crankcase is correct, start up the crankcase lubricating oil pump.**
   A. To satisfy
   B. To be satisfied
   C. After satisfying
   D. After being satisfied .

4. **Hearing a strong noise, _____ at once.**
   A. the engine stopped
   B. the engine was stopped
   C. he stopped the engine .
   D. he had stopped the engine

5. **The two-stroke cycle begins with the piston coming up from the BDC, with the scavenging ports in the sides of the cylinders being _____.**
   A. open .
   B. uncover
   C. covered
   D. closed

6. **The term "moderate speed" was previously interpreted as meaning a speed which would enable a vessel _____ within half the range of visibility.**
   A. stopping
   B. being stopped
   C. to stop
   D. to be stopped .

7. **Hardly had the engine started _____ the temperature of the cooling water suddenly rose up to 40℃.**
   A. then
   B. than

C. when .
D. after

8. **_____ during the last repair?**
A. Did you have No.4 cylinder repair
B. Do you have No.4 cylinder repaired
C. Didn’t you have No.4 cylinder repairing
D. Didn’t you have No.4 cylinder repaired .

9. **The main engine is cooled with fresh water _____ is added suitable small quantities of chemicals to prevent corrosion.**
A. in which
B. on which
C. to which .
D. by which

10. **The exhaust ports are located around the lower part of the cylinder liner, _____ the products of combustion are driven by scavenging air.**
A. in which
B. by which
C. through which .
D. from which

11. **When entering a foam injected space _____ breathing apparatus.**
A. put out
B. put on .
C. take off
D. take in

12. **The exhaust valve is opened at about the same time _____ the air inlet ports are opened.**
A. before
B. after
C. when .
D. until

13. **_____, we continued lifting out the pistons.**
A. Late as it was .
B. As it was late
C. Since it was late
D. Because of its late

14. **_____ does it take to change the main engine from ahead to astern?**
A. How many times
B. How much water
C. How long .
D. How length

15. **We have planned to remove the piston with the help of assistant engineers during the cargo unloading, while the vessel _____ port Shanghai.**

A. reaches to
B. gets
C. calls on
D. calls at .

16. **_____, the following possible causes should be investigated.**
A. Should the engine stop without apparent reason .
B. The engine should stop without apparent reason
C. The engine stops without apparent reason
D. The engine is stopped without apparent reason

17. **The difference between a supercharged engine and an un-supercharged engine is that _____.**
A. the later
B. the latter
C. the former .
D. the farmer

18. **_____ can be found on most medium to large merchant vessels even if the main engine is either a steam turbine or 2-stroke crosshead engine.**
A. The medium speed 4-stroke trunk piston engine .
B. The low speed 2-stroke crosshead engine
C. The medium speed 2-stroke crosshead engine
D. The low speed 4-stroke trunk piston engine

19. **_____ allows the engine to be placed wherever is most suitable, as they no longer have to be aligned with reduction gearing and shafting as is the case with conventional installations.**
A. Diesel engine propulsion
B. Diesel electric propulsion .
C. Steam engine propulsion
D. Gas turbine propulsion

20. **Medium speed engines have a _____ power to weight ratio than the slow speed two strokes, but due to the higher speeds tend to have _____ maintenance intervals.**
A. higher/reduced .
B. higher/increased
C. lower/reduced
D. lower/increased

21. **The purpose of the skirt or trunk in four-stroke cycle engines is to act in a similar manner to a _____.**
A. crosshead .
B. crown
C. piston rod
D. connecting rod

22. **The four-stroke cycle is so called because it takes _____ to complete the processes needed to convert the energy in the fuel into work.**
A. two strokes of the piston
B. four strokes of the piston .

C. one revolution of the crankshaft
D. four revolutions of the crankshaft

23. **In the suction stroke, the crankshaft is rotating clockwise and the piston is moving _____ the cylinderThe inlet valve is _____ and a fresh charge of air is being drawn or pushed into the cylinder by the turbocharger.**
A. up/opened
B. down/open .
C. up/closed
D. down/closed

24. **It is during _____ that work energy is being put into the engine; during the other 3 strokes of the piston, the engine is having to do the work.**
A. the suction stroke
B. the compression stroke
C. the expansion stroke .
D. the exhaust stroke

25. **Pressurized air enters the cylinder via the inlet ports and pushes the remaining exhaust gas from the cylinder in a process known as "_____".**
A. charging
B. supercharging
C. scavenging .
D. exhausting

26. **The bedplate must be rigid enough to support the weight of the rest of the engine, and maintain the crankshaft, which sits in the bearing housings in the _____, in alignment.**
A. longitudinal girders
B. transverse girders .
C. fore girders
D. aft girders

27. **Basically the bedplate consists of two _____, which run the length of the engine.**
A. longitudinal girders .
B. transverse girders
C. fore girders
D. aft girders

28. **The A-frames carry the crosshead guides and support the engine _____.**
A. foundation
B. seating
C. entablature .
D. bedplate

29. **To prevent excessive _____ in the transverse girders, the tie bolts are positioned as close to the center of the crankshaft as possible.**
A. thermal stresses
B. bending moments .

C. thermal loads
D. surface tensions

30. **Because the tie bolts are so close to the crankshaft, some engines employ _____ to hold the crankshaft main bearing cap in position instead of conventional studs and nuts.**
A. through bolts
B. jack bolts .
C. tap bolts
D. fitted bolts

31. **The crankshafts on the large modern 2-stroke crosshead engines are _____ big _____ makes as a single unit and so are constructed by joining together individual forgings.**
A. enough/to
B. too/to .
C. such/so
D. so/that

32. **The crankpins and journals were machined and matching holes bored in the webs, which were slightly _____ in diameter.**
A. smaller .
B. larger
C. higher
D. lower

33. **Today, crankshafts for large 2-stroke crosshead engines are of the _____ type.**
A. semi-built .
B. built-up
C. solid forged
D. individual forged

34. **The _____ of the semi-built method of the construction crankshaft is that by making the two webs and crankpin from a single forging the grain flow in the steel follows the web round into the crankpin and back down the other web.**
A. advantages .
B. disadvantages
C. power advantages
D. power disadvantages

35. **The connecting rob is fitted between the crosshead and the crankshaftIt transmits the firing force, and together with the crankshaft convert the _____ motion to a _____ motion.**
A. rotary / reciprocating
B. up and down / fore and aft
C. fore and aft / up and down
D. up and down / rotary .

36. **The slippers run _____ in the crosshead guides as the piston and rod are _____ and prevent the top of the connecting rod from moving sideways.**
A. up and down / reciprocating .
B. up and down / rotating

C. back and forth / reciprocating
D. back and forth / rotating

37. **Because the top of the connecting rod swings about the pin and changes direction each time the piston reaches mid-stroke, the relative speed between bearing and pin at mid-stroke is zero, _____ to a maximum as the piston approaches top or bottom dead center and then _____ back to zero again as the piston approaches mid-stroke and the connecting rod changes direction.**
A. accelerates / decelerates .
B. accelerates / accelerates
C. decelerates / decelerates
D. decelerates / accelerates

38. **The load on the crosshead pin is always _____, so it is the _____ half of the bearing which is subject to wear.**
A. upwards / top
B. upwards / bottom
C. downwards / top
D. downwards / bottom .

39. **Because of the high loads the bearing material is a tin- aluminum alloy bonded to a steel shellThe crosshead pin is highly polished to a _____.**
A. flat surface
B. mirror finish .
C. sloping surface
D. inclined surface

40. **Oil is supplied to the crosshead using a swinging arm or a _____ and is sometimes boosted in pressure to and efficient lubrication.**
A. telescopic pipe .
B. large bore pipe
C. generating pipe
D. central pipe

41. **Because of the resulting higher pressures in the cylinder from the combustion of this greater mass of fuel, and the larger diameters, the liner must be made _____ at the top to accommodate the higher stresses, and prevent cracking of the material.**
A. thinner
B. thicker .
C. smoother
D. rougher

42. **Cylinder liners from older lower powered engines had a uniform wall thickness and the cooling was achieved by circulating cooling water through a space formed between _____.**
A. crown and skirt
B. liner and jacket .
C. ring and groove
D. jacket and block

43. **Fuel has to be injected into the engine at a high pressure so that it _____ correctly.**
A. is purified
B. in timed
C. is compressed
D. atomizes .

44. **Because the timing of injection is crucial, _____ mounted on the camshaft, which is driven by the crankshaft are used to operate the fuel pumps, one of which is provided for each cylinder.**
A. gears
B. rams
C. barrels
D. cams .

45. **The high-pressure fuel opens the fuel valve and is sprayed into the cylinder in tiny droplets known as _____.**
A. injection
B. penetration
C. atomization .
D. compression

46. **It is important to note that the injection only takes place when the plunger is moving up the cam _____.**
A. base circle
B. slope .
C. bottom point
D. top point

47. **As the plunger moves upwards in the barrel, injection will commence once the plunger has _____ the spill ports and the pressure builds up.**
A. opened up
B. closed off .
C. lined up
D. taken off

48. **It should be evident that the amount of fuel injected into the cylinder is dependent on the position of the helix relative to the _____.**
A. inlet port
B. exhaust port
C. spill port .
D. scavenge port

49. **The plunger is machined to very fine tolerances, as is the matched _____ in which it reciprocates.**
A. barrel .
B. ram
C. piston
D. rod

50. **Fuels of different qualities may require advancing or retarding the injection timing, in addition to which if the injection timing is advanced when the engine is running at loads below the _____,**

then a saving in fuel can be achieved.

A. BHP
B. MCR .
C. IHP
D. MEP

51. **Injectors on modern engines are cooled by a combination of the intensive bore cooling in the cylinder by a combination of the intensive bore pockets and by the fuel which is re-circulated through the injector when the follower is on the _____ of the cam or when the engine is stopped.**

A. slope
B. base .
C. top
D. bottom

52. **_____ the oxygen content in the exhaust gas, _____ the combustion is.**

A. The lower / the worse
B. The higher / the better
C. The lower / the better .
D. The highest / the worst

53. **Too much excess air is _____ because the heat generated is being lost through the exhaust trunking instead of being made used of in heating the water to produce steam.**

A. not good .
B. good
C. better
D. the best

54. **On engines having oil cooled pistons the lubricating oil pre-heater must be put into operation and the rate of heating so _____ that the temperature of the piston cooling oil returns are 32 to 35℃ over a period of at least two hours.**

A. slow
B. quick
C. arranged .
D. high

55. **If the engine can be started and maneuvered on high viscosity fuel, the _____ of the fuel reaching the injectors should be raised to such a point that the viscosity is less than the required value, i.e27cSt.**

A. pressure
B. temperature .
C. viscosity
D. density

56. **Start the turning gear, and with some one hand-operating the cylinder lubricators at regular intervals, and with the indicator cocks _____, and with the control gear in the _____ position, give the engine at least one complete turn.**

A. open / “stop” .
B. closed / “stop”

C. open / “start”
D. closed / “start”

57. **For a fire to begin there must be present a combustible material, oxygen or air to _____ combustion, and a source of heat at a temperature high enough to start combustion.**
A. begin
B. support .
C. last
D. extinguish

58. **Indications of _____ are loss in power and irregular running of the engine, high exhaust temperatures of corresponding unite, high local temperature in scavenge trunk, surging of turbocharger, and sparks and smoke emitted from scavenge drains.**
A. a crankcase explosion
B. a scavenge fire .
C. abnormal compression ratio
D. incorrect air / fuel ratio

59. **In ships where the engine room is designed as UMS, temperature sensors are fitted at critical points within the scavenge spacesActivation would cause automatic _____ of the engine.**
A. stop
B. start
C. speed up
D. slow down .

60. **If a scavenge fire starts, the engine must be put to “_____” and the fuel must be taken off the cylinders affected by the fire.**
A. stop engine
B. finished with engine
C. dead slow ahead .
D. dead slow astern

61. **The lubrication to the cylinders affected by the fire must be _____ to prevent seizure and all scavenge drains must be _____ to prevent the discharge of sparks and burning oil from the drains into the engine room.**
A. decreased / opened
B. decreased / shut
C. increased / opened
D. increased / shut .

62. **If the scavenge fire is of a more major nature, if there is a risk of the fire extending or if the scavenge trunk is adjacent to the crankcase with risk of a hot spot developing it sometimes becomes necessary to _____ the engine.**
A. stop .
B. start
C. speed up
D. slow down

63. **Fuel injection equipment must be kept in good condition, timed correctly, and the _____ in each cylinder must also be carefully balanced so that individual cylinders are not overloaded.**
A. MIP .
B. MCR
C. MEP
D. BHP

64. **If cylinder liner wear is up to maximum limits the possibility of scavenge fires will not be materially reduced until the liners are _____.**
A. polished
B. renewed .
C. adjusted
D. ground

65. **The injection may be delayed, _____ the pumps are in good order, if the fuel lines to the injection valves have not been cleared of air.**
A. because
B. though .
C. since
D. until

66. **If the action of the engine indicates that some of the cylinders are not firing, the ones affected may be determined by watching _____.**
A. the bad smoke
B. the smoky exhaust
C. the exhaust temperature .
D. the peak pressure

67. **If _____ are taken at regular intervals, any unequal distribution of load will be easily found out.**
A. indicator diagrams .
B. nomo-gram
C. temperature readings
D. pressure readings

68. **Most troubles likely to occur with marine diesel engine can, if located in time, be remedied with no difficulty and many can be _____ if the engine is maintained with a high sense of responsibility to the people on the part of the motormen and engineers.**
A. found out
B. eliminated
C. avoided .
D. lowered

69. **The diesel engine is similar to the gasoline engine in that _____.**
A. both of them are ignited by compressed air
B. both of them are the forms of external combustion engines
C. both of them have spark plugs
D. the power is developed by the piston in the cylinder .

70. **The reason why more and more of the large merchant vessels are being powered by medium-speed diesel engines is _____.**
A. they operate between 150 and 450 rpm
B. they are connected to the propeller by gearing
C. their smaller size and weight .
D. they can be connected directly to the propeller without gearing

71. **Gas turbines differ from steam turbines in that _____.**
A. steam rather than gas is used to turn a shaft
B. vapor rather than gas is used to turn a shaft
C. the former uses gas to turn a shaft .
D. the latter uses gas to turn a shaft

72. **Cooling makes the engine metals their mechanical properties.**
A. Remain
B. to remain
C. retain .
D. to retain

73. **A supercharged engine differs from an un-supercharged engine it operates at an increases pressure.**
A. in which
B. on which
C. at which
D. in that .

74. **Defective atomizer in a diesel engine will lead to .**
A. smoky exhaust .
B. starting failure
C. overload
D. over speed

75. **Defective air cooler in a diesel engine will lead to .**
A. smoky exhaust .
B. starting failure
C. overload
D. over speed

76. **Defective governor in a diesel engine may lead to .**
A. smoky exhaust
B. starting failure
C. ignition relay
D. over speed .

77. **Defective timing gear in a diesel engine may lead to .**
A. smoky exhaust
B. starting failure .
C. overload
D. over speed

78. **If exhaust temperatures are too high, you should check _____.**
A. air cooler
B. turbocharger
C. charge air
D. A+B+C .

79. **If scavenge box should be hot, _____would occur.**
A. seized piston
B. defective atomizer
C. scavenge fire .
D. too much L.O

80. **A built-up exhaust valve is one in which _____.**
A. the stem and heads are made of different material .
B. low-alloy steel is used throughout
C. a replaceable valve disk is welded to the head
D. the self-centering action comes from motion of the valve stem in the guide

81. **Poor combustion in a diesel engine can be caused by _____.**
A. high compression pressure
B. low intake air temperature
C. low exhaust pressure
D. high scavenge air temperature .

82. **Which of the following may cause that an engine doesnt turn on starting air?**
A. too low starting air pressure
B. main starting valve closed
C. neither A nor B
D. A and B .

83. **Combustion knock can occur in the cylinders of a diesel engine under any condition permitting _____.**
A. a shortened ignition delay period
B. a lean fuel/air mixture
C. excess fuel in the combustion chamber
D. rapid vaporization of injected fuel droplets .

84. **To avoid scavenge fires occurring the engine timing and equipment maintenance _____.**
A. should be correctly carried out .
B. should correctly be taken place
C. should carried with care
D. must to carry out with great care

85. **The viscosity regulator controls the fuel oil temperature _____provide oil at the correct viscosity for combustion.**
A. in order that
B. because of .
C. in order to
D. owing to

86. **During the inspection, the starting air valves should be closed _____the engine from turning.**
A. to increase
B. to speed up
C. to prevent .
D. to reduce

87. **The usual method of effectively applying foam on a fire is by _____.**
A. spraying directly on the base of the fire
B. flowing the foam down a vertical surface .
C. sweeping the fire before you with the foam
D. spraying directly on the surface of the fire

88. **Precision engine bearing inserts are manufactured with a small portion of the bearing ends extending beyond the bearing housing or capsThe installation process of these bearings requires sufficient _____.**
A. overlap
B. crush .
C. lap or lead
D. protrusion

89. **As for turbine oil, contacting with water in the form of steam will be inevitable so good _____ properties will be essential.**
A. defrosting
B. de-oiling
C. demulsifying .
D. dehumidifying

90. **The ___ engine is used for alternators and sometimes for main propulsion with a gearbox to provide a propeller of between 90 to 120 rpm..**
A. four-stroke .
B. two-stroke
C. slow speed
D. reversible

91. **To correct a hunting problem in a main propulsion diesel engine hydraulic governor, you should _____.**
A. increase the governor oil pressure
B. adjust the speed droop setting
C. adjust the speeder spring travel
D. adjust the compensating needle valve .

92. **The lower section of a piston is called the _____.**
A. land .
B. skirt
C. crown
D. plate

93. **Which of the following can be obtained by means of an indicator card?**
A. the peak pressure in a cylinder

B. the temperature of the cooling water
C. the fuel consumption.
D. none of the above

94. **Grind the _____.**
A. keyway
B. shaft
C. packing
D. valve .

95. **_____, the engine must be stopped immediately.**
A. Should knocking occur .
B. If knocking occur
C. Should if knocking occurs
D. If occur knocking

96. **The three basic parts of any eductor are the nozzle, the suction chamber, and the _____.**
A. injector
B. compressor
C. diffuser .
D. siphon

97. **A diesel engine which is rated for normal operation at a crankshaft speed of 800 RPM, is commonly classed as a _____.**
A. slow-speed diesel
B. medium-speed diesel .
C. high-speed diesel
D. constant-speed diesel

98. **The pressure difference before and after the lube oil filter indicates _____ the filter should be cleaned.**
A. when .
B. how
C. where
D. whether

99. **The mechanical efficiency of an engine is always less than 100% _____ losses occurring in the form friction.**
A. because
B. since
C. due to .
D. owing to

100. **Energy loses _____ friction occurs in every engine.**
A. because .
B. thanks to
C. dues to
D. owing to

101. **James Watt _____ the steam engine in 1796.**
A. discovered
B. had discovered
C. invented .
D. had invented

102. **Pump up the starting air reservoirs to their maximum pressure and _____ the air reservoirs and air system.**
A. open
B. close
C. drain .
D. vent

103. **The four-stroke cycle begins with the piston .**
A. coming up from the BDC
B. coming up from the TDC
C. coming down from the BDC
D. coming down from the TDC .

104. **_____ the moveable plate and floating ring inside the pump is very difficult.**
A. Having adjusted
B. Being adjusted
C. To adjust .
D. Adjusted

105. **No sooner _____ than they started to repair the sludge pump.**
A. the second engineer had got into the engine room
B. the second engineer got into the engine room
C. has the second engineer got into the engine room
D. did the second engineer get into the engine room .

106. **The young motorman as well as the others _____ to operate the oil separator.**
A. has learnt .
B. have learnt
C. learn
D. are learning

107. **Before dismantling the pipe, would you _____ the oil retained in the hose with _____?**
A. flash/fresh air
B. wash/fresh water
C. flush/compressed air .
D. rush/diesel oil

108. **The oil sludge is burnt in the _____ on boardI’ll show you the ashes.**
A. boiler
B. main engine
C. auxiliary engine
D. incinerator .

109. **In boilers, besides maintaining the burner atomizers, air diffuser vanes, fuel temperature, forced draft fan, fuel pump and other hardware in good condition, there are some adjustments on the _____ that can produce a good flame for the most efficient operation.**

A. fuel-air ratio .
B. compression ratio
C. fuel rack
D. viscosity index

110. **Deck machinery, which is also known as hull machinery, includes all power driven equipment located _____ the machinery spaces that is _____ with the main propulsion plant.**

A. inside / associated
B. inside / not associated
C. outside / associated
D. outside / not associated .

111. **0111The transmission system is the means _____ the movement of the rudder is accomplished.**

A. by which .
B. to which
C. in which
D. at which

112. **The required rudder angle is transmitted hydraulically or electrically from the steering wheel at the bridge to the _____ at the steering gear, just above the rudder.**

A. transmitter
B. tele-motor .
C. hydraulic ram
D. hydraulic cylinder

113. **In the variable delivery pump, moving the spindle more from the central point will cause _____ fluid to be pumped and consequently _____ pressure is generated to drive the rams.**

A. more / more .
B. more / less
C. less / more
D. less / less

114. **Certain requirements must currently be met by a ship’s steering systemThere must be _____ independent means of steering, although where two identical power units are provided, an auxiliary unit is not required.**

A. one
B. two .
C. three
D. four

115. **The power and torque capability of the steering system must be such that the rudder can be swung from _____ one side to_____ the other side with the ship at maximum speed.**

A. 35° / 35° .
B. 35° / 30°

C. 15° / 15°
D. 28° / 60°

116. **Care must be taken to condition the _____ in the boiler to prevent scaling, and corrosion, which can weaken the pressure vessel.**
A. water .
B. fuel
C. steam
D. air

117. **The steam boiler is part of a closed loop steam, whereby, after the energy of the steam is used up and it becomes water again, _____ is collected and returned back to the boiler for heating up again to steam.**
A. the former
B. the first
C. the latter .
D. the last

118. **Humans are still needed to monitor the condition of the boiler all the time the latter is operated, _____ it is just to acknowledge an alarm buzzer or flashing light in a control room.**
A. even if .
B. so that
C. such that
D. in order that

119. **The rising velocity of the globules carries them upwards where they become trapped by the under surfaces of plates and _____ until the enlarged globules have sufficient rising velocity to travel along the plate surface and break away at periphery.**
A. disperse
B. coalesce .
C. compress
D. shrinkage

120. **The pump used to send the bilge water into the oily water separator_____ the mixture because this might create finer oil particles.**
A. should agitate
B. should not agitate .
C. should mix up
D. should not add up

121. **_____ is a function of the reactive / resistive characteristics of the load items and cannot be adjusted by manipulating the alternator control devices.**
A. Power factor .
B. Power ratio
C. compression ratio
D. Compression factor

122. **_____ is an opening for supplying seawater to condensers, pumps, etclocated in the hull below the waterline and having means for the attachment of associated piping.**

A. SEA CHEST .
B. SCUPPER
C. SCUTTLE
D. SEA PORT

123. **A ship designed for carrying goods requiring refrigeration is called _____.**
A. REEFER .
B. RO/RO SHIP
C. CONTAINER
D. TANKER

124. **_____ is a series of trials done at sea to determine whether the ship has met the specifications of design, modification, or repair.**
A. SEA WORTHINESS
B. SEA TRIALS .
C. TRIAL-AND-ERROR
D. DOCK TRIALS

125. **Zinc rods are installed in the refrigeration system .**
A. liquid strainer
B. liquid receiver
C. saltwater condenser .
D. evaporator

126. **Accidental flooding of the engine room bilges by the bilge main is prevented by .**
A. stop-check valves installed in the bilge manifolds .
B. using a positive displacement reciprocating bilge pump
C. installing eductors in all bilge rose boxes
D. installing a swing check before each bilge valve

127. **In a refrigeration system, if the cooling water to the condenser fails, the .**
A. box temperature solenoid valve will close
B. expansion valve will close
C. compressor will shutdown .
D. king valve will open

128. **When adding oil to a refrigeration system, precautions must be taken to ensure that .**
A. the compressor suction pressure is not too high
B. all air is purged from the pump and charging fittings .
C. the high pressure cutout switch is held open to prevent accidental starting
D. the condenser is completely shutdown first

129. **To add refrigerant to the high side of an air conditioning system, you should introduce the refrigerant through the .**
A. discharge service valve as a vapor
B. suction service valve as a liquid
C. charging valve as a liquid .
D. condenser purge valve as a vapor

130. **When a refrigeration compressor is in the ‘off’ cycle, the thermal expansion valve will .**
A. always be wide open when the compressor restarts
B. continue to operate as if the system were in operation .
C. remain open until evaporator pressure equalizes, then close until the compressor restarts
D. always be completely closed until the compressor restarts

131. **A solenoid valve used in a refrigeration system should be installed .**
A. with the axis of the solenoid horizontal, sensing temperature of the box, and upstream of the thermal expansion valve
B. upright, sensing temperature of the box, and upstream of the thermal expansion valve .
C. upright, sensing temperature of the box, and downstream of the thermal expansion valve
D. upright, sensing heat of the tail coil, and upstream of the thermal expansion valve

132. **Main steam and exhaust pipes for winches and similar gear shall not pass through crew accommodation nor, whenever technically possible, through alleyways leading to crew accommodation; where they do pass through such alleyways, they shall be adequately .**
A. ventilated and tagged
B. ventilated and cooled down
C. insulated and encased .
D. insulated and warmed up

133. **The ____ is used to handle the cargo.**
A. steering gear
B. windlass
C. deck crane .
D. warping drum

134. **_____ belongs to the cargo handling equipment.**
A. cargo winch .
B. chain lifter
C. cable stopper
D. windlass

135. **The ____ is used to handle the anchor.**
A. steering gear
B. windlass .
C. deck crane
D. warping drum

136. **The _____belongs to the anchor handling equipment.**
A. chain lifter .
B. winch barrel
C. slewing rim
D. warping dru

137. **The _____belongs to the anchor handling equipment.**
A. cable stopper .
B. winch barrel

C. slewing rim
D. warping drum

138. **_____ belongs to the anchor handling equipment.**
A. jib stopper
B. winch barrel
C. slewing rim
D. windlass .

139. **The ____ is used to handle the ropes and wires.**
A. steering gear
B. windlass
C. deck crane
D. warping drum .

140. **The _____ belongs to the mooring equipment.**
A. steering gear
B. windlass
C. deck crane
D. warping drum .

141. **The air filter is fixed in the ____ of an air compressor.**
A. inlet pipe .
B. outlet pipe
C. inter cooler
D. after cooler

142. **The ____ stage air compressors are widely used on board the ship.**
A. single
B. II .
C. III
D. multiple

143. **The air compressor pumps air to the _____.**
A. air cylinder .
B. combustion chamber
C. steam drum
D. expansion tank

144. **The air compressor pumps air to the _____.**
A. expansion tank
B. combustion chamber
C. air receiver .
D. evaporator

145. **The air compressor pumps air to the_____**
A. engine cylinder
B. air bottle .

C. evaporator
D. condenser

146. **Before starting an air compressor, It should be _____.**
A. turned
B. oil level checked .
C. filled with water
D. A and B

147. **Before starting an air compressor, It should be _____.**
A. unloaded .
B. primed
C. filled with water
D. greased

148. **During working of an air compressor, _____ should be drained .**
A. inter cooler .
B. cylinder
C. outlet pipe
D. inlet pipe

149. **During working of an air compressor, _____ should be drained .**
A. oil sump
B. oil separator .
C. outlet pipe
D. inlet pipe

150. **Supply the _____before starting an air compressor.**
A. fuel oil
B. cooling water .
C. steam
D. power

151. **Open the _____before starting an air compressor.**
A. unload valve .
B. cooling water
C. oil cup
D. sump

152. **Open the _____of inter cooler before starting an air compressor.**
A. cylinder cover
B. cooling water
C. oil cup
D. drain valve .

153. **A centrifugal pump can’t supply water after startingYou should check ____.**
A. priming water .
B. power supply

C. packing gland
D. bearing lubrication

154. **When start a screw pump, the by pass valve should be ____.**
A. closed
B. opened fully .
C. cracked open
D. partly open

155. **When starting a centrifugal pump, the discharge valve should be ____.**
A. closed .
B. opened fully
C. cracked open
D. partly open

156. **When starting a reciprocating pump, the inlet valve should be ____.**
A. closed
B. opened fully .
C. cracked open
D. partly open

157. **The ____pump is usually used as the emergency bilge pump.**
A. turbine
B. screw
C. vane
D. ejector .

158. **The ____pump is usually used as the bilge feed pump to an oily water separator.**
A. turbine
B. screw .
C. vane
D. ejector

159. **A mixed-flow pump is a _____ pump classified by the working principle.**
A. self priming
B. positive displacement
C. reciprocating
D. impeller .

160. **Dress up the _____.**
A. keyway .
B. shaft
C. valve
D. casing

161. **A water pump can not supply water after startingIt may be caused by _____.**
A. closed discharge valve
B. broken pipe line

C. worn shaft
D. both A and B .

162. **The younger motorman as well as the others ___ to operate the oil separator.**
A. has learnt .
B. have learnt
C. learn
D. are learning

163. **Which pump is the self-priming pump?**
A. turbine
B. centrifugal
C. ejector .
D. mixed flow

164. **Close the _____.**
A. keyway
B. shaft
C. packing
D. valve .

165. **When an auxiliary boiler is panting and emitting black smoke, you should _____.**
A. increase the fuel oil temperature
B. decrease the fuel oil temperature
C. decrease the fuel oil supply pressure
D. increase the air supply.

166. **Hydraulic pumps most commonly used in steering systems are of the _____.**
A. lobe type
B. screw type
C. axial piston type .
D. volute type

167. **_____ sometimes called filter, is a device designed to prevent the passage of unwanted solids into the system.**
A. Steam trap
B. Check valve
C. Separator
D. Strainer .

168. **The reciprocating pump can’t draw water from a tank may be caused by _____.**
A. leaky pipe .
B. opened inlet valve
C. too much water in tank
D. None of the above

169. **The _____pump is usually used as the lubricating oil pump.**
A. turbine
B. screw .

C. vaneejector
D. centrifugal

170. **The _____is not a component of an oil separator.**
A. sliding bowl bottom
B. gravity disc
C. separating disc
D. scum valve .

171. **The _____is fitted on an oily water separator.**
A. sliding bowl bottom
B. gravity disc
C. bowl
D. liquid level detector .

172. **In _____the control action is independent on the output.**
A. a closed loop control system
B. an open loop control system .
C. a boiler control system
D. a steering gear

173. **The bearing cap and shell are replaced and tightened up until _____.**
A. the “ nip ” is zero .
B. the “ nap ” is zero
C. the “ gap ” is correct
D. the “ clearance ” is correct

174. **Duty officer informs us that the vessel is out of harbor and in “Full Ahead” We are going to run _____.**
A. diesel oil instead of fuel oil
B. fuel oil instead of diesel oil .
C. diesel oil instead fuel oil
D. fuel oil instead diesel oil

175. **The _____has a water damp ring.**
A. purifier .
B. oil/water separator
C. incinerator
D. distiller

176. **The operating water is supplied under the _____of an oil separator.**
A. sliding bowl bottom .
B. bowl hood
C. bowl
D. filter units

177. **The flame safeguard control system of a large automatic auxiliary boiler will provide fuel shut off in the case of high _____.**
A. water

B. voltage
C. fuel pressure
D. steam pressure .

178. **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? .**
A. Chilled water system supply temperature.
B. Chilled water system return temperature
C. Compressor discharge temperature
D. Compressor suction pressure

179. **Which of the materials listed is used as the dynamic seal material on mechanical seals installed on most centrifugal pumps used in water service?**
A. Copper
B. Copper and carbon
C. Carbon .
D. Bronze

180. **Which of the following actions should be taken if during a routine maintenance inspection of a centrifugal pump, localized scoring on a pump shaft sleeve is detected? .**
A. Correct the cause of the scoring and repair the sleeve or replace with a new one.
B. Reassemble the unit and provide more water leak off for proper lubrication
C. Check for parallel alignment of the sleeve radial faces to the sleeve bores
D. Reassemble the unit and adjust the governor to obtain a slower speed

181. **An exhaust gas bypass is installed on a waste heat boiler in order to _____.**
A. bypass exhaust gas at high loads to prevent excessive back pressure
B. bypass a portion of the exhaust gas at peak loads for better efficiency
C. recycle exhaust gas to the turbocharger
D. minimize moisture condensation in the boiler gas passages at low loads .

182. **If one of the bilge system manifold valves does not properly seat, the _____.**
A. bilge well connected to that valve, plus the second bilge well being pumped will be completely emptied
B. bilge system will lose vacuum and prevent the other bilges from being pumped out .
C. bilge well aft connected to that valve will siphon its contents to the forward bilge wells
D. discharge pressure will be too high

183. **A re-heater in an air conditioning system functions to _____.**
A. control inlet air temperature
B. control inlet air volume
C. maintain relative humidity at 15%
D. restore conditioned air temperature to a comfortable level .

184. **In a chilled water air conditioning unit using a reciprocating compressor, the refrigerating effect of the primary refrigerant can be increased by _____.**
A. increasing refrigerant pressure in the coil
B. increasing chilled water flow through the cooler

C. sub-cooling the refrigerant in the condenser .
D. superheating the refrigerant in the compressor

185. **Sludge may form in the lubricating oil crankcase of a reciprocating air conditioning compressor as a result of _____.**
A. wax precipitation in the lube oil
B. contamination by dust, scale, or moisture .
C. refrigerant bubbles in the lube oil
D. refrigerant reducing the lube oil viscosity

186. **Which is the pollution prevention equipment?**
A. booster pump
B. evaporator
C. incinerator .
D. cooler

187. **The _____is used to burn oil sludge.**
A. clarifier
B. oil/water separator
C. incinerator .
D. distiller

188. **The advantages of flash type evaporators, as compared to submerged tube type evaporators, include _____.**
A. less internal corrosion because of lower brine density
B. higher temperature evaporation for lower salinity of the distillate produced
C. less scale formation in a flash evaporator .
D. less feed-water required for a flash evaporator

189. **The clutch band of a constant tensioning mooring winch must be set up tight enough to drive the winch drum and should slip only when _____.**
A. excessive loads are placed on the winch .
B. minimum pull is being exerted by the winch
C. automatic operation of the winch is desired
D. wire is being retrieved at the maximum rate

190. **During bunkering, the request for stoppage of pumping shall be made, as a rule, 5 minutes _____.**
A. ago
B. before
C. ahead .
D. front

191. **I remember _____ the oil separator the day before yesterdayBut it failed again.**
A. to repair
B. to be repaired
C. repairing .
D. being repaired

192. **The motor for the fresh water pump _____.**
A. need to repair
B. need to be repaired
C. needs to repair
D. needs repairing .

193. **If a hydraulic pump is overheating, the cause may be __.**
A. excessive internal leakage in the pump .
B. low discharge pressure and fluid flow
C. excessive fluid level in the hydraulic reservoir
D. operation of the pump at 100% efficiency

194. **When a sudden increase in steam demand comes to normal, the drum pressure will and water level in the drum will .**
A. rise, rise also
B. rise, drop .
C. drop, rise
D. drop, drop also

195. **An indicator on the main switchboard should show _____ the emergency battery is in service or not.**
A. that
B. when
C. if
D. whether .

196. **When the bearing becomes dry from lack of oil, the motor shaft may heat to _____ an extent _____ it welds itself to the bearing.**
A. either/or
B. neither/nor
C. such/that .
D. so/that

197. **While the parallel operation, ____ must be used.**
A. ammeter
B. voltmeter
C. synchroscope
D. A+B+C .

198. **Before doing maintenance on electrical equipment, you should ____.**
A. turn off power first .
B. turn on power first
C. with a test pen in hand
D. tell C/E

199. **Tools with ____handles should be used to check electric circuit.**
A. plastic .
B. metal

C. stainless steel
D. copper

200. **How do you treat someone suffering from electrical shock after you secure the source? .**
A. check for respiration
B. check for pulse
C. treat for shock
D. All of the above.

201. **It is well known that the whole power distribution of the ship’s electrical services mainly depend on the_____.**
A. sub-boards
B. main switchboards .
C. emergency switchboards
D. distribution boards

202. **We prefer all the spare parts _____ on board before departure.**
A. to send
B. to be sent .
C. for being sent
D. being to send

203. **Upon arrival at a port, a vessel is not allowed _____ her ballast water, tanker washings or bilge water and other oily water at will.**
A. to discharge .
B. to be discharged
C. discharging
D. being discharged

204. **_____ in the engine room, the motormen could hardly talk each other.**
A. To work
B. Working .
C. Having worked
D. worked

205. **Tell your men _____ the rules and procedures of working when dismantling the equipment.**
A. not to go against .
B. don’t go against
C. not go to against
D. to not go against

206. **_____, the metal expands.**
A. Heats
B. Heating
C. To heat
D. Heated .

207. **The following engine parts are found damaged and we are about to _____ compensation from the shipyard.**

A. claim to
B. claiming to
C. claim for .
D. claiming for

208. **_____ to damage the protective coating on the inner side of the shell.**
A. Care to be not taken
B. Care not to be taken
C. Care to be taken not .
D. Not care to be taken

209. **Now that the valve is not worth _____, I suggest it _____.**
A. to repair/to renew
B. repairing/be renewed .
C. repairing/will be renewed
D. to repair/to be renewed

210. **After he _____ the test, the engineer put down the results.**
A. has finished
B. finishes
C. had finished .
D. would finish

211. **The chief engineer suggests that the second engineer _____ a dead line for handing in the work plan.**
A. will set
B. shall set
C. set .
D. sets

212. **Let H _____ the quantity of heat which has been converted into mechanical work.**
A. represent .
B. represents
C. representing
D. being represented

213. **We’ ve tried many ways, but all in vainOnly in this way, _____ the problem, I’ m sure.**
A. can we solve .
B. we can solve
C. we will solve
D. can we solved

214. **If you _____ the equipment more carefully before sail, we _____ so much trouble now.**
A. examined, are not having
B. had examined, would not have
C. had examined, would not have had .
D. should examine, would not have

215. **Convection is the principal means _____ temperature is equilibrated in liquids and gases.**
A. in which
B. on which
C. by which .
D. from which

216. **_____ the bodies are, _____ the friction will be.**
A. The smoother/the greater
B. Smoother/less
C. The rougher/ the greater .
D. rougher/greater

217. **_____, the motion would continue indefinitely once it had started.**
A. Were there loss of energy by friction
B. Since there be loss of energy by friction
C. Were there no loss of energy by friction .
D. Should be no loss of energy by friction

218. **_____, remedies must be taken to stop it as early as possible.**
A. Any surge occurs
B. Any surge occurred
C. Should any surge occur .
D. Should any surge occurring

219. **The certificate for the refrigerating plant will ____soonI’d like to extend its validation now.**
A. update
B. finish
C. outdated
D. expire .

220. **It has something _____ with poor workmanship and assembly, doesn’t it?**
A. do
B. to do .
C. done
D. doing

221. **The above-mentioned damage has caused from improper fitting so that we _____ you _____ for making compensation.**
A. hold/responsibility
B. ask/responsibility
C. hold/responsible .
D. require/responsible

222. **The annual repair of this year will _____ at the end of this monthPlease get everything ready.**
A. take place .
B. take over
C. carry out
D. carry over

223. **The _____ of the life-raft is sufficient for all of you.**

A. capacity .
B. visibility
C. reliability
D. ability

224. **According to our calculation there is shortage of ten tons of oil compared with yoursI can't sign the oil _____.**

A. sample
B. receipt .
C. record
D. quantity

225. **Please give us your quotations _____ you receive the additional repair list.**

A. as soon as .
B. as well as
C. as soon as possible
D. as early as possible

226. **I would have gone ashore with the second engineer, if I _____ time.**

A. have had
B. had have
C. had had .
D. would have had

227. **By this time tomorrow, the ship _____ its repair work in the engine room.**

A. will do
B. has done
C. had done
D. will have done .

228. **I am sorry _____ waiting for a long time.**

A. to keeping you
B. to kept you
C. to have kept you .
D. kept you

229. **It is no _____ arguing about this problem, because our agent will never change his mind.**

A. help
B. good
C. use .
D. worth

230. **Our company has built a new ship in Hamburg and I am going to fly there to _____.**

A. hand it over
B. take it over .
C. carry it over
D. carry it out

231. **If the surveyors _____ yesterday, they would have finished the survey work.**
A. did not interrupt
B. were not interrupted
C. had not interrupted
D. had not been interrupted .

232. **If there are _____ in the repair work, please come to our duty engineer at once.**
A. any problem
B. some problem
C. any problems .
D. some problems

233. **An engineer, together with some motormen _____ to help in the repair work.**
A. send
B. sends
C. was sent .
D. were sent

234. **It is obvious that the expansion of the water _____ the increase of its temperature.**
A. is due to .
B. dues to
C. is because
D. is for

235. **Every precaution must be taken to avoid _____.**
A. sparking being taking place
B. to spark taking place
C. sparking to be taken place
D. sparking taking place .

236. **When was your ship built? _____ is a new oneShe was delivered to us by Bremen Shipyard only three months ago.**
A. Ours .
B. Ours ship
C. Our’s ship
D. Our’s

237. **A moving object will not accelerate or decelerate _____ a force is applied to it.**
A. whether
B. if
C. unless .
D. till

238. **We still do not know _____.**
A. where is the trouble
B. where does the trouble
C. where the trouble lies .
D. what is the trouble

239. **There is too much water in the fuelIt doesn’t _____ to the specifications.**
A. come from
B. come in
C. come out
D. come up .

240. **Our ship often comes to this little port and stays here for _____.**
A. sometime
B. some time .
C. sometimes
D. some times

241. **I am afraid you can’t dismantle the equipment in that way _____.**
A. in the case
B. in any case .
C. in no case
D. in case

242. **Tell the engineer on duty to keep close watch over the machine _____ temperature is sometimes a bit too high.**
A. which
B. what
C. that
D. whose .

243. **Rounds _____Everything is in good order.**
A. operated
B. made .
C. run
D. done

244. **We have just repaired the motorRemember _____ to it during your watch.**
A. to pay attention .
B. paying attention
C. pay attention
D. your paying attention

245. **The second engineer seemed to know what the sign _____.**
A. stand by
B. stand for
C. stood by
D. stood for .

246. **The accident resulted _____ the motorman’s carelessness.**
A. in
B. to
C. from .
D. by

247. **When we arrived here yesterday, their ship _____ for three days.**
A. has left
B. had left
C. has been away
D. had been away .

248. **This machine _____ out of order very often, but now it works well.**
A. is used to be
B. was used to be
C. used to be .
D. was used to

249. **We’d better _____ economic speed _____ fuel consumption.**
A. take/save
B. to take/save
C. take/to save .
D. to take/to save

250. **We have stayed at Shanghai port for a long timeThe fouling on the ship’s hull greatly increases her _____.**
A. power
B. speed
C. resistance .
D. thrust force

251. **The officer in charge of the engineering watch shall continue to be responsible for machinery operations, _____ the presence of the chief engineer in the machinery space.**
A. as long as
B. unless
C. despite .
D. till

252. **The officer in charge of the engineering _____ the watch to the reliving officer if there is reason to believe that the latter is obviously not capable of carrying out the watch-keeping duties effectively.**
A. shall take over
B. shall not take over
C. shall hand over
D. shall not hand over .

253. **Changes in direction or speed of the main propulsion units shall be recorded, _____ an Administration has determined that the size or characteristics of a particular ship make such recording impracticable.**
A. in addition to
B. in addition that
C. except for
D. except where .

254. **_____, the second one will start automatically.**
A. If the first stand-by set failed
B. If the first stand-by set fails .
C. If the first stand-by set will fail
D. If the first stand-by set doesn’t fail

255. **The fire drill must, as far as practicable, be conducted if _____.**
A. there is a minor emergency
B. there is an actual emergency
C. there were a minor emergency
D. there were an actual emergency .

256. **The bedplate must be flexible enough to hog and sag with the foundation plate _____ it is attached and which forms part of the ship’s structure.**
A. in which
B. on which
C. to which .
D. by which

257. **If the bedplate was too rigid, then as the hull flexed, the _____, which secure the engine into the ship would be likely to break, and there would be a danger of the bedplate cracking.**
A. through bolts
B. jack bolts
C. holding down bolts .
D. tap bolts

258. **The trend nowadays is to build the frame box as a separate fabricated construction and then, after stress relieving and machining the mating surfaces, to mount it on the _____This has the advantage of saving weight.**
A. seating
B. bedplate .
C. entablature
D. cylinder block

259. **However fast or slow the combustion rate, it is still a _____ between carbon, hydrogen, sulphur and oxygen that releases heat.**
A. physical deformation .
B. state exchange
C. chemical reaction
D. coalescence

260. **_____ is put into use in the late years to maintain a preset tension in a mooring line after a ship has been tied up at a pier.**
A. The large-tension mooring
B. The small-tension mooring
C. The variable-tension mooring
D. The constant-tension mooring .

261. **In the constant-tension mooring, the mooring lines holding the ship to the pier will maintain a constant tension even with changes in tide or ship’s draft, _____.**

A. without the necessity of manually adjusting the lines .
B. without the necessity of automatically adjusting the lines
C. with the necessity of manually adjusting the lines
D. with the un-necessity of automatically adjusting the lines

262. **_____ conveys a signal of desired rudder angle from the bridge and activates the power unit and transmission system unit the desired angle is reached.**

A. The control equipment .
B. The power unit
C. The transmission system
D. The follow-up mechanism

263. **The“person in the phrase ”to designate a person or persons ashore having direct access to the highest level of management” refers to _____.**

A. the manager of the shipping company
B. the master of the ship
C. the designated person on board ship
D. the designated person ashore .

264. **The term “the Company” in the ISM Code is defined as _____.**

A. the ship owner
B. any person who has assumed responsibility for operating the ship
C. either A or B .
D. neither A nor B

265. **The safety management objectives of the ISM Code are _____.**

A. to provide for safe practices in ship operation and a safe working environment
B. to establish safeguards against all identified risks
C. to continuously improve safety management skills of personnel, including preparing for emergencies
D. all the above .

266. **Preventive maintenance _____.**

A. should not be carried out during the watches
B. can only be carried out in port
C. is a kind of maintenances carried out prior to the occurrence .
D. is a kind of maintenances carried out after the occurrence

267. **“In times of heavy weather, it is extremely dangerous if manning is very short.” This sentence means _____.**

A. In times of heavy weather, it is extremely dangerous if a seaman is not enough tall
B. In times of heavy weather, it is extremely dangerous if a crew is very short
C. In case of bad weather, it is particularly dangerous if there is a shortage in personnel .
D. In case of bad weather, it is particularly dangerous if there are enough personnel

268. **“Any leaks in piping, propeller shaft, machinery, tanks, will have to be repaired, or at least patched up temporarily until the next stop.” This sentence means that _____.**

A. Any leaks in piping, propeller shaft, machinery, tanks, will have to be repaired on the spot

B. Any leaks in piping, propeller shaft, machinery, tanks, will have to be repaired on the next port of call

C. Any leaks in piping, propeller shaft, machinery, tanks, will have to be repaired until the next stop

D. Any leaks in piping, propeller shaft, machinery, tanks, will have to be at least patched up .

269. **0271The word "critical" in the sentence "This is a critical period as any loss of propulsion, or steering, can lead to collision, grounding, or other damage to the ship." can be best replaced by _____.**

A. dangerous .

B. best

C. bad

D. important

270. **All of the followings are orders between the bridge and the engine room except _____.**

A. One-hour notice .

B. Dead slow ahead

C. Finished with engines

D. Half astern

271. **"AMIDSHIPS" refers to _____.**

A. back of the vessel

B. the middle portion of a ship .

C. a backward movement of a vessel

D. across the ship, at right angles to the fore-and-aft centerline

272. **The depth of the ship below waterline measured vertically to the lowest part of the hull is called _____.**

A. trim

B. lean

C. draft .

D. tonnage

273. **All of the followings are the detainable deficiencies under the SOLAS Convention expert .**

A. Failure of proper operation of propulsion and other essential machinery, as well as electrical installation

B. Failure of the proper operation of the main and auxiliary steering gear

C. Failure of engineering watch arrangements to confirm to the requirements specified for the ship by Administration.

D. Failure of the proper operation of emergency generator, lighting, batteries and switches

274. **is considered to be one of the detainable deficiencies under the STCW Convention.**

A. Absence, substantial deterioration or failure of proper operation of the cargo deck area fire protection on tanker

B. Absence, non-compliance or serious deterioration of lights, shapes or sound signal

C. Absence or failure of proper operation of the radio equipment for distress and safety communication

D. Absence in a watch of a person qualified to operate equipment essential to safe navigation, safety radio communications or the prevention of marine pollution .

275. **“Inability to provide for the first watch at the commencement of a voyage and for subsequent relieving watches persons who are sufficiently rested and otherwise fit for duty” is considered to be one of the detainable deficiencies under .**

A. the SOLAS Convention
B. the MARPOL Convention
C. the STCW Convention .
D. the LIAD LINE Convention

276. **STCW78/95 states that the office in charge of the engineering watch is the representative .**

A. ship-owner’s
B. master’s
C. chief engineer’s .
D. manager’s

277. **When deciding the composition of the engineering watch, which may include appropriately, many factors shall be taken into account.**

A. satisfied engineers
B. qualified ratings .
C. satisfied chief engineer
D. qualified chief engineer

278. **When deciding the composition of the engineering watch, which may include appropriately qualified ratings, following criteria shall be taken into account Ⅰ.the type of ship Ⅱ.the type and condition of the machineryⅢthe safety of life, ship, cargo and portⅣ.the observance of international, national and local regulations.**

A. Ⅰ+Ⅱ
B. Ⅱ+Ⅲ
C. Ⅱ+Ⅲ+Ⅳ
D. Ⅰ+Ⅱ+Ⅲ+Ⅳ .

279. **All member of the engineering watch shall be familiar with assigned watch-keeping dutiesIn addition, every member shall, with respect to the ship they are serving in have knowledge of Ⅰthe use of appropriate internal communication systems Ⅱthe use of GMDSSⅢthe escape routes from machinery spaceⅣthe number location and types of fire-fighting equipment in the machinery spaces.**

A. Ⅰ+Ⅲ+Ⅳ .
B. Ⅱ+Ⅲ+Ⅳ
C. Ⅲ+Ⅳ
D. Ⅰ+Ⅱ+Ⅲ+Ⅳ

280. **When the machinery spaces are in the periodic unmanned condition, shall be immediately available and on call to attend the machinery space.**

A. the chief engineer
B. the designated engineer from shipyard
C. the designated duty officer in charge of the engineering watch .
D. the designated surveyor from classification society

281. **The officer in charge of the engineering watch shall notify the chief engineer without delay .**
A. in any emergency or if in any doubt as to what decision or measures to take .
B. in the event of any impending action in machinery spaces that may cause reduction in ship’s speed
C. when isolating and bypassing machinery to be worked on
D. co-operating with any engineer in charge of maintenance work

282. **When the ship is in restricted visibility, the officer in charge of the engineering watch shall ensure that Ⅰ Bridge order relating to changes in speed or direction of operation are immediately implemented Ⅱ .auxiliary machinery used for maneuvering is readily available Ⅲ.permanent air or steam pressure is available for sound signals.**
A. Ⅰ + Ⅱ
B. Ⅰ +Ⅲ
C. Ⅱ +Ⅲ
D. Ⅰ + Ⅱ +Ⅲ .

283. **The International Sewage Pollution Prevention Certificate shall be issued for a period specified by the Administration, which shall not exceed from the date of issue.**
A. six months
B. one year
C. three year
D. five years .

284. **The Convention is the first to establish basic requirements on training certification and watch-keeping for seafarers on an international level.**
A. STCW78 .
B. STCW95
C. SOLAS74
D. SOLAS88

285. **One of the major features of the STCW95 is the adoption of a new STCW Code, to which many have been transferred.**
A. safety regulations
B. technical regulations .
C. minimum requirements
D. standard requirements

286. **The Garbage Record Book, as a part of the ship’s official logbook, shall be kept on board and preserved for a period of .**
A. 3 years after making the first entry
B. 2 years after the last entry .
C. 3 months after last entry
D. 3 years after the last entry

287. **The flash point of a petroleum product is an indication of its .**
A. viscosity
B. pour point
C. volatility .
D. lower explosive limit

288. **The flash point of a liquid refers to the temperature .**

A. at which a liquid will give off inflammable vapors .
B. at which a liquid will burn steadily
C. at which a liquid will explode
D. that a liquid must reach before it will flow readily

289. **What is the harmful effect of sulfur in a fuel?**

A. It causes excessive smoking and soot at low firing rates
B. It doesn't readily burn when combined with oxygen
C. It clogs fuel oil strainers more often
D. It forms a corrosive acid when mixed with water or water vapor.

290. **The maximum Blood Alcohol Concentration (BAC) rate on board shall not be more than by weight any time when being testedBut watch-keepers are not allowed to drink any alcoholic beverage before their watch.**

A. 0.08% /4 hours .
B. 0.008%/2 hours
C. 0.04%/4 hours
D. 0.04%/2 hours

291. **The Port State Control officer may witness a fire drill carried out by the crew assigned to these duties on the .**

A. Navigation Log Book
B. Engine Room Log Book
C. Oil Record Book
D. Muster List .

292. **Your ship's certificates show that you did not do renewing work for certificateAll certificates have expired a few days beforeThus, your ship is It follows therefore that she will .**

A. seaworthy/ be fined in our port
B. un-seaworthy/ be disassembled in our port
C. seaworthy/ be assembled in our port
D. un-seaworthy / be detained in our port .

293. **During PSC inspection related to the ISM Code, of the Safety Management System (SMS) should be carried out if clear grounds are established.**

A. a less favorable inspection
B. a more favorable inspection
C. a less detailed inspection
D. a more detailed inspection .

294. **The additional mark _____ in the Classification Certificate for Machinery represents the propulsion apparatus is remotely controlled on the navigating bridge control station, and engine room is watched by duty personnel.**

A. BRC .
B. MCC
C. AUT-0
D. AUT-1

295. **The additional mark _____ in the Classification Certificate for Machinery means propulsion apparatus is remotely controlled on the navigating bridge control station, and engine assembly control station is watched by duty personnel.**

A. BRC
B. MCC
C. AUT-0
D. AUT-1 .

296. **The additional mark _____ in the Classification Certificate for Machinery represents that personnel are watching at engine assembly control station and monitoring all machinery and electronic devices.**

A. BRC
B. MCC .
C. AUT-0
D. AUT-1

297. **The additional mark _____ in the Classification Certificate for Machinery means propulsion apparatus is remotely controlled on the navigating bridge control station, and engine assembly control station is unmanned periodically.**

A. BRC
B. MCC
C. AUT-0 .
D. AUT-1

298. **_____ means the level for which minimum appropriate protective security measures shall be maintained at all times, threats and exchanging such information with appropriate Contracting Governments.**

A. Security level 1 .
B. Security level 2
C. Security level 3
D. Lowest safety level

299. **_____ means the level for which appropriate additional protective security measures shall be maintained for a period of time as a result of heightened risk of a security incident.**

A. Security level 1
B. Security level 2 .
C. Security level 3
D. Medium safe level

300. **_____ means the level for which further specific protective security measures shall be maintained for a limited period of time when a security incident is probable or imminent, although it may not be possible to identify the specific target.**

A. Security level 1
B. Security level 2
C. Security level 3 .
D. Highest safety level

301. **_____ means a plan developed to ensure the application of measures on board the ship designed to protect persons on board, cargo, cargo transport units, ship’s stores or the ship from the risks of a security incident.**

A. Ship security plan .
B. Company security plan
C. Port facility security plan
D. National security plan

302. **_____ means a plan developed to ensure the application of measures designed to protect the port facility and ships, persons, cargo, cargo transport units and ships stores within the port facility from the risks of a security incident.**

A. Ship security plan
B. Company security plan
C. Port facility security plan .
D. National security plan

303. **_____ means the person on board the ship, accountable to the master, designated by the Company as responsible for the security of the ship, including implementation and maintenance of the ship security plan and for liaison with the company security officer and port facility security officers.**

A. Ship security officer .
B. Company security officer
C. Port facility security officer
D. PSC officer

304. **_____ means the person designated by the Company for ensuring that a ship security assessment is carried out; that a ship security plan is developed, submitted for approval, and thereafter implemented and maintained and for liaison with port facility security officers and the ship security officer.**

A. Ship security officer
B. Company security officer .
C. Port facility security officer
D. PSC officer

305. **_____ means the person designated as responsible for the development, implementation, revision and maintenance of the port facility security plan and for liaison with the ship security officers and company security officers.**

A. Ship security officer
B. Company security officer
C. Port facility security officer .
D. PSC officer

306. **Water can’t be used to put out fires of _____.**

A. Class A
B. Class B
C. Class C
D. B+C .

307. **Christopher Columbus ____ eighteen years ____ planning for that wonderful voyage which he made across the Atlantic Ocean.**

A. spends/in
B. spent/on
C. has spent/on
D. had spent/in .

308. **The ship should be operated by a company which is issued a(an)_____relevant to ship.**

A. ISM
B. DOC .
C. SMC
D. PSC

309. **A(An)_____ should be issued for every company complying with the requirement of the ISM Code by the Administration.**

A. ISM
B. DOC .
C. SMC
D. PSC

310. **A certificate, called a(an) _____ ,should be issued to a ship by the Administration.**

A. ISM
B. DOC
C. SMC .
D. PSC

311. **During port state control inspection, the detention report should be made in accordance with the format in appendix 5 of _____ Resolution A 787(19).**

A. ISM Code
B. PSC
C. STCW 78/95
D. IMO .

312. **According to the functional requirements for a Safety Management System, every company should develop, _____ and _____ a SMS.**

A. implement/verify
B. maintain/improve
C. implement/maintain .
D. review/access

313. **Under the provisions of applicable international conventions, the officers to conduct port state control inspection must be duly authorized by _____.**

A. the company
B. the Government of the country .
C. the organization recognized by the Administration
D. the IMO

314. **A Document of Compliance differs from a Safety Management Certificate in that the former is issued to _____ by the Administration.**

A. a ship
B. a company .
C. a charterer
D. a manager

315. **International Management Code for the safety operation of ships and for pollution prevention is simplified as _____.**
A. ISM Code .
B. SOLAS 74 Convention
C. Safety Management System
D. MARPOL Convention

316. **If the PSCO has clear grounds for carrying out a more detailed inspection, _____ should be immediately informed of these grounds.**
A. the master .
B. the chief engineer
C. the owner of the ship
D. the manager who assumes the responsibility for operation of the ship

317. **During inspection of oil and oily mixtures from machinery spaces, which of the following factors should be taken into account by the PSCO? .**
A. The quantity of oil residues generated
B. The capacity of sludge and bilge water holding tank
C. The capacity of the oily water separator
D. All of the above .

318. **The PSCO would be justified in making a detailed inspection of all life-saving appliances, if he sees that _____.**
A. the survival craft launching equipment have never been used
B. the pivot points are seized
C. the lashing or stowing of deck cargo is improper
D. All of the above signs are evident .

319. **When the PSCO would like to witness a fire drill carried out by the crew, he should consult _____ to locate a simulated fire.**
A. the manager of the company
B. the surveyor of the Classification Society
C. the master of the vessel .
D. the chief engineer of the vessel

320. **During inspection of the machinery space, which of the following statements points to an unsatisfactory organization of the systematic maintenance?**
A. missing valve hand wheels
B. dirty tank tops
C. a large number of temporary repairs
D. All of the above.

321. **During port state control inspection, if one generator is out of commission, _____ should investigate whether power is available and conduct tests.**

A. the third engineer
B. the PSCO .
C. the surveyor
D. the chief engineer

322. **I find _____.**
A. it is difficult for them to finish the job in time .
B. difficult for them to finish the job in time
C. they have much difficulty to finish the job in time
D. that difficult for them to finish the job in time

323. **Latent heat changes the _____of water.**
A. physical state .
B. temperature
C. atmospheric pressure
D. sensible pressure

324. **The company which is defined in the ISM Code means_____.**
A. the owner of the ship
B. the manager who assumes the responsibility for operation of the ship
C. the bareboat charterer
D. All of the above.

325. **The conventions under which the port state control inspection is carried out include all the following except _____.**
A. SOLAS 74
B. MARPOL 73/78
C. STCW 78/95
D. ISM Code .

326. **If you burned your arm on a bare steam line, the most effective immediate treatment would be to_____.**
A. wrap the arm in a tight bandage
B. soak the arm in hot salt water
C. cover the burn with petroleum jelly
D. put the burn in cold water .

327. **The _____is used to measure power.**
A. ammeter
B. voltmeter
C. wattmeter .
D. frequency meter

328. **Which of the following operations must be entered on the Oil Record Book Part I? IRoutine discharge at sea of bilge water containing oil from the machinery spaces IIBunkering of fuel oil**
A. I only
B. II only
C. both I and II .
D. neither I nor II

329. **Which of the statements listed concerning heat transfer is correct?**
A. Heat is always transferred at a constant rate
B. Heat transfer rate increases as temperature difference increases.
C. The rate of heat transfer is not affected by temperature difference
D. The high temperature region is known as a heat sink

330. **It was _____ midnight that we removed the trouble and went back to our cabin.**
A. until
B. not until .
C. not before
D. not after

331. **The diesel engine consumes considerably less fuel than the steam engine for equal output, _____ enables a motor-ship to load more cargo.**
A. why
B. which .
C. in which
D. on which

332. **The following preparations are essential for any _____ of marine diesel engine before it may be started.**
A. doing
B. make .
C. turn
D. operating

333. **Wear occurring at the tips of the reduction gear teeth is usually the result of _____.**
A. surface fatigue
B. fretting corrosion
C. heavy overloading
D. gear misalignment .

334. **You are unable to pump out the aft starboard engine room bilge well that is fouled, with one foot of water over the top of the bilge well, what action should be carried out?**
A. Send the wiper into the well with only a scoop and pail
B. Remove the bilge manifold valve and attempt to back flush the line.
C. Simultaneously operate all available bilge pumps
D. It is only necessary to transfer half the contents of a drum of degreaser into the bilge well

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336. **Winch gears must be maintained in proper alignment to prevent _____.**
A. overheating of the lube oil
B. over-speeding of the motor

C. wear on the braking system
D. damage to the teeth .

337. **The order " " means "Maximum maneuvering engine revolution for ahead propulsion."**
A. Full Ahead .
B. Half Ahead
C. Full Astern
D. Half Astern

338. **Prior to starting most medium-speed propulsion diesel engines, which of the procedures listed should be observed?**
A. The expansion tank should be topped off
B. The thermostatic water regulating valves should be manually opened
C. The fuel filters should be changed
D. The engine should be turned over slowly with the indicator cocks open.

339. **Personnel who are moving or handling material aboard ship should NOT follow which of the listed practices?**
A. signaling that all personnel are clear before lifting or lowering material
B. Examining material for sharp edges or protruding points before handling
C. Closing, tagging, or securing valves that permit entrance of steam, water, or air into a fitting or other equipment
D. Throwing materials from high places to the deck.

340. **Prior to entering a cargo pump room, you should ensure that _____.**
A. the forced ventilating system is operating .
B. the cargo pumps are secured
C. no monocarbon gases are present
D. the oily water separator is de-energized

341. **When required to work where there may be explosive gases, you should use tools which are .**
A. approved by the Coast Guard
B. high carbon steel
C. fixed with a ferrous cover
D. nonsparking .

342. **Which of the following is not a recommended safe practice?**
A. Securing equipment against slipping or drifting
B. Operating machinery at its recommended speed
C. Repairing loose handles on tools before using
D. Using tools for purpose for which they are not designed.

343. **Which of the following must be eliminated to prevent accidents?**
A. Unsafe actions .
B. Orderliness
C. Frequent inspections
D. Good work habit

344. **Which of the listed conditions can be considered as the single greatest cause of accidents?**
A. Speed
B. Excessive knowledge or skill
C. Human error .
D. Excitement

345. **Which of the actions listed and instituted on your part will have the greatest lasting effect on the crew with respect to safety?**
A. Posting posters illustrating practices
B. Showing video tapes of actual accidents
C. Incorporating safety practices in daily routine .
D. Publishing comprehensive safety rules

346. **To safeguard the operator and other personnel working on or near a hoisting operation which of the following precautions should be observed?**
A. Keep a load on the hoist until all personnel are finished working
B. Set the load on a movable dolly when transportation may be needed
C. Have one man keep a hand on the load to steady it
D. Insure that the lifting gear capacity is not exceeded .

347. **Safety is dependent on orderliness and cleanlinessOrder may be maintained by .**
A. storing all items in an assigned place .
B. storing all items in a common storage container except those ready-for-sea
C. tagging all items according to their age and then storing them together
D. disposing of worn-out items

348. **When administering artificial respiration, it is of the utmost important to .**
A. use the mouth-to-mouth method
B. clear airways .
C. use rhythmic pressure method
D. know all approved methods

349. **When administering artificial respiration to an adult, the breathing cycle should be repeated about .**
A. 12 to 15 times per minute .
B. 18 to 20 times per minute
C. 20 to 25 times per minute
D. as fast as possible

350. **Immediately after abandoning a vessel, lookouts should be posted aboard liferafts to look for .**
A. survivors in the water .
B. food and water
C. land
D. bad weather

351. **Drinking salt water will .**
A. be safe if mixed with fresh water
B. prevent seasickness

C. promote urine excretion .
D. protect against heat cramps

352. **As a watch officer when bunkering, which of the following does require his individual attention?**
A. draft of the vessel .
B. rate of delivery
C. communication with terminal personnel
D. observation of manifold valves

353. **When is the most critical time of bunkering in regards to oil pollution?**
A. lining up the systems
B. topping off .
C. starting delivery
D. connecting hoses and joints

354. **To avoid excessive surge pressure when bunkering, you should .**
A. bunker at a normal rate
B. check for kinks in hose
C. close valves slowly .
D. shut valves before topping off

355. **Approximately what percent of tank space should be left for expansion of oil due to possible temperature increase?**
A. 1% to 3% .
B. 1% to 2%
C. 4%
D. 2% to 4%

356. **Bunkering shall be terminated if there is a .**
A. severe electrical storm
B. fire on the pier
C. fire on the ship
D. any of the above .

357. **Which of the following fuel oil characteristics establishes the danger point when transferring, pumping, and firing procedures are concerned?**
A. Fire point
B. Flash point .
C. Specific gravity
D. viscosity

358. **The temperature of the fuel oil received during bunkering operation is critical in determining the .**
A. expansion space to leave in a tank .
B. flash point at which the fuel will burn
C. temperature to which the fuel must be heated
D. rate at which the fuel can be pumped during transfer operations

359. **The flash point of a residual fuel oil should be used to determine the highest temperature to which oil may be heated .**
A. for atomizing
B. for centrifuging
C. in a storage tank .
D. in the re-circulating line

360. **Heavy fuel oils generally have an upper average ash content of 0.1% by weightWhich of the following conditions could be expected if the ash content increase above this amount?**
A. Glazing of the cylinder liners
B. Increase valve wear .
C. Excessive oil pumping
D. Increase fuel consumption

361. **When you are transferring fuel oil to the setting tanks, precautions to be observed should include .**
A. plugging gooseneck tank vents to prevent accident overflow
B. maintaining a high transfer rate until a slight trickle of oil is observed flowing from the overflow line
C. sounding the tanks frequently and reducing the transfer rate as the level approaches maximum fill .
D. maintaining a supply of chemical dispersant to cleanup minor oil spills adjacent to the ship

362. **A lube oil sample taken from the main engine lube oil system has dark yellow opaque colorThis is the result of .**
A. water contamination
B. mixing oils of two widely different viscosities
C. overheating
D. aeration .

363. **When fuel oil is accidentally missed with lube oil which of the following processes can be used to separate them? Ifiltering IIsettling**
A. I only
B. II only
C. either I or II
D. neither I or II .

364. **If a used lube oil analysis indicates an excessive chromate content, this means .**
A. air filtration is inadequate
B. engine coolant leaking into the lube oil .
C. fuel oil is leaking into the lube oil
D. the piston rings are excessively worn

365. **One characteristic of a lubricating oil adversely affecting the result of centrifuging is .**
A. high TBN value
B. low oil floc point
C. low oil demulsibility .
D. low oil neutralization number

366. **The Total Base Number (TBN) value of diesel engine lube oil refers to its ability to .**
A. resist changes in viscosity with changes in temperature

B. resist emulsification
C. neutralize acids .
D. resist oxidation at high temperatures

367. **A diesel engine exposed to widely varying ambient temperatures should use to a lubricating oil with .**
A. a high viscosity index .
B. a low viscosity index
C. neutralize acids
D. resist oxidation at high temperatures

368. **Which of the following characteristic of lube oil helps to reduce the amount of deposits in the piston ring belt during the combustion process in a diesel engine?**
A. Low viscosity index
B. Low carbon forming tendencies .
C. High film strength
D. High non-corrosive qualities

369. **Which lubricating oil additive is used in diesel engines to reduce the tendency for sludge and varnish to form on the engine parts?**
A. Flash point improvers
B. Pour point improvers
C. Inhibitors .
D. Foam suppressors

370. **Safe welding practice requires .**
A. checking the area for items that may catch fire
B. that a fire watch be posted
C. checking for the explosive gases
D. all of the above .

371. **Before welding is permitted on a fuel tank, it must be certified or declared .**
A. safe for becoming rounded
B. safe for hot work .
C. not safe for personnel
D. not safe for hot work

372. **Using a file without a handle may result in .**
A. your work becoming rounded
B. injury to your hand .
C. overheating of the file
D. pinning

373. **Which of the files listed is tapered on three sides and is used to file acute internal angles?**
A. Mill
B. Round
C. Square
D. Triangular .

374. **A drilled hole is accurately finished to size with a .**
A. center drill
B. finish drill
C. broach
D. reamer .

375. **To anneal a copper gasket, you should heat the gasket .**
A. and quench it in oil
B. cherry red and quench in water
C. and let it cool slowly in the air .
D. and carbonize

376. **Which of the following nondestructive testing methods can be used to detect a suspected subsurface defect in a tail-shaft liner?**
A. Dye penetrant
B. Magnetic particle
C. Ultrasonic .
D. All of the above

377. **Which of the listed effects represents the purpose of heat treating steel?**
A. Develop ductility
B. Improve machining qualities
C. Relieves stresses
D. All of the above .

378. **Reheating a hardening component to a temperature lower than the hardening temperature and then cooling it is known as .**
A. low temperature hardening
B. case hardening
C. annealing
D. tempering .

379. **The tool used in precision work to smooth or enlarge a slightly undersized hole, is called .**
A. round out
B. round file
C. reamer .
D. hole driller

380. **Which of the listed types of files is the best for producing a fine finish on metal?**
A. Mill .
B. Float
C. Warding
D. Second cut

381. **When the tail-shaft is drawn from a vessel in dry-dock, which of the following inspections is required to be carried out?**
A. The propeller hub taper and shaft keyway should be inspected for cracks or corrosion.
B. The stern bearing alignment with the stern frame should be checked

C. The interior of the stern tube should be inspected for leaks
D. The shaft liner should be removed and inspected

382. **Inspection of a vessel’s propeller during dry-dock should include .**
A. noting the condition of the fairwater
B. inspection of the keyway .
C. logging inspection results in the official deck log
D. all of above

383. **A vessel has been equipped with an oil lubricated stern bearing and is undergoing a routine dry-dockWhich of the following inspection should be made when the tail-shaft has been drawn?**
A. The overall condition of the bearing surface should be examined.
B. The shaft liner should be inspected for cracks and tested to insure a tight fit
C. The stern tube should be tested for cracks with dye penetrant
D. all of above

384. **“Insufficiency of manning or insufficiency of certification of seafarers” is an identification of a .**
A. substandard ship .
B. standard ship
C. over-standard ship
D. reference ship

385. **The Pollution Prevention Regulations require that all oil spills in United States water be reported immediately to the _____.**
A. local port authority
B. Corps of Engineers
C. U.SCoast Guard .
D. state pollution board

386. **Oil Pollution Regulations require any transfer or discharge of oil or oily mixtures to be recorded in the _____.**
A. bridge log
B. Master’s log
C. engine room log
D. oil record book .

387. **Each ship shall carry on board a ship security plan approved by _____.**
A. the chief engineer officer
B. the master of the ship
C. the manager of the company
D. the Administration .

388. **An International Ship Security Certificate shall be issued for a period specified by the Administration which shall not exceed _____.**
A. six months
B. two years
C. four years
D. five years .

389. **The records of ship security training, drills and exercises shall be kept in the working language or languages of the shipIf the language or languages used are not_____, a translation into one of these languages shall be included.**

A. English, French or Spanish .
B. Chinese, English or French
C. English, French or Japanese
D. Chinese, English or Spanish

390. **The ship security officer shall have knowledge and have received training, taking into account the guidance given in Part B of _____.**

A. the ISM Code
B. the ISPS Code .
C. the IBC Code
D. the IGC Code

391. **‘Offset’ is an inherent characteristic of which of the follow types of control modes?**

A. Tow position
B. Proportional .
C. Reset
D. Rate

392. **Which of the following definitions can be used to define the term ‘offset’ as a characteristic of controller action?**

A. The period of time in which the set point and the control point coincide
B. The periodic change between the set point and the control point
C. The variable difference between the set point and the control point
D. The constant difference between the set point and the control point.

393. **The control mode where the position of the final control element has a linear relationship with the position or value of the controller, variable is known as_____.**

A. two position control
B. proportion control .
C. reset control
D. rate control

394. **The ratio of output response to a specified change in the input is known as_____.**

A. primary feedback
B. deviation
C. sensitivity .
D. dead band

395. **The steady state difference between the control point and the value of the controlled variable, corresponding with the set point, is known as _____.**

A. dead band
B. control point
C. deviation
D. offset .

396. **The quantity or condition which is measured and controlled is known as the _____.**
A. controlled variable .
B. manipulated variable
C. set point
D. control point

397. **The value of the controlled variable, which under any fixed set of conditions the automatic controller operates to maintain, is known as _____.**
A. set point
B. control point .
C. deviation
D. offset

398. **In an automation system, the effect of a control action sensed by a controller is known as _____.**
A. command input
B. set point signal
C. output
D. feedback .

399. **In a pneumatic automation system, a unit 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_____.**
A. reset action
B. proportional action .
C. two position action
D. rate action

400. **Restrictions occurring in the small orifices of pneumatic control system components can be used by _____.**
A. moisture in the compressed air supply .
B. excessive dryness in the compressed air supply
C. pressure surging in the compressed air receiver
D. insufficient lubrication of the system components

401. **The two most common gases used in pneumatic system are _____.**
A. compressed air and nitrogen .
B. helium and nitrogen
C. oxygen and hydrogen
D. oxygen and acetylene

402. **The meat box temperature control circuit, as used in ship service refrigeration system, is an example of _____.**
A. two position control .
B. signal speed floating control
C. proportional control
D. reset control

403. **The mode of control employed by an alarm circuit is a _____.**

A. two position control .
B. signal speed floating control
C. proportional speed floating control
D. reset control

404. **Which of the fuel injection systems listed uses a spring loaded differential spray needle valve and individual pump for each cylinder?**

A. Common-rail injection
B. Air injection
C. Jerk pump injection .
D. Distribution injection

405. **Proper lubrication of the main bearing is more easily obtained in a single acting four-stroke/cycle diesel engine than in a single acting two-stroke/cycle diesel engine because ____.**

A. bearing pressure in a four-stroke\cycle acting single diesel engine is continually reversed .
B. bearing pressure in a two-stroke\cycle single acting diesel engine is continually reversed
C. the maximum bearing pressure is higher in a single acting two-stroke/cycle diesel engine
D. two-stoke/cycle diesel engines require more complicated lubrication piping

406. **The interior of some diesel engine saltwater heat exchangers are protected from corrosion by the use of_____.**

A. aluminum plates
B. lead cathodes
C. copper baffle plates
D. sacrificial zincs .

407. **Internal combustion engine crankcase vent outlets must be equipped with _____**

A. hinged rain guards
B. corrosion resistant flame screens .
C. dipsticks for measuring oil levels
D. crankcase ventilation fans

408. **Wristpin bearings are difficult to lubricate because of their oscillating motion and_____**

A. their free-floating design
B. their relatively small size
C. the reciprocating motion of the piston
D. their position in the lubrication system .

409. **Shaker, circulation and spray are the three general methods used in _____**

A. pre-injection fuel oil treatment
B. lube oil filtration
C. lube oil purification
D. piston cooling .

410. **For any piston ring to operate smoothly without scuffing ,the ring must be _____.**

A. of a material harder than the cylinder liner
B. properly lubricated .

C. prevented from compressing
D. prevented from rotating during engine operation

411. **The primary function of a fuel delivery check valve assembly is to_____.**
A. deliver proper fuel quantity to the injection nozzle
B. provide rapid fuel injection cutoff .
C. control fuel quantity entering the pump body
D. control fuel pressure delivered to the combustion chamber

412. **Fuel droplets injected into a diesel engine cylinder must have adequate penetration to ____.**
A. prolong the ignition delay period
B. ensure the beginning of fuel injection
C. thoroughly utilize the air charge .
D. allow controlled fuel combustion

413. **Corrosion inhibitors and/or soluble oils are added to diesel engine cooling systems to _____.**
A. maintain low pH in the cooling water
B. reduce the cooling water temperature
C. increase cooling water hardness
D. form a protective film on metal surfaces .

414. **The arrangement and shape of the cams on a diesel engine camshaft directly control which of the listed groups of operating conditions?**
A. speed, torque, and horsepower production
B. firing order, valve timing, and valve lift .
C. fuel consumption, efficiency, and cylinder pressure
D. scavenge pressure, compression ratio, and exhaust pressure

415. **A diesel engine is equipped with an isochronous hydraulic governorA decrease in load will cause the engine speed to _____.**
A. decrease only
B. increase only
C. decrease slightly then returned to original speed
D. increase slightly then returned to original speed .

416. **The reversing cams of some four-stroke/cycle diesel engines are brought into position by _____.**
A. sliding the camshaft along its axis .
B. rotating the cam 180
C. rotating the cam followers 180
D. moving the idler sprockets in the drive chain

417. **If the cooling water temperature and the lube oil temperature in a diesel engine are too high, the cause can be _____.**
A. a dirty lube oil strainer
B. internal water leaks
C. an oil suction line restriction
D. excessive wears of the cooling water pump .

418. **Most large, low-speed, main propulsion diesel engines use duplex lube oil strainer to _____.**

A. decrease the time required between cleanings
B. removes all large and small foreign objects
C. ensure a positive flow of oil at all times .
D. ensure that all lube oil has been treated twice

419. **While inspecting the main bearings on a diesel engine you find impregnated dirt and scratches in the bearing surface .you would, therefore, suspect that _____.**

A. the bearing had been overheated
B. water was present in the oil
C. the lube oil was not being properly filtered .
D. the maximum allowable bearing pressure had been exceeded

420. **Which of the listed problems would be indicated by an accumulation of water in one cylinder, in addition to the crankcase of an idle diesel engine?**

A. Excessive cylinder liner
B. water in the fuel system
C. Cracked cylinder liner .
D. Leaking lube oil cooler

421. **If a hydraulic governor has been refilled with oil, the engine should be operated until it reaches normal temperaturethen the air should be purged, and the_____.**

A. rack position should be adjusted
B. compensating needle valve should be opened fully compensating
C. needle valve should be adjusted to stabilize operation .
D. speed limiting device should be adjusted

422. **The purpose of the compensating adjustment used in a diesel engine hydraulic governor is to _____**

A. compensate for low oil level
B. increase governor promptness
C. prevent governor hunting .
D. limit engine load

423. **An individual injection pump is designed for variable beginning and constant ending of injectionFor diesel engines operating at constant speeds, the start of injection will____.**

A. advance as the load increases .
B. retard as the load increase
C. remain unchanged regardless
D. always occur at top dead center

424. **Diesel engines driving alternators operating in parallel must maintain set frequency regardless of load changesThe governor characteristic used to accomplish this is known as _____.**

A. actuation
B. sensitivity
C. compensation .
D. thrust shaft

425. **Which of the following statements represents an advantage of an electromagnetic clutch?**

A. Large misalignments can be tolerated between the shaft and engine coupling
B. Slip is held to a minimum when reversing shaft rotation
C. Engine torsion vibrations to the driven shaft are eliminated.
D. It aids in maintaining power factor

426. **Which of the following adjustments is always required whenever the diesel engine governor oil has been drained and renewed?**

A. speed droop
B. compensation .
C. idle speed setting
D. load limit control

427. **On a diesel engine equipped with a hydraulic speed control governor, hunting in many cases can be corrected by adjusting the _____.**

A. accumulator spring compressor
B. balance piston
C. compensating needle valve .
D. proportional piston

428. **The amount of fuel delivered by a helical plunger fuel injection pump is controlled by _____.**

A. varying the pump discharge pressure
B. varying the pump return pressure
C. rotation of the pump plunger .
D. rotation of the pump barrel

429. **If the coolant temperature of a closed cooling water system for a diesel engine gradually increases, the trouble usually is _____.**

A. a broken shaft on the freshwater pump
B. an excessive accumulation of scale exchanger .
C. an incorrect thermostatic element operating range
D. lube oil in the cooling water

430. **Which of the following statements concerning the lubrication of diesel propulsion engines used in vessels over 300 gross tons is most accurate?**

A. Lubrication systems using engine driven lube oil pumps do not require any additional independent arrangement when such arrangements have been proven reliable
B. The use of engine driven pre-lube pumps is permitted on vessels with propulsion systems developing less than 500 shaft horsepower
C. When forced lubrication is used for propulsion engines, one independently driven stand-by pumps is to be provided in addition to the necessary pumps for normal operation .
D. Lubrication systems where two oil coolers are fitted require a minimum of two temperature control devices which may be actuated by similar sensors

431. **The pressure differential across a diesel engine lube oil system duplex filter should be checked to _____.**

A. determine the need for filter cleaning .
B. measure any change in oil viscosity

C. prevent damage to the filter
D. determine the need for batch filtration

432. **Some diesel engines are fitted with a thermometer in the cooling water outlet from each cylinderIf the cooling water temperature from all cylinders begins to rise above normal, you should suspect _____.**
A. increase blow-by in all cylinders
B. incomplete combustion in all cylinder
C. overloading in all cylinders .
D. insufficient fuel delivery to all cylinders

433. **Proper operation of the main engine reduction gear set requires the operation to monitor _____.**
A. the sump oil level
B. oil flow sight glasses
C. bearing temperatures
D. all of the above .

434. **On a diesel engine equipped with an isochronous governor, if the "speed droop" control is reduced to the "zero" setting, the engine _____.**
A. speed will drop drastically with any increase in load
B. will stop due to zero fuel supply
C. will stall upon application of load
D. speed will remain fairly constant despite load changes .

435. **Air bubbles in a hydraulic governor can cause _____.**
A. sluggish response .
B. speed droop variations
C. isochronous governing
D. sensitivity increase

436. **The amount of fuel delivered for each cycle must be in accordance with the engine load, and the same quantity of fuel must be delivered to each cylinder for each power stroke at that loadWhich of the following statements describes this requirement?**
A. Proper timing
B. Accurate metering .
C. Suitable injection rate
D. Suitable atomization rate

437. **If a main propulsion diesel engine hunts excessively at idle speed, you should _____.**
A. adjusts the idle speed control
B. drain and flushes the governor and replace the oil
C. adjusts the compensating needle valve .
D. drain and flushes the governor and replace the oil

438. **The most crucial time for any bearing with regards to lubrication is _____.**
A. during low loads
B. after proper oil viscosity is reached

C. during starting .
D. after cleaning filters

439. **The main source of fuel injection system malfunctions is _____.**
A. improper adjustments
B. contaminated fuel .
C. coated fuel lines
D. excessive vibration

440. **Which of the listed devices could be used as a ring groove tool during preparation for the installation of new rings?**
A. Steel brush
B. Fine emery cloth or steel wool
C. A section of the removed compression ring .
D. A case hardened scraper

441. **The shape of a cam on a diesel engine determines the valve’s _____.**
A. point of opening
B. speed of opening
C. lift from its seat
D. all of the above .

442. **The ash content of a fuel oil is significant to the operating engineer because it _____.**
A. is an indication of the amount of noncombustible material present in the oil .
B. indicates the quantity of energy released by burning a unit amount of the fuel
C. is useful for determining proper atomization temperatures
D. reflects the overall thermal efficiency of the fuel oil service system

443. **Main propulsion engine lube oil sumps should be constructed _____.**
A. so as to never be integral lube
B. with a sloped bottom .
C. only of nonferrous, noncorrosive metals
D. with drain/return lines terminating just above or at the designed normal level

444. **The function of lubricating oil is to _____.**
A. maintain even distribution of bearing wear
B. maintain a constant oil temperature
C. maintain a pressurized film between moving surfaces .
D. remove entrained water

445. **At which of the following locations would a duplex pressure gage most likely be located?**
A. Fuel oil service pump discharge
B. Fuel oil strainer .
C. Fuel oil heater
D. Fuel oil flow meter

446. **Main engine room control console alarms are to be of the self monitoring type, meaning that an open circuit to a particular alarm circuit will _____.**
A. cause an alarm condition .

B. secure power to the indicator
C. secure power to the monitored device
D. automatically recluse within 10 seconds

447. **The construction of the main propulsion engine lube oil sump should .**
A. have no plating joints of 90
B. retain the lube oil as long as possible before it recirculates through the system .
C. provided drain/return lines that are no greater than 24 inches from the pump suction
D. be provided with only a perfectly horizontal bottom

448. **Thermostatic steam pressure reducing valves are used in the fuel oil service system to control the .**
A. double bottom fuel oil tank temperature
B. heater supply steam flow .
C. pressure of the fuel supplied to the burners
D. attemperator steam flow in the heater discharge circuit

449. **The lowest temperature at which fuel combustion becomes self-sustaining in the presence of a source of ignition, is defined as the .**
A. auto-ignition point
B. flash point
C. burning temperature
D. fire point .

450. **The double bottom in a vessel is a space comprised of .**
A. plating forming the engine room tank top
B. doubler plating installed over the flat keel plate
C. a watertight boundary formed by the inner bottom
D. compartments between the inner and outer bottoms .

451. **If the compensating needle valve of a hydraulic governor is opened more than necessary the governor will .**
A. have a larger than normal dead band
B. produce excessive speed response to a load change .
C. respond slowly to any change in engine load
D. stabilize engine speed at the new governor setting

452. **The plunger in a jerk pump is rotated until the release port is uncoveredIf the port remains uncovered all of the time, which of the listed operations will occur?**
A. No fuel will be delivered.
B. The maximum effective stroke will be attained
C. The fuel delivered to the cylinder will be excessive
D. The injection nozzle will overheat and carbonize

453. **One result of operating a diesel engine at light load with excessively low cooling water temperature is a/an .**
A. decrease in ignition lag
B. increase in fuel economy

C. reduction in lube oil viscosity
D. increase in cylinder misfiring .

454. **If the jacket water temperature in an auxiliary diesel engine cooling system is lower than normal, the probable cause is .**
A. air binding of the engine cooling system
B. a cracked water cooled exhaust manifold
C. blockage in the heat exchanger
D. faulty operation of the thermostat .

455. **In a jerk pump, the amount of fuel that will be forced through the spray nozzle on each upward stroke of the plunger depends on .**
A. the pump supply pressure
B. the slope of the fuel cam
C. how the plunger is rotated .
D. the number of sleeve segments engaged with the rack

456. **To guarantee that a reduction gear bearing is receiving proper oil supply, you should check the .**
A. lube oil temperature at the cooler outlet
B. lube oil strainer magnets bearing
C. lube oil temperature .
D. lube oil pressure to the bearing

457. **Adjustments to the compensating needle valve in a hydraulic governor should be made with the engine at .**
A. maximum power at a normal load
B. maximum power and load under normal conditions
C. half speed and normal temperature
D. normal operating temperature without a load .

458. **Which of the listed diesel engine operating conditions should be checked immediately after any diesel engine is started?**
A. Exhaust temperature
B. Lube oil level
C. Lube oil pressure .
D. Water level in the expansion tank

459. **During extremely cold weather, while starting an engine, it turns too slowly and fails to startThis problem is most likely the result of .**
A. high fuel oil viscosity
B. low fuel oil temperature
C. high lube oil viscosity .
D. energized glow plugs

460. **Movement of the pump control rack in a fuel injection system using individual plunger-type pumps .**
A. changes the position of the fuel inlet ports
B. changes the length of the pump stroke

C. varies the quantity of fuel delivered .
D. varies the compression of the delivery valve spring

461. **A faulty thermostatic bypass valve, in a diesel engine cooling system, can result in _____.**
A. excessive time required for warming-up .
B. excessive freshwater corrosion
C. scale formation on the saltwater side
D. saltwater mixing with the freshwater

462. **Which of the listed governor characteristics will greatly affect the load sharing relationship between paralleled diesel generators?**
A. Sensitivity
B. Power
C. Speed droop .
D. Compensation

463. **The major cause of trouble in a mechanical-hydraulic governor is contamination of the hydraulic fluid by _____.**
A. dirt .
B. fuel oil
C. governor cooling water
D. fuel oil tars

464. **Cast iron pistons used in large propulsion diesel engines are constructed with _____.**
A. not taper what so ever
B. the skirt being tapered and smaller than the crown
C. the skirt being tapered and larger than the crown
D. the crown being tapered and smaller than the skirt .

465. **The amount of fuel delivered by a unit injector is controlled by the _____.**
A. camshaft
B. main spring
C. rack position .
D. nozzle orifice size

466. **Which of the listed substances can be satisfactorily removed from diesel fuel by centrifuging?**
A. Sludge .
B. Gasoline
C. Fuel oil
D. Lube oil

467. **Pitted reduction gear teeth having a deep blue color with evidence of overheating have been operated with _____.**
A. excessive speed
B. improper warm-up
C. extreme misalignment
D. inadequate lubrication .

468. **The upper section of a piston is called the _____.**
A. land
B. skirt
C. crown .
D. plate

469. **The effective pump stroke of an individual port-and-helix fuel injection pump is determined by the _____.**
A. fuel delivery pressure
B. pump plunger diameter
C. plunger control rack position .
D. total pump stroke

470. **Why is the ring belt narrower in diameter than the skirt of a piston designed for a diesel engine?**
A. To allow for greater expansion due to higher operating temperature.
B. To seal the cylinder against leakage of combustion gases
C. To provide an additional surface for oil cooling
D. To provide an additional strength for the crown and lower structure

471. **If the operating element of a thermostatic valve installed in a diesel engine cooling system malfunctions, it may result in _____.**
A. a low level in the engine expansion tank
B. excessively high coolant pressure
C. improper temperatures .
D. malfunctioning of the jacket water heater

472. **In a diesel engine, excessive cylinder liner wear will cause _____ Ⅰ increased blow-by Ⅱ wear between the piston ring and groove**
A. Ⅰ only is correct
B. Ⅱ only is correct
C. both Ⅰ and Ⅱ are correct .
D. neither Ⅰ or Ⅱ are correct

473. **Aburned exhaust valve may be detected by a higher than normal _____.**
A. firing pressure
B. exhaust temperature from a particular cylinder .
C. cooling water temperature
D. compression pressure

474. **Which of the following conditions will develop if the flow of ‘raw’ cooling water to diesel engine is obstructed?**
A. Air will enter the cooling system
B. Carbon will plug the water cooled exhaust manifolds
C. The jacket water temperature will rise.
D. The lube oil viscosity will increase

475. **Which of the listed conditions will occur if a diesel engine exhaust valve is leaking?**
A. Loss of compression for that cylinder

B. Misfiring or rough running
C. Damage to the valve
D. All of the above .

476. **The fuel injection pumps on a diesel engine are controlled by a linkage system attached to the _____.**
A. camshaft
B. crankshaft
C. governor .
D. flywheel

477. **Keel coolers fouled with marine growth, will result in _____.**
A. higher raw water temperatures
B. higher jacket water temperatures .
C. a malfunctioning thermostat
D. higher fuel temperature

478. **Gear-type flexible couplings are often used in diesel engine drive trains because they_____.**
A. require no lubrication under normal operating conditions
B. compensate for gross misalignment in the drive train
C. are able to transmit high torque ,even where slight misalignment exists .
D. will rapidly disconnect the engine from the line shaft

479. **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?**
A. Baffle plates that have been bent during prior removal
B. Leaks in the cooler tube nest
C. Operating the engine while maintaining a high sea water outlet temperature .
D. A punctured sea water strainer supplying cooling water to the heat exchanger

480. **Cavitation erosion in the cooling water system of a diesel engine usually occurs at the pump impeller, and on the waterside of the _____.**
A. fuel nozzle holders
B. exhaust value guides
C. engine cylinder liners .
D. low temperature and a low viscosity

481. **Fuel oil discharged to the diesel engine cylinder is atomized at the _____.**
A. turbocharger
B. injection nozzle tip .
C. carburetor
D. fuel oil pump

482. **Exhaust pyrometer readings provide an indication of the .**
A. effectiveness of water-cooled exhaust elbows
B. distribution of the load between engine cylinders .
C. amount of fuel penetration into the engine cylinders
D. indicated horsepower of the engine cylinders

483. **A change in engine speed is required before a governor is able to make a corrective movement of fuel rackThis aspect of governing is commonly expressed as a percent and is known as .**

A. governor sensitivity .
B. governor promptness
C. speed droop
D. isochronous governing

484. **Proper dispersion of fuel in a diesel engine cylinder is dependent upon the .**

A. injection pressure
B. shape of combustion space
C. turbulence in combustion space
D. all of the above .

485. **In a closed cooling water system, which of the problems can cause the water pressure to fluctuate?**

A. An open vent in the cooling system
B. A fouled sea chest
C. A restricted water passage in the engine
D. Air entrained in the cooling water .

486. **Differential needle valves used in fuel injectors are directly closed by .**

A. cam action
B. spring force .
C. fuel oil pressure
D. firing pressure

487. **A dirty lube oil strainer can result in .**

A. crankcase
B. low lube oil temperature
C. excessive oil consumption
D. low bearing oil pressure .

488. **In a closed cooling system for a turbocharged, four-stroke/cycle diesel engine, fluctuating water pressure can be caused by .**

A. improper venting of the cooling system .
B. carrying the expansion tank water level too high
C. a totally clogged impeller in the cooling water pump
D. an incorrectly set cooling system temperature control

489. **In a full flow type lube oil system, the bypass relief valve will lift due to .**

A. a clogged filter element .
B. excessive lube oil pump discharge pressure
C. excessive lube oil flow
D. excessively hot lube oil

490. **Which of the following statements is correct concerning diesel engine cooling water systems?**

A. Each engine must have its own engine driven cooling water pump capable of providing cooling for all ranges of operation
B. propulsion engines with bores exceeding 200 mm are to be fitted with a means to display the cooling

water temperature of each cylinder

C. At least two independent sea sucti8ons are to be provided for supplying water to the engine jackets or to the heat exchangers.

D. Suitable strain are to be fitted between the circulating pumps and heat exchangers when sea water is used for direct cooling

491. **Air motion is induced in a four-stroke/cycle diesel engine cylinder to improve air fuel mixing, and is known as .**

A. supercharging
B. scavenging
C. turbulence .
D. swept volume charging

492. **Maintaining the proper fuel oil temperature will result in .**

A. the elimination of valve wear
B. improved atomization .
C. a decrease in cylinder blow-by
D. an increase in cylinder blow-by

493. **Trunk type diesel engine pistons are effectively cooled when heat is .**

A. radiated through the engine block
B. transferred to water cooled cylinder walls .
C. conducted through the piston crown
D. transferred to escaping exhaust gases

494. **An increased differential between the inlet and outlet of a strainer usually indicates the strainer is .**

A. holed
B. fouled .
C. clean
D. dry

495. **High exhaust back pressure will result in an increase in .**

A. turbocharger efficiency
B. engine power output
C. carbon deposits on fuel injectors .
D. cylinder scavenging

496. **Which of the following statements is correct for the design and installation of diesel engine cooling water systems?**

A. An alarm device with audible and visible signals is required for all cooling water systems
B. Propulsion engines with bores over 200 mm are to be fitted with cooling water jackets
C. Each totally enclosed cooling system shall be provided with a suitable head tank
D. Drain cocks are to be provided at the lowest points of all cylinder water jackets.

497. **A sudden drop in diesel engine cylinder compression pressure can be caused by_____.**

A. a leaking fuel injector nozzle
B. a clogged air filter

C. excessively early fuel injection
D. malfunctioning valves .

498. **Ring groove inserts are occasionally used on aluminum alloy piston to_____.**
A. reduce the ring groove wear rate .
B. seal against crankcase vapors
C. lessen the wear on aluminum part of the cylinder
D. allow for the greater expansion rate of aluminum

499. **Coolant can be lost from a diesel engine jacket cooling waster system by leakage from_____.**
A. cylinder head cracks
B. piping joints
C. pump leaking
D. all of the above .

500. **An overcorrecting and unstable engine governor operation is known as_____.**
A. droop
B. dead banding
C. dash potting
D. hunting .

501. **What is the function of an engine’s stationary parts?**
A. To add power to the engine
B. To keep the engine firmly attached to its supporting base
C. To keep moving engine part in their proper relative positions .
D. To rotate the crankshaft

502. **Diesel engine automated control systems may utilize sensing devices of dual function, with sensing ranges providing both alarm and engine shut down capabilityWhich of the key points would only require an alarm sensor?**
A. Lube oil pressure and temperature
B. jacket water pressure and temperature
C. Engine over-speed
D. Lube oil sump level .

503. **Crankcase explosions in propulsion diesel result from_____.**
A. the splashing of lubrication oil by the crankshaft
B. the dilution of crankcase oil with particles of combustion
C. broken fuel lines spraying oil on the crankcase
D. the ignition of unburned fuel and air in the crankcase .

504. **Combustion knock occurring in a diesel engine can be caused by _____.**
A. low coolant temperature .
B. insufficient fuel
C. high ambient temperature
D. carbon buildup on the injector tips

505. **Which of the items listed causes a direct acting mechanical governor to operate the engine fuel control linkage?**

A. Hydraulic oil pressure
B. Servomotor action
C. Flyweight centrifugal force .
D. Relay motion

506. **The two strokes of a two-stroke/cycle diesel engine are _____.**
A. power and intake
B. intake and exhaust
C. exhaust and compression
D. compression and power .

507. **Which of the conditions listed may occur in an operating diesel engine if air pockets form within the cylinder head circulating water passages? .**
A. Hydraulic stress and distortion will develop
B. Hot spots will develop.
C. Fuel oil viscosity will increased
D. An increase in trapped deposits of scale and dirt

508. **Air receivers installed in starting air systems are to be _____.**
A. cylindrical in shape with service connections located at the top and bottom
B. opened and made available for inspection during biannual inspections provided
C. with automatic drain traps for the removal of moisture
D. so installed as to make the drain connections effective under extreme conditions of trim .

509. **Critical speed in diesel engines occurs when engine torque pulsations become _____.**
A. opposed to the crankshaft rocking couple
B. resonant with the crankshaft natural frequency .
C. critical fore and aft crankshaft vibrations
D. horizontal whipping motions of the crankshaft

510. **Heat damage to fuel injection nozzles can be prevented by avoiding ____.**
A. excessive fuel oil temperature
B. long periods of engine overload .
C. metallic contact between nozzles and cylinder heads
D. hard carbon deposit and varnish on the nozzles

511. **Failure to open the diesel engine test cocks after a long period of shutdown, prior to starting may result in _____.**
A. an air bound fuel system
B. damage to cylinder heads and pistons .
C. excessive fuel injection
D. excessive air valve lift

512. **The knock occurring when a cold diesel engine is started and continues while running at low speed, but stops when the engine reaches normal operating speed and temperature, is_____.**
A. caused by retarded injection timing
B. caused by a mechanical defect in one cylinder
C. caused by high fuel injection pressures
D. normal for these conditions .

513. **If a diesel engines exhaust temperature is abnormally high, the cause could be_____.**
A. too light of a load
B. injection timing is too early
C. overloading of the engine .
D. too low of a compression ratio

514. **In a simple mechanical governor, the _____.**
A. centrifugal force rotates the ball-head
B. flyweight centrifugal force is balanced by spring force .
C. flyweight centrifugal force is balanced by hydraulic pressure
D. speeder spring alone actuates the fuel control rod

515. **To minimize the formation of carbon deposits on fuel injection nozzles, you should _____.**
A. avoid using liquid-cooled nozzles whenever possible
B. avoid low cooling water temperatures
C. avoid prolonged overloading of the engine .
D. make certain the gasket seal between the nozzle and cylinder head is tight

516. **If the water level dropped rapidly in the expansion tank of a closed diesel engine cooling water system, you should suspect a _____.**
A. loss of suction in the circulating pump
B. leak in the primary cooling system .
C. broken raw water pump shaft
D. burned or cracked piston in one cylinder

517. **Injectors for use with heavy fuel oil must be cooled by either water or light oil to _____.**
A. prevent heat corrosion to internal components
B. increase fuel delivery rate and economy
C. prevent pre-ignition
D. avoid carbonization of the nozzle tips .

518. **Vessels having main engines arranged for air starting are to be provided with at least _____.**
A. one automatic drain serving both containers
B. two air starting containers of approximately equal size .
C. one control air container and one starting air container
D. one additional means of starting the main engine

519. **Fuel is ignited in a diesel engine cylinder by _____.**
A. a spark plug
B. injectors
C. the heat of compression .
D. increasing jacket water temperatures

520. **In a diesel engine, the time taken to heat the fuel particles, turn them into vapor, and bring about combustion is called _____.**
A. injection lag
B. ignition delay .
C. compression
D. turbulence lag

521. **A possible cause for an individual piston to knock when at TDC on a slow-speed, two-stroke/cycle main propulsion diesel engine could be due to _____.**
A. early fuel injection
B. excessive bearing play within the running gear
C. overloading of the cylinder
D. all of the above .

522. **Excessive diesel engine back pressure may be an indication of _____.**
A. carbon buildup in the exhaust manifold .
B. overcooling of the exhaust manifold
C. eroded muffler baffle plates
D. high injection pressure

523. **In order to start a large, low-speed, main propulsion diesel engine on high viscosity fuel after an extended shutdown, the _____.**
A. fuel must be preheated .
B. intake air should be preheated
C. lube oil outlet temperature should be increased 20℃ above normal
D. none of the above

524. **A spring-loaded centrifugal flyweight governor responds to reduced engine load with an immediate increase in ____.**
A. pilot valve oil pressure
B. speeder spring force
C. compensation needle valve clearance
D. centrifugal force on the flyweights .

525. **Lube oil accumulating in the cooling water system of a diesel engine will result in _____.**
A. lube cooler failure
B. poor heat transfer .
C. mechanical lubricator failure
D. camshaft seizure

526. **A fuel leak occurs in the high pressure fuel piping between the injection pump and fuel nozzleThis requires immediate repair because of the _____.**
A. high cost of fuel
B. serious fire hazard .
C. possibility of pollution
D. poor combustion which will occur in that cylinder

527. **The device used to limit engine torque at various engine speeds is called a _____.**
A. speed limiting governor
B. variable speed governor
C. constant speed governor
D. load limiting governor .

528. **Engine coolant accumulating in the diesel engine lubricating oil can result from a _____.**
A. low oil pressure
B. high coolant pressure

C. leaking fuel injector
D. cracked cylinder head or liner .

529. **Persistent knocking of one cylinder of a diesel engine ceases when the fuel supply to that cylinder is securedThis problem may be a result of _____.**
A. low loading of that cylinder
B. faulty combustion in that cylinder .
C. sluggish piston ring action
D. excessive piston cooling

530. **The efficient burning of fuel in a diesel engine is dependent upon the _____.**
A. temperature of compression
B. atomization of the fuel
C. penetration of the fuel
D. all of the above .

531. **What is the best way of stopping an over-speeding diesel engine?**
A. Disconnect the battery cables from the starting motor
B. Drain the hydraulic fluid from the governor sump
C. Block the flow of cooling air to the radiator
D. Secure the fuel supply and block the air intake .

532. **One remedy for a high firing pressure, in addition to a high exhaust temperature in one cylinder of a diesel engine, is to _____.**
A. increase scavenge air pressure
B. reduce fuel booster pump pressure
C. adjust the fuel rack .
D. retard fuel injector timing

533. **The blower type crankcase ventilation system _____.**
A. removes combustible gases in the crankcase .
B. prevents the formation of combustible gases in the crankcase
C. cools lubricating oil
D. improves cold weather starting

534. **The over-speed trip installed on most diesel engine will stop the engine by shutting off the _____.**
A. water supply
B. fuel oil supply .
C. lube oil supply
D. exhaust damper

535. **White smoke exhausting from an operating diesel engine may indicate _____.**
A. a cracked liner .
B. burning lube oil
C. an overloaded engine
D. insufficient combustion air

536. **White smoke exhausting from a diesel engine can result from _____.**
A. high exhaust temperature
B. high lube oil temperature
C. low turbo-charger speed
D. low cooling water temperature .

537. **White smoke issuing from the exhaust of an auxiliary diesel engine valve opening ____.**
A. the engine is overloaded
B. the engine is cold .
C. there is too much lube oil in the cylinders
D. the turbocharger is fouled

538. **White smoke exhausting from a diesel engine can be caused by _____.**
A. low combustion temperature .
B. a leaking fuel nozzle check valve
C. late fuel injection
D. plugged oil-scraper ring hole

539. **White smoke exhausting from a diesel engine can be caused by a _____.**
A. high combustion temperature
B. high compression pressure
C. cracked cylinder liner .
D. fuel with a high vanadium content

540. **Black smoke exhausting from an operating diesel engine can be caused by _____.**
A. fuel dribbling from leaking fuel injectors .
B. burning fuel with a high carbon content
C. burning fuel with a high vanadium content
D. burning fuel with a lower sulphur content

541. **A device which functions to bring a diesel engine to a full stop to protect it from damage is known as a/an _____.**
A. torque limiter
B. over-speed trip .
C. over-speed governor
D. load limit governor

542. **Broken intake valve springs on one cylinder of a diesel engine can cause the engine to _____.**
A. Over speed
B. fire improperly .
C. lose oil pressure
D. overheatrapidly

543. **When the opening pressure of a diesel fuel injector is greater than that specified by the engine manufacturer，the _____.**
A. quantity of fuel injected is decreased .
B. quantity of fuel injected will always be increased

C. start of injection is advanced
D. duration of injection will always be greater

544. **.Icreasing the exhaust valve tappet clearance of a diesel engine will result in the exhaust valve opening _____.**
A. later and closing earlier .
B. later and closing later
C. earlier and closing earlier
D. earlier and closing later

545. **If a diesel engine fails to start，one of the likely causes is _____.**
A. low compression temperature .
B. low ambient air pressure
C. high lube oil pump pressure
D. high fuel oil booster pump pressure

546. **What causes diesel fuel to be ignited in the cylinder of an operating diesel engine?**
A. Spark plug
B. Heat of compression .
C. Carburetor
D. Glow plug

547. **What is commonly used to create turbulence in a diesel engine combustion system?**
A. Shape of the piston crowns .
B. Increasing the compression ratios
C. Increasing the piston crowns
D. Increasing the turbocharger gear ratio

548. **A smoking exhaust from an operating diesel engine could be caused by _____.**
A. low sulfur content in the fuel
B. a loose injector inlet connection
C. late fuel injection .
D. high injection pressure

549. **The purpose of compressing the air within the cylinder of a diesel engine is to _____.**
A. produce the heat for ignition .
B. decrease injection lag
C. increase ignition delay
D. aid in exhausting burnt gases

550. **The primary purpose of oil control rings on a diesel piston is to_____.**
A. provide a reservoir for cylinder lubrication
B. pump oil into the combustion space for cylinder cooling
C. prevent excessive lubricating oil consumption .
D. allow hydraulic oil film formation on the cylinder

551. **Diesel engine lube oil diluted with fuel oil is indicated by_____.**
A. decreased viscosity .
B. decreased pour point

C. increased flash point
D. increased viscosity

552. **To shut down a diesel engine after it exceeds the set maximum speed，which type of device listed should be used?**
A. Speed limiting governor
B. Over-speed governor
C. Over-speed trip .
D. Over-speed relay

553. **In describing basic diesel engine operation，the term ‘event’ refers to _____.**
A. the production of high pressure gases
B. the removal of expended combustion gases
C. the admission of air to the cylinder
D. all of the above .

554. **Oil control rings used in two-stroke/cycle diesel engines are located near the bottom of the piston skirt in order to _____.**
A. increase the liner area covered by the oil film
B. maintain an oil film on the lower liner where scuffing is prevalent
C. keep excess oil away from intake and exhaust ports .
D. help cushion piston skirt side thrust by providing a hydrodynamic oil wedge

555. **An over-speed trip serves to _____.**
A. stop the engine by cutting off the cooling water supply
B. stop the engine by closing the air intake .
C. slow the engine but not stop it
D. slow the engine to half of normal load

556. **In an operating diesel engine, which of the following condition is an indication of a leaking air starting valve?**
A. noise coming from that air starting valve
B. continuous operation of the starting air compressor
C. zero air pressure in the air starting system
D. overheated starting air pipe to the cylinder head .

557. **Which of the listed cylinder liner surface conditions indicates proper lubrication?**
A. Dull black appearance
B. Bright appearance .
C. Thin layer of lacquer
D. Thick oily film

558. **To function properly, oil control rings used on a diesel engine piston must distribute sufficient oil to all parts of the cylinder wall and must also _____.**
A. prevent any lubricant from reaching
B. prevent excessive lubrication from reaching the combustion space .
C. Provide metal-to-metal contact to seal the cylinder against blow-by
D. assure a positive means of scraping carbon accumulation from the cylinder

559. **An over-speed trip stops a diesel engine when the engine _____.**
A. runs out of fuel
B. has low lubricating oil pressure
C. exceeds a set maximum speed .
D. has high cooling water temperature

560. **In order to keep excess oil from the intake ports in two-stroke/cycle diesel engines, _____.**
A. wide compression rings are used
B. oil rings are located above the piston
C. chromium plating is used on all piston rings
D. oil rings are located near the bottom of the piston skirt .

561. **The ratio of the brake horsepower to the indicate of a diesel engine is its _____.**
A. thermal efficiency
B. mechanical efficiency .
C. brake thermal efficiency
D. volumetric efficiency

562. **Turbulence is created in the cylinders of a diesel engine to _____.**
A. obtain injection lag
B. help mix fuel and air .
C. increase combustion pressure
D. utilize higher injection pressures

563. **The main operating characteristic of diesel engines which distinguishes them from other internal combustion engines is the _____.**
A. method of supplying air
B. cooling system
C. method of igniting fuel .
D. valve operating mechanism

564. **A diesel engine is warmed up and white vapor is in the exhaust， this could indicate _____.**
A. excessive cylinder lubrication
B. a lugging engine
C. a leaking cylinder liner .
D. overloading of one cylinder

565. **How are the pressure and temperature affected in a diesel engine cylinder during compression?**
A. Pressure and temperature decrease
B. Pressure and temperature increase .
C. Pressure decreases and temperature increases
D. Pressure increases and temperature decreases

566. **If a used lube oil analysis indicates excessive fuel dilution, the lube oil should be _____.**
A. changed .
B. centrifuged
C. filtered
D. settled

567. **If the compression ratio is increased on any diesel engine, _____.**
A. the expansion ratio will decrease
B. combustion will be slowed down
C. thermal efficiency will decrease
D. thermal efficiency will increase .

568. **A practical way of checking for excessive fuel injection in one cylinder of an operating diesel engine is to ____.**
A. feel the high pressure fuel line
B. check the cylinder exhausts for white smoke frequently
C. check the cylinder exhaust temperature .
D. isolate each cylinder and inspect the injector

569. **Which of the factors listed has the greatest effect on the mechanical efficiency of a diesel engine?**
A. temperature of the intake air
B. friction within the engine .
C. mechanical condition of the supercharger
D. mechanical condition of the turbocharger

570. **What determines the number of events occurring in a cycle of operation in an internal combustion engine?**
A. Crankshaft revolution
B. Type of engine (diesel or gasoline) .
C. Distance a piston travels during a stroke
D. Number of pistons

571. **The function of the piston compression rings used in a diesel engine is to _____.**
A. seal the space between the piston and liner
B. transmit heat from the piston to the cylinder liner
C. reduce the amount of combustion gas blow-by
D. all of the above .

572. **Modern marine diesel engines using mechanical fuel injection, operate on a combustion cycle which is_____.**
A. a combination of constant volume and constant pressure .
B. a combination of constant temperature and constant pressure
C. entirely constant pressure
D. entirely constant volume

573. **The main function of piston compression rings is to _____.**
A. prevent excessive cylinder liner wear
B. reduce friction losses in the engine
C. seal the space between the piston and the liner .
D. limit upward flow of lube oil into the combustion space

574. **How often should the lubricating oil of a diesel engine be changed?**
A. After every trip
B. Every 4000 hours

C. According to manufacturer’s instructions .
D. Every time they are shutdown

575. **The flywheel reduces speed fluctuations by _____.**
A. maintaining a constant rack setting
B. storing kinetic energy .
C. maintaining equal exhaust pressure
D. maintaining even camshaft speed

576. **The over-speed trip device installed in some diesel engines is automatically actuated by_____.**
A. spring force
B. hydraulic pressure
C. centrifugal force .
D. mechanical linkage

577. **Modern marine diesel engines equipped with mechanical fuel injection operate on a combustion phase within the cycle which is_____.**
A. entirely constant pressure
B. entirely constant temperature
C. a combination of constant volume and constant pressure .
D. a combination of constant temperature and constant pressure

578. **In a single acting, two-stroke/cycle, diesel generator engine, the power impulse in an individual cylinder occurs _____.**
A. once every crankshaft revolution .
B. once every two crankshaft revolutions
C. once every piston stroke
D. twice every piston stoke

579. **An indicator card or pressure-volume diagram, shows graphically the _____.**
A. compression ratio of the engine
B. volume of the engine
C. relationships between pressure and volume during one stroke of the engine
D. relationships between pressure and volume during one cycle of the engine .

580. **Piston compression rings used in a diesel engine function to _____.**
A. transfer heat from the cylinder to the piston
B. scrape oil from the sides of the piston
C. seal the combustion space from the crankcases .
D. prevent any piston contact with the cylinder liner

581. **Which of the following statements represents the function of the compression rings installed at the top of a diesel Engine piston?**
A. Control the amount of lube oil burned in the combustion chamber
B. Transmit heat from the piston to the cylinder liner.
C. Prevent damage to ring groove inserts by acting as a heat dam
D. Dissipate combustion chamber gas pressure by channeling it through the ring gap

582. **Because of the close tolerances used in diesel engine fuel oil pumps, a worn plunger requires_____.**

A. grinding the spare plunger to the barrel
B. replacing the plunger and the barrel .
C. highly polishing both the plunger and barrel
D. replacing plunger only

583. **A diesel engine emits blue exhaust smoke as a result of _____.**

A. cold intake air
B. excessive compression pressure
C. excessive cylinder lubrication .
D. a light load

584. **If a diesel engine is smoking excessively under load, the cause could be _____.**

A. low exhaust back pressure
B. early fuel injection in one of the cylinders
C. compression pressure in one of the cylinders
D. plugged injector holes .

585. **For most diesel propulsion and generator engines, the over-speed trip device will stop the engine by _____.**

A. moving the governor control to stop
B. shutting off the lubricating oil supply
C. tripping the governor emergency stop lever
D. shutting off the fuel supply .

586. **The highest loads applied to the diesel engine crankshaft main bearings are _____.**

A. axial loads
B. firing loads .
C. inertia loads
D. centripetal loads

587. **Combustion gases formed in the cylinder of a diesel engine are prevented from blowing past the piston by _____.**

A. cylinder valves
B. compression rings .
C. piston skirts
D. oil rings

588. **While overhauling a jerk-type fuel pump it is necessary to replace the pump plungerWhich of the parts listed below must also be replaced?**

A. Delivery check valve
B. Pump barrel .
C. Tubing to the injector
D. Cam follower

589. **The purpose of the flywheel is to _____.**

A. provide energy to operate the engine between power impulses .
B. neutralize the primary inertia force of the crankshaft

C. reduce the shock of starting loads on the main bearings
D. prevent the engine from operating at critical speed

590. **An emergency diesel generator should automatically shut down in the event of _____.**
A. dangerous over-speeding
B. a loss of lube oil pressure
C. activation of the fixed CO2 system for the emergency generator space
D. all of the above .

591. **Increasing the compression ratio of a diesel engine while maintaining the designed rate of fuel flow will result in _____.**
A. increased horsepower .
B. reduced efficiency
C. increased heat loss
D. lower cylinder pressures

592. **Black smoke exhausting from an operating diesel engine is an indication of poor combustion which may be caused by _____.**
A. water in the fuel
B. insufficient fuel for combustion
C. clogged air intake passages .
D. burning lubricating oil

593. **In a modern internal combustion diesel engine, the load carrying part of the engine is referred to as the_____.**
A. bedplate or base .
B. sump or oil pan
C. cylinder block
D. frame

594. **If the plunger or barrel of a fuel injection jerk pump becomes damaged, _____.**
A. only the replacement of the entire pump would be acceptable
B. the injection pump and injection nozzle must be replaced
C. either the barrel or plunger must be replaced
D. the barrel and plunger must be replaced as a unit .

595. **A well-lubricated bearing surface always appears_____.**
A. well knurled
B. slightly streaked
C. lightly glazed
D. highly polished .

596. **Which of the following statements describes the results of excessive microbiological growths within a fuel system?**
A. all excessive amounts of growth will cause the main engines of the vessel to stall due to the inability to supply the proper quantities of fuel to satisfy the existing load
B. The deposits produced by these growths form blockages and flow restrictions ultimately leading to improper atomization of the fuel into the cylinders.
C. Eventually the growth of these organisms will deplete the supply of food available to them, which in

turn will cause their demise

D. If continual growth is permitted, a sweet odor similar to that associated with baking will be noticed when system components are opened for inspection

597. **If the detergent type lubricating oil being used in a diesel engine is black, the oil _____.**

A. must be centrifuged
B. must by filtered
C. must be changed
D. is holding finely dispersed carbon in suspension .

598. **In an internal combustion engine, which of the devices listed will force the compression rings to seal the compression gases in the space above the piston?**

A. Used of bimetallic piston rings
B. Ring gap pre-tensioning
C. Thermal increase in ring-end clearance
D. Gas pressure acting against the back of the ring .

599. **When disassembling or assembling an injection pump plunger and barrel you should _____.**

A. keep the parts immersed in diesel fuel
B. always keep the plunger and barrel together
C. work over a linoleum-type surface
D. all of the above .

600. **Oil oxidation, as a result of excessively high lube oil temperature, is harmful to a diesel engine because _____.**

A. oil foaming will occur
B. large quantities of oil are consumed
C. lube oil viscosity is always decreased
D. corrosive by-products are usually formed .

601. **Surface irregularities, such as erosion and pitting on injection pump plungers, will_____.**

A. increase ignition delay
B. affect fuel oil metering .
C. affect engine performance at low speed
D. only disappear due to fuel oil abrasion

602. **The oxidation by-products forming in diesel engine lube oil can cause _____.**

A. pitting
B. sludge
C. hard varnish
D. all of the above .

603. **Which of the following operational conditions will occur to the diesel engine lube oil at extremely high temperature?**

A. The oil oxidizes and forms carbon deposits .
B. The viscosity increases
C. Engine oil consumption decreases
D. Lubricating qualities of the oil are enhanced

604. **Which of the listed conditions can cause a diesel engine to use too much lube oil?**
A. Dirty lube oil filter
B. Too much piston ring wear .
C. High lube oil viscosity
D. Low lube oil temperature

605. **Auxiliary diesel engines can be automatically shut down as a result of _____.**
A. low lube oil temperature
B. low lube oil pressure .
C. high exhaust temperature
D. high cooling water pressure

606. **Valve lash, or clearance refers to the _____.**
A. clearance between the top of the valve stem and the rocker arm .
B. compression of the valve springs
C. clearance between the valve seat inserts and the head
D. out of roundness of the fuel injection cams

607. **In some modern large diesel engines, which of the following is used as the support for the main bearings?**
A. Bedplate .
B. Block
C. Base
D. Sump

608. **The efficiency of a flash type evaporator can be increased by .**
A. lowering brine discharge density
B. decreasing the absolute pressure of each stage .
C. increasing the saltwater feed heater temperature
D. increasing the pressure at the spray pipe

609. **The second stage feed-water temperature and shell absolute pressure in a multistage, flash type, distilling plant is ___.**
A. higher than the first stage feed-water temperature and absolute shell pressure
B. lower than the first stage feed-water temperature and absolute shell pressure .
C. the same as the first stage feed-water temperature and absolute shell pressure
D. not related to the feed-water temperature and absolute shell pressure

610. **Early models of the flash-type evaporators used a separate shell-and-tube heat exchanger as the air ejector condenserMore recent models use a combined air ejector condenser with the__.**
A. distilling condenser
B. salt water feed heater .
C. distillate cooler
D. flash chamber

611. **On a multistage flash-type evaporator, the flash chamber is ___.**
A. combined as part of the salt water feed heater
B. the open area above the brine levels in the first and second stages .

C. combined as part of the distillate cooler
D. another term used to describe the vapor feed heater

612. **The heated feed-water entering any flash chamber of a flash-type evaporator will __.**
A. vaporize, with the un-flashed water remaining at the temperature at which it entered the flash chamber
B. vaporize, with the un-flashed eater equalizing to the saturation conditions existing in the f lash chamber .
C. vaporize, with the remaining water a t a temperature greater than it entered the flash chamber
D. boil, allowing steam bubbles to rise through the brine at the bottom of the flash chamber

613. **A vacuum is initially established in the first and second stages of a low pressure evaporator by the use of __.**
A. vacuum drag from the auxiliary condensate system
B. individual vacuum pumps
C. a single non-condensing air ejector
D. a two stage air ejector .

614. **The demisters installed in a flash-type evaporator serve to __.**
A. deaerate the first effect distillate
B. filter the condensed flash vapors
C. deaerate the first and second effect distillate
D. remove small water droplets entrained in the flashed vapor .

615. **Small droplets of water entrained in the flashed vapor produced in a flash-type evaporator, are removed by the .**
A. spray pipes
B. demisters .
C. condensers
D. splash baffles

616. **In a flash evaporator, scale as a result of higher than normal temperatures in most likely to occur in the __.**
A. second stage feed heater
B. saltwater feed heater .
C. distillate cooler
D. second stage vapor separator

617. **The temperature of the fuel oil received during bunkering operations is critical in determining the_____.**
A. expansion space to leave in a tank .
B. flash point at which the fuel will burn
C. temperature to which the fuel must be heated
D. rate at which the fuel can be pumped during transfer operations

618. **If a vessel moored at a U.Sterminal does not comply with coast guard pollution prevention regulation, it may be detained by the _____.**
A. Inspector general
B. Captain of the port .

C. local port authority
D. state pollution board

619. **The ship security assessment is an essential and integral part of the process of developing and updating_____.**
A. the ship security plan .
B. the company security plan
C. the port security plan
D. the national security plan

620. **Piston cooling fins are located .**
A. atop the piston crown
B. beneath the piston crown .
C. at the base of the piston skirt
D. inside the cylinder liner cooling water jacket

621. **Which of the following conditions is realized by the turbo-charging of a previously naturally aspirated diesel engine? .**
A. Ignition lag increases
B. Lube oil system pressure increases
C. Brake specific fuel consumption increased
D. Mechanical efficiency increaded.

622. **Which of the following represents the significance the fuel oil cetane number?**
A. The cetane number has no affect on injection lag.
B. The cetane number is an indication of the fuel’s viscosity
C. Ignition lag is reduced with fuels having a high cetane number
D. The cetane number is of little significance in the combustion

623. **When the ship is going to enter into the harbor, .**
A. change from heavy fuel oil to diesel oil for mail engine .
B. pumping oil bilge water
C. change sea chest form high level one to lower one
D. test emergency generator

624. **A dry-type spark arrestor removes sparks from a diesel engine exhaust by .**
A. increasing the linear velocity of the exhaust gases
B. changing directions of exhaust gas flow .
C. decreasing the temperature of the exhaust gases
D. accelerating the exhaust gas through a reduced size orifice

625. **The oil index of main engine should be controlled to prevent it from in heavy weather.**
A. over heat
B. over speed
C. over pressure
D. over worn .

626. **In the navigation, cause the shafting over load most easily.**
A. stopping the main engine suddenly

B. changing the main engine running direction suddenly .
C. the sailing from the shallow water area to the deep water area
D. the ship’s trim too much

627. **Some refrigeration systems have chemical moisture indicators installed in conjunction with the sight glass in the liquid lineIf excess moisture is present in the system, the indicator will .**
A. activate the driers
B. change color .
C. secure the compressor
D. add a predetermined amount of liquid drier

628. **To ensure oil purifier working in normal condition, the interval between two sludge discharging should not exceed hours.**
A. 2
B. 4 .
C. 5
D. 6

629. **One of the reasons that causes oil flowed from sludge outlet of a self-cleaning purifier is .**
A. seal water supply be cut off
B. make-up water supply be cut off .
C. oil outlet valve closed or not open sufficiently
D. the flow rate of oil is too much

630. **Positive displacement, helical gear pumps are well suited for pumping oil because .**
A. stuffing boxes eliminate the leakage problems usually associated with other gear pumps
B. it is not necessary to closely maintain design clearances with this pump
C. they are essentially self-priming and produce a high suction lift .
D. these pumps are designed with extreme tooth angled

631. **The in the steering gear move the rudder to the required angel.**
A. control equipment
B. power unit
C. transmission mechanisms .
D. fittings and pipeline

632. **The ability of lubricating oils to resist viscosity changes during temperature changes is indicated by the .**
A. American Petroleum
B. Institute number viscosity index number .
C. Seconds Saybolt Furol number
D. Seconds Saybolt Universal number

633. **Before doing any work on a hydraulic system equipped with accumulators, you should .**
A. drain the accumulators and purge with oxygen
B. bleed off all stored energy from the accumulators completely .
C. charge the accumulators to prevent system energy loss
D. pump the hydraulic fluid into the accumulators to prevent fluid loss

634. **Usually, emergency electricity supplies to on board.**
A. Cargo winch
B. Windlass
C. Steering gear .
D. Main air compressor

635. **The seven segment arrangement for numerical(数字的) display on consoles, test meters and other applications can be either .**
A. UJT or BJT
B. BCD or OCD
C. JFET or IGFET
D. LED or LCD .

636. **Before engaging the turning gear and turning the diesel engine, which of the following operation should be done except .**
A. open the indicator cocks
B. supply some CYL.Oil to cylinder liner wall with lubricator (only for two stoke diesel engine)
C. put the fuel handle in the “stop” position
D. pump up the air bottle .

637. **During the watch keeping at sea, the engineer in charge should notify in the event of any serious occurrence or a situation where he is unsure of the action to take.**
A. the master
B. the chief engineer .
C. the bridge
D. the company superintendent

638. **When the ship, its main propulsion device equipped with clutch, arrived at the port and finished with the engine, the correct operation should be .**
A. disengaging the clutch firstly, then stopping the main engine .
B. stopping the main engine firstly, then disengaging the clutch
C. stopping the cooling water pump firstly, then stopping the main engine
D. stopping the main engine and disengaging the clutch at the same time

639. **The purpose of treating the cooling water of the diesel engine is to Ⅰ.resist the scale formation in the cooling chamber Ⅱ.lubricate the engine part Ⅲ.increase thermal capacity Ⅳ.resist corrosion**
A. Ⅰ+Ⅱ
B. Ⅱ+Ⅲ
C. Ⅲ+Ⅳ
D. Ⅰ+Ⅳ .

640. **A is the documentary attestation for the delivery of stores and spare parts.**
A. engine logbook
B. delivery docket .
C. store booklet
D. maintenance book

641. **, where the ship is docked for hull coating renewal, and for any other required underwater work to be carried out, when the opportunity is taken to make other repairs.**
A. Voyage repairs
B. Routine docking .
C. Damage repairs
D. Conversion

642. **During the dock repair, should be measured firstly before tail shaft drawn out.**
A. the sinking of tail shaft .
B. the clearance of stern bearing
C. the total flexure of shaft
D. main engine crankshaft deflection

643. **During sea trial, the main engine well be kept run at load.**
A. 100%
B. 110%
C. 85%
D. different .

644. **During the PSC inspection, under the provisions of SOLAS 74, which one may not be regarded as clear grounds for ships' detainment?**
A. excess amount of oily-water mixtures in bilges
B. insulation of piping including exhaust pipes in engine room contaminated by oil .
C. improper operation of bilge pumping arrangements
D. there were an actual emergency

645. **The bridge should inform the engine room before passing through congested or shallow waterway.**
A. 24 hours
B. 2 hours
C. 1 hours .
D. 15 minutes

646. **International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code) is a part of .**
A. SOLAS .
B. MARPOL
C. STCW
D. Ballast Water convention

647. **Each ship shall carry on board a shop security plan approved by .**
A. the chief engineer officer
B. the master of the ship
C. the manager of the company
D. the Administration .

648. **The installation and provision of fire fighting equipment is mainly subject to .**
A. ISM code .
B. ISPS code

C. IBC code
D. FSS code

649. **When the order given by bridge may have bad results, the duty engineer should .**
A. inform the captain for a further consideration, then perform it .
B. inform the captain, and not perform it
C. stop the M/E immediately, and then inform the chief engineer
D. stop the M/E immediately, and then inform the captain

650. **The SOLAS convention prescribes that in the fire fighting drill the duty engineer should start the pump and supply deck water in minute(s).**
A. 5 .
B. 3
C. 2
D. 1

651. **In order to strengthen maritime security and prevent and suppress acts of terrorism against shipping, a new, comprehensive security regime for international shipping was set to enter into force in July 2004The new regime is .**
A. ISM Code
B. ISPS Code .
C. FSS Code
D. IBC Code

652. **In the voyage, when carrying out abandon ship drill, should be test every time.**
A. the emergency lighting system for muster and abandon ship
B. air/oil emergency shut-down .
C. M.Eemergency operation
D. main/auxiliary steering gear changing

653. **Excessive piston ring wear in a diesel engine will cause _____.**
A. high lube oil viscosity
B. increased lube oil consumption .
C. low lube oil temperatures
D. high firing pressures

654. **If a diesel engine runs roughly, which of the systems listed is most likely to be at fault?**
A. Fuel .
B. Lubricating
C. Cooling
D. Ignition

655. **Worn diesel engine intake valve guides can result in _____.**
A. increased engine breathing efficiency
B. excessive valve lash
C. excessive lube oil consumption .
D. lower than normal fuel consumption

656. **Diesel engine valve springs function to _____.**
A. hold the valves open
B. keep the valves off their seats until the exhaust stroke is completed
C. close the valves .
D. open inlet valves when the air injection cycle begins

657. **In the common rail system, excessive pressure in the header may be caused by _____.**
A. improper adjustment of the bypass valve .
B. a dribble in the fuel injection nozzle
C. insufficient leak-off through injection nozzle packing
D. a malfunctioning injection nozzle

658. **Which of the following conditions can cause excessive lube oil consumption in a diesel engine?**
A. Low lube oil temperature
B. Dirty lube oil strainer
C. Low lube oil pressure
D. High lube oil temperature .

659. **If the jacket water temperature rises rapidly above normal in a diesel engine, you should FIRST _____.**
A. place standby cooler in operation
B. reduce engine load .
C. check thermostatic valve
D. clean sea water strainer

660. **Valve cages are used on some large diesel engines to _____.**
A. reduce wear on the valve stem
B. permit the use of alloy valve seat materials
C. reduce heat transfer from the valve seat
D. facilitate valve removal for servicing .

661. **Under normal conditions, the main source of crankcase oil contamination is attributed to _____.**
A. metal particles loosened by wear
B. air when air cleaners are not used
C. condensation of water vapors
D. breakdown of the lubricating oil by dilution .

662. **In a diesel engine, a cylinder liner should be replaced if it is _____ Ⅰ Scuffed Ⅱ Scored**
A. I only is correct
B. Ⅱ only is correct .
C. both I and Ⅱ are correct
D. neither I or Ⅱ are correct

663. **In a diesel engine cooling system, the high temperature alarm contact maker will be activated on excessively high water discharge temperature from the _____.**
A. raw water pump discharge
B. expansion tank outlet

C. cooling water heat exchanger
D. outlet engine jacket water outlet .

664. **Cooling water pumps driven by direct reversing diesel engines are usually of the straight impeller vane type pump with a concentric housing to _____.**
A. facilitate bi-directional operation .
B. provide the greatest pump efficiency
C. prevent pump clogging from marine growth
D. prevent cavitation at the pump outlet

665. **One cause of diesel engine surging can be a result of _____.**
A. injection pump plungers stuck or worn .
B. low compression
C. solenoid stuck open
D. fuel tank too full

666. **In an operating diesel engine, pre-ignition can be caused by _____.**
A. excessively late fuel injection
B. oil in the air charge .
C. water in the fuel
D. injection continuing after the fuel charge is ignited

667. **Excessive lube oil consumption can result from worn or broken _____.**
A. piston rings
B. valve guides
C. valve seals
D. all of the above .

668. **In a diesel engine, an integral liner is one in which the cooling water _____Iflows through the cylinder liner jackets Ⅱ.touches the outer side of the liner**
A. I only .
B. Ⅱ only
C. both I and Ⅱ
D. neither I and Ⅱ

669. **In a diesel engine, when refitting piston rings you should _____Icheck the ring gap at the smallest diameter of the cylinder ⅡRemove carbon from the ring groove**
A. I only
B. II only
C. both I and II .
D. neither I nor II

670. **A condition that can increase the foaming tendency of lube oil is _____.**
A. excessively high oil temperatures
B. water or moisture contamination .
C. fuel dilution
D. life its cylinder relief vales

671. **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_____.**

A. backfire through the air intakes
B. develop less power under load .
C. have high firing pressures
D. lift its cylinder relief valves

672. **Excessive lubricating oil consumption in a running diesel engine can be caused by _____.**

A. clogged lube oil piping
B. excessive valve-guide clearance .
C. high lube oil viscosity
D. low lube oil temperature

673. **Which of the following condition is likely to develop if the thermocouple element of a pyrometer becomes coated with excessive amounts of combustion by-products?**

A. Indicated exhaust pressure readings will increase
B. Pyrometer responses will be retarded.
C. Indicated cylinder temperature readings will increase
D. Indicated firing pressure readings will increase

674. **Significant retardation of a diesel engine fuel injection timing will result in _____.**

A. smoother engine operation
B. advanced fuel ignition
C. increased fuel economy
D. reduced engine power .

675. **In a four-stroke/cycle diesel engine, badly worn intake valve guides can cause excessive_____.**

A. exhaust pressure
B. exhaust temperatures
C. cooling water temperatures
D. lube oil consumption .

676. **Forcing the exhaust gases form the cylinder of an operating diesel engine with the aid of a blower is known as _____.**

A. scavenging .
B. forced draft
C. turbo-charging
D. aspiration

677. **An acceptable means of tightening connecting rod and main bearing cap bolts is to measure the _____Itorque applied to each nut and bolt assembly IIstretch of each nut before and after tightening**

A. I only .
B. II only
C. both I and II
D. neither I nor II

678. **A condition contributing to diesel engine piston rings sticking in the ring grooves, is insufficient ring clearance at the ring_____Igap IIside**

A. I only
B. II only .
C. both I and II
D. neither I nor II

679. **In a trunk type diesel engine piston, the thickness of the head or crown is determined by the_____Istatically balanced IIheat dissipation requirement**
A. I only
B. II only
C. both I and II .
D. neither I nor II

680. **A crankshaft whose center of gravity coincides with its center line is said to be_____Istatically balanced IIdynamically balanced**
A. I only .
B. II only
C. both I and II
D. neither I nor II

681. **Late fuel oil injection in a diesel engine can result in ___.**
A. fuel knock
B. increased power
C. low compression pressure
D. high exhaust temperature .

682. **Which of the following problems represent one possible cause of high lube oil consumption in a four stroke diesel engine?**
A. Worn intake valve guides .
B. Pitted pre-combustion chambers
C. Loose valve tappets
D. High exhaust back pressure

683. **At bottom dead center, the centerline of the connecting rod usually coincides with the___.**
A. angularity of the piston motion
B. inertia moment from the piston
C. centerline of the cylinder .
D. centerline of the king pin

684. **In a diesel engine, when installing new piston rings it is important to check_____Iring gap clearance IIside clearance**
A. I only
B. II only
C. both I and II .
D. neither I nor II

685. **When fuel is injected late into a diesel engine cylinder,_____.**
A. the exhaust will be clear
B. fuel consumption will be low

C. all the fuel will be burned at top dead center
D. fuel consumption will be high .

686. **When using a fuel with a higher than normal sulfur content in an auxiliary diesel engine, you should_____.**
A. maintain higher than normal jacket water temperature
B. change the lube oil more frequently than normal .
C. maintain a higher air-box temperature than normal
D. maintain a higher air-box pressure than normal

687. **In which of the scavenging methods listed will the exhaust valve be located in the cylinder head?**
A. Return-flow
B. Uniflow .
C. Cross-flow
D. Direct flow

688. **Which of the listed devices could be used as a substitute for a ring grooving tool?**
A. Steel brush
B. Fine emery cloth or steel wool
C. A section of the removed compression ring .
D. A case hardened scraper

689. **The cylinder liner forming the cylinder wall and the inside of the water jacket is called a ____.**
A. dry liner
B. wet liner .
C. jacket liner
D. corrugated liner

690. **In a diesel engine, late fuel injection is indicated by black or gray exhaust smoke with_____.**
A. low firing pressure .
B. low exhaust temperature
C. mechanical knock in each cylinder
D. fuel knock in each cylinder

691. **Metal particles accumulated from the wearing of components in a diesel engine can result from lube oil that has been contaminated with_____.**
A. abrasive particles
B. metallic oxides
C. corrosive acids
D. any or all of the above .

692. **Some diesel engines are supercharged with a ____.**
A. slam charger
B. turbocharger .
C. fuel atomizer
D. fuel injector

693. **Misalignment of the drive shaft and propeller shaft flanges can be detected by using a dial indicator or _____.**

A. inside micrometer
B. feeler gauge and straight edge .
C. adjustable trammel
D. sighting device

694. **A diesel engine will lose power if fuel injection occurs too late in the cycle, because the _____.**

A. fuel droplets will burn as they leave the fuel injector
B. fuel will not be properly atomized in the cylinder
C. maximum expansion of the burned fuel cannot take place in the cylinder .
D. compression pressure will be too low to cause fuel ignition

695. **In a diesel engine, blow-by_____.**

A. increase exhaust back pressure
B. causes excessive crankcase pressure .
C. can only be detected by a compression check
D. decreases fuel consumption

696. **The process of supplying a diesel engine cylinder with air at a pressure greater than atmospheric is called_____.**

A. engine displacement
B. super-aspirating
C. air injection
D. supercharging .

697. **Late fuel injection timing is indicated by _____.**

A. lower than normal cylinder pressure and low exhaust temperature
B. lower than normal cylinder pressure and high exhaust temperature .
C. higher than normal cylinder pressure and low exhaust temperature
D. higher than normal cylinder pressure and high exhaust temperature

698. **If the analysis of used lube oil indicates a high content of iron particles, this could indicate_____.**

A. corrosive deterioration of a bearing
B. inadequate air filtration
C. excessive ring and liner wear .
D. excessive cooling of lubricating oil

699. **The exhaust system for a turbocharged diesel engine functions to _____.**

A. power the after-coolers
B. power the turbocharger .
C. reduce the cylinder scavenge effect
D. cool the turbocharger

700. **In a medium speed diesel engine, a trunk type piston may be cooled by_____Ioil circulation though passages in the piston crown IIheat transfer through piston rings and liner wall**

A. I only
B. II only

C. either I or II .
D. neither I or II

701. **In a diesel engine jacket water cooler, with seawater cooling the fresh water, the _____.**
A. sea water temperature must never be warmer than 40℃
B. jacket water pressure should always be greater than the sea water pressure .
C. jacket water temperature must always be less than 60℃
D. jacket water pressure must always be less than the sea water pressure

702. **Late fuel injection in a diesel engine is indicated by low firing pressure with _____.**
A. high exhaust temperature .
B. low exhaust temperature
C. fuel knock in each cylinder
D. mechanical knock in each cylinder

703. **Which of the following beneficial results can be expected from supercharging a previously naturally aspirated engine?**
A. Increased turbulence
B. increased mechanical efficiency
C. Increased brake mean effective pressure
D. All of the above .

704. **If an auxiliary diesel engine temperature is higher than normal ,but the thermostat is determined not to be defective you would suspect a /an _____.**
A. cavitation erosion in the water jackets
B. excess corrosion inhibitor in the coolant
C. dirty jacket water cooler .
D. defective turbocharger

705. **In a unit injector the amount of fuel that will be forced through the spray nozzle on each stroke of the plunger depends on _____.**
A. the pump supply pressure
B. the slope of the fuel cam
C. how the plunger is rotated .
D. the number of sleeve segments engaged with the rack

706. **Late fuel injection occurring at, or after TDC in a diesel engine is indicated by excessive exhaust smoke and _____.**
A. low exhaust temperature
B. low firing pressure .
C. fuel knock in each cylinder
D. mechanical knock in each cylinder

707. **Compared to a naturally aspirated diesel engine, a supercharged diesel engine has_____.**
A. a cylinder air charge of higher pressure .
B. increased pumping losses
C. less valve overlap
D. reduced blow-by

708. **When one cylinder has a lower compression pressure and higher exhaust gas temperature than any of the other engine cylinders, which of the conditions listed will indicated?**
A. Advanced ignition
B. Clogged air intake
C. Leaky exhaust valve .
D. High exhaust pressure

709. **The bore of a diesel engine cylinder describes the _____.**
A. swept volume of the cylinder
B. inside diameter of the cylinder .
C. piston displacement in the cylinder
D. length of the piston stroke

710. **Late fuel injection in a diesel engine is indicated by low firing pressure with _____.**
A. low exhaust temperature
B. low exhaust pressure
C. mechanical knock in each cylinder
D. black or gray exhaust smoke .

711. **Which of the listed pre-start procedures should be carried out prior to starting a crosshead type diesel engine after an overhaul?**
A. Pre-lube cylinders with hand cranks
B. Open all air space drain cocks
C. Open all indicator valves
D. All of the above .

712. **The direct acting mechanical governor used with some small diesel engines, controls fuel flow to the engine by_____.**
A. governor flyweight action on a pilot valve which controls fuel injection
B. governor flyweight motion acting on fuel controls through suitable linkage .
C. positioning a butterfly valve in the fuel delivery system positioning
D. a servomotor piston attached to the fuel controls

713. **A supercharged diesel engine when compared to a similar naturally aspirated diesel engine, will develop an increase in _____.**
A. ignition lag
B. engine horsepower .
C. lube oil system pressure
D. specific fuel consumption

714. **The sludge tank installed in the diesel engine room is used to collect_____Isludge from the fuel oil settling tanks ad centrifuge IIwater that has been collected in the settling tank**
A. I only
B. II only
C. both I and II .
D. neither I or II

715. **If a few injector spray holes become plugged, the result could be _____.**
A. excessive surging at governed speed

B. combustion knock under load
C. poor fuel combustion
D. all of the above .

716. **Which of the following conditions is most likely to occur when unburned fuel contaminates the crankcase of a diesel engine?**
A. Lube oil is diluted and its viscosity is reduced .
B. Sulfuric acid is formed
C. Bearings become pitted ad immediately fail
D. Valve stems develop sludge deposits

717. **The International Code for the Construction and equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code) is a part of .**
A. SOLAS .
B. MARPOL
C. STCW
D. Ballast Water convention

718. **If the speed of a turbocharged diesel engine is maintained constant the turbocharger speed will _____.**
A. decrease until the engine speed increases
B. increase as the load increases .
C. decrease as the load
D. increases remain unchanged

719. **Why are some diesel engine cylinder liners plated on the wearing surface with porous chromium?**
A. The chromium will not wear out the piston rings
B. The chromium strengthens the liners in the way of the scavenging air ports
C. Chromium eliminates the need for oil scraper rings
D. Pores in the plating aid in maintaining the lube oil film .

720. **A distorted spray pattern from a fuel injector can cause a diesel engine to have _____.**
A. higher firing pressure
B. more power output
C. lower fuel pressure
D. less power output .

721. **Which of the listed bearing types is an example of a solid bearing?**
A. Piston wrist pin bushing .
B. turbine bearing
C. Spring bearing
D. Diesel engine main bearing

722. **The process of scavenging a two-stroke/cycle diesel engine serves to_____.**
A. improve fuel flow volume
B. cool the exhaust valves .
C. reduce the intake air charge density
D. increase the temperature of exhaust gases

723. **A diesel generator has just been paralleled with an AC turbo-generator, but the load can not be properly divided .This could be caused by_____**

A. an incorrect diesel generator governor speed droop adjustment .
B. a faulty reverse power relay within the main circuit breaker assembly
C. unsynchronized isochronous load distribution adjustments
D. a different speed setting on each unit

724. **The term diesel engine scavenging means_____.**

A. delivering more air into the cylinder than it would normally receive during an ordinary charging process
B. forcing the products of combustion out of the cylinder with the fresh air charge .
C. collecting the air charge at the cleaner
D. combustion and expansion of hot gas

725. **Air scavenging of a diesel engine cylinder_____.**

A. blows out the exhaust gases
B. supplies oxygen for combustion
C. cools the valves and cylinder walls
D. all of the above .

726. **Higher than normal temperature air passing through the intake of a diesel engine will result in_____.**

A. greater overall efficiency
B. greater fuel economy
C. lower horsepower .
D. lower compression ratio

727. **The rate of pressure rise during the period following fuel ignition in a diesel will result in _____.**

A. valve overlap
B. volumetric efficiency
C. turbulence of the air change .
D. fuel efficiency

728. **Distortion of the spray pattern of a nozzle or injector may be indicated by a/an_____.**

A. high firing pressure
B. overload of that particular cylinder
C. smoky exhaust .
D. cooling water temperature rise

729. **A diesel engine is supercharged in order to_____.**

A. lower the no-load RPMs
B. provide more air for combine with the fuel .
C. increase the no-load RPMs
D. provide more fuel combine with the air

730. **A properly honed diesel engine cylinder liner will_____.**

A. prevent piston ring wear
B. shorten the ring break-in period .

C. prevent cylinder liner glazing
D. appear slick and glazed

731. **When the opening pressure of a diesel engine fuel injector is greater than that specified by the engine manufacturer, which of the following problems can be expected? .**
A. Quantity of fuel injected tends to be decreased .
B. Quantity of fuel injected will always be increased
C. Start of injection tends to be advanced
D. Duration of injection will always greater

732. **Which of the following conditions could be a cause of excessive fuel dilution of diesel engine lube oil?**
A. Leaking fuel injectors
B. Lower than normal compression
C. Delayed fuel injection
D. All of the above are correct .

733. **When a fuel injection nozzle overheats, which of the problems listed can be expected?**
A. The fuel metering will vary .
B. The fuel will explode
C. The cylinder head will crack
D. The engine will stop

734. **Fuel oil contamination of an auxiliary diesel engine lube oil can result in _____.**
A. an increased flash point
B. higher lube oil pressures
C. an increased viscosity
D. lower lube oil pressures .

735. **A diesel engine piston crown can crack from _____.**
A. excessive piston to liner clearance
B. excessive dirt beneath the piston crown that reduces heat transfer
C. faulty nozzle spray
D. all of the above .

736. **Scavenging in a turbocharged, four-stroke/cycle diesel engine is accomplished_____._**
A. during the valve overlap period .
B. with only the exhaust valve open
C. at a pressure below atmospheric
D. without cooling the cylinders or pistons

737. **If the firing pressures in a diesel engine are high, although the exhaust temperatures are normal, the cause may be .**
A. early injection timing
B. worn orifices in the injection nozzles .
C. worn or scored cylinder liners
D. using a fuel with too low of a cetane number

738. **Diesel engine lube oil can become contaminated as a result_____.**
A. the water produced during combustion
C. the sulfur in the fuel
C. unburned fuel oil
D. all of the above .

739. **Which of the diesel engine cylinder liners listed has internal cooling water passages?**
A. Internally finned liner
B. Externally finned liner
C. Wet liner
D. Integral water-jacket liner .

740. **If a single cylinder relief valve on a diesel engine lists frequently while the engine is running, the cause may be an _____.**
A. excessively late injection timing for each cylinder
B. incorrectly adjusted intake valve timing
C. incorrectly adjusted fuel injector .
D. incorrectly adjusted intake valve clearance

741. **Which of the following conditions indicates the dilution of diesel engine lube oil by fuel oil? .**
A. Water discharging from the water outlet of the lube oil purifier
B. Fuel oil discharging from the water outlet of the lube oil purifier
C. Lube oil discharging from the water outlet of the lube oil purifier
D. A change in the lube oil viscosity .

742. **Which of the turbo-charging systems listed operates with the least average back pressure in the exhaust manifold?**
A. Constant volume
B. Constant pressure
C. Pulse pressure .
D. Radial flow

743. **The exhaust valve opens before bottom dead center in a four stroke engine to_____Iallow for blow down IIReduce pumping losses**
A. I only
B. II only
C. both I and II .
D. neither I nor II

744. **An operating turbocharged diesel engine that suddenly loses power, is due to a/an_____.**
A. restricted turbocharger air intake .
B. oil leak into the turbocharger
C. dribbling injector
D. low fuel viscosity

745. **A dry-type exhaust muffler clogged with soot, will cause_____.**
A. low exhaust temperature
B. loss of engine power .

C. burned intake valves
D. engine racing

746. **Which of the following problems will occur if the needle valve in a fuel injection nozzle sticks in the open position?**
A. Fuel injection timing will change .
B. Nozzle operation will be unaffected
C. Fuel will leak into the drain line
D. Fuel will not be delivered

747. **Which of the turbo-charging methods listed directs the exhaust gases to the turbine at fairly uniform velocity and pressure?**
A. Constant pressure .
B. Pulse
C. constant velocity
D. Axial flow

748. **It is easier to replace a dry cylinder liner than a wet one because_____.**
A. of the thin wall thickness
B. honing makes it easier to maintain the desired oil ilm
C. water seals are not required .
D. it fits more loosely due to a decrease in heat transfer through the composite wall

749. **Which of the listed conditions can be used to determine if lube oil has been diluted by fuel? .**
A. Viscosity is decreased .
B. Octane number is altered
C. Pump speed is decreased
D. Blower’s speed is decreased

750. **Intake air flow from a diesel engine turbocharger is directly proportional to engine_____.**
A. exhaust gas pressure
B. exhaust gas temperature
C. speed
D. load .

751. **One advantage of dry cylinder liners used in a diesel engine is the_____.**
A. lower thermal expansion rates than wet liners
B. greater heat transfer rate than wet liners
C. greater wear resistance than wet liners
D. procedure to replace dry liners is simpler than for wet liners .

752. **One characteristic of a pulse type turbo-charging system is_____.**
A. high average exhaust manifold
B. greatly fluctuating inlet manifold pressure
C. constant exhaust manifold pressure
D. multiple exhaust pipes to the turbocharger .

753. **One of the advantages in the use of a dry liner over a wet liner is_____.**
A. it is fitted with neoprene O-ring seals

B. the honing process makes it easier to maintain the desired oil film
C. there is likelihood of water leaking into the combustion space .
D. it fits more loosely due to a decrease in heat transfer through the composite wall

754. **Heat damage to fuel injection nozzles on small high-speed diesel engines, can be prevented by_____.**
A. employing fuel oil as a cooling medium
B. preventing hard carbon deposit on nozzle tips
C. avoiding fuel oil temperature exceeding builder’s specification
D. ensuring good metallic contact between nozzles and cylinder heads .

755. **By comparing the exhaust gas temperature of each cylinder, the operator can determine if the load is balanced throughout the engineThe device most commonly used is a_____.**
A. tachometer
B. pyrometer .
C. dynamometer
D. calorimeter

756. **The major cause of problems occurring with fuel injection equipment is_____.**
A. incorrect replacement of barrels and plungers of jerk pumps
B. overheating of the nozzle orifices
C. cracked pump housings
D. dirt in the fuel .

757. **A defective injector nozzle in a propulsion diesel engine can cause_____.**
A. engine power losses
B. smoking due to unburned fuel
C. high exhaust temperature readings
D. all of the above .

758. **Lubricating oil viscosity in an operating diesel engine can be reduced by_____.**
A. increasing cooling water flow
B. increasing lube oil flow
C. dilution by fuel oil .
D. adding SAE 70 oil

759. **Which of the following statements is correct regarding a turbocharged four-stroke/cycle diesel generator? .**
A. At zero load the intake manifold pressure is greater than the exhaust manifold pressure
B. At full load the intake manifold pressure and exhaust manifold pressure are equal
C. At full load the intake manifold pressure is less than the exhaust manifold pressure
D. At full load the intake manifold pressure is greater than the exhaust manifold pressure .

760. **Diesel engine cylinder head test cocks are used to _____.**
A. check cylinder lubrication
B. connect the pressure indicator pressure .
C. test cylinder heads
D. connect the exhaust gas pyrometers

761. **Dirt lodged on the nozzle valve seat of a fuel injection nozzle will cause _____.**
A. erosion and cratering of the nozzle orifices
B. fuel leakage into the nozzle drain line
C. fuel leakage before and after injection .
D. insufficient fuel delivery though that nozzle

762. **A sudden decrease in the diesel engine lube oil viscosity could be an indication of_____.**
A. loss of additives from the lube oil
B. carbon deposits in the lube oil
C. excessive centrifuging
D. excessive fuel dilution .

763. **The relative air pressure in the inlet manifold of a turbocharged diesel engine is usually_____.**
A. greater than the average exhaust manifold pressure .
B. less than the average exhaust manifold pressure
C. greater at the turbine wheel than at the impeller
D. greater at reduced engine speed

764. **A leaking diesel engine fuel injector will cause_____.**
A. prolonged maintenance intervals
B. improved atomization
C. greater fuel economy
D. incomplete combustion .

765. **A turbocharged diesel engine will have an intake manifold pressure_____.**
A. constantly decreasing as engine load increase
B. constantly increasing as the amount of supercharging increases .
C. approximately equal to exhaust manifold pressure at all times
D. approximately equal to atmospheric pressure at all times

766. **Diesel engine cylinder head test cocks are used to_____.**
A. check cylinder lubrication prior to starting engine
B. connect exhaust gas analyzers to determine engine efficiency
C. pressure test cylinder heads to check for leaks
D. remove moisture accumulations from cylinder prior to starting .

767. **Problems with the diesel engine fuel injection pump are usually caused by_____.**
A. improper adjustment
B. contaminated fuel .
C. kinked fuel lines
D. excessive engine vibration

768. **Which of the following faults would allow lube oil to enter the cooling system of a diesel engine?**
A. Excessive valve train lubrication
B. Leaking standby oil cooler core .
C. Excessive lube oil pressure
D. Excessive lube oil in the system

769. **Which of the following problems is the main source of fuel pump and injection system malfunctions?**
A. Improper lubrication
B. Air in the fuel system .
C. Coated fuel lines
D. Excessive vibration

770. **Lube oil in the fresh water cooling system of a diesel engine may result from a _____.**
A. camshaft seizure
B. lube oil pump failure
C. lube oil cooler failure .
D. lube oil pump overflow

771. **Which of the diesel engine components listed increase air density and helps to improve engine operating efficiency?**
A. Impeller
B. Compressor
C. After-cooler .
D. Exhaust differ

772. **One end of a cylinder for a medium or high-speed diesel engine is sealed by the piston and rings, the other end is sealed by the _____.**
A. crankcase
B. cylinder head .
C. valve cover
D. engine frame

773. **High cylinder firing pressure, accompanied by low exhaust temperature, can result from ___.**
A. improper fuel rack positing
B. lengthy exhaust valve duration
C. extend operation at light load
D. excessively early injection timing .

774. **Which harmful consequence may be the result of lube oil sludge accumulation? .**
A. Clogged oil pump suction screens
B. Increased oil operating temperatures
C. Sticking piston rings
D. All of the above .

775. **What is the function of the after-cooler installed in the diesel engine air intakes system?**
A. Decrease the air density
B. Increase the exhaust temperature
C. Decrease the lube oil temperature
D. Increase the air density .

776. **An efficient seal between the cylinder block and cylinder heads on many diesel engines is obtained with_____.**
A. graphite packing
B. sealing compound

C. lubricating oil
D. gaskets .

777. **An increase in the fuel injection pump discharge pressure can be caused by a/an _____.**
A. leaking delivery valve
B. excessive bearing end play
C. plugged injector spray hole .
D. increased plunger stroke

778. **High lube oil temperatures developing in a diesel engine can result from_____.**
A. high oil pressure
B. excessive bearing end play
C. plugged oil control rings
D. engine overload .

779. **The function of the after-cooler installed between the turbocharger and intake manifold on some diesel engine, is to _____.**
A. increase the density of the intake air .
B. decrease turbocharger power usage
C. reduce exhaust gas temperature
D. compensate for turbocharger PRM fluctuations

780. **A dirty fuel oil filter is can be detected by _____ Ⅰ.fuel oil analysis Ⅱ.observing the pressure drop across the filter**
A. Ⅰ only
B. Ⅱ only .
C. either Ⅰ or Ⅱ
D. neither Ⅰ nor

781. **Which of the terms listed below represents the operational speed at which excessive engine vibration is created?**
A. Non-harmonic speed
B. Critical speed .
C. Maximum speed
D. Design maximum speed

782. **Lubricating oil used in a diesel engine serves to _____.**
A. reduce the wear of bearing surfaces
B. cool the bearing surfaces
C. assist in sealing bearing surfaces
D. all of the above .

783. **After-cooling of a turbocharged diesel engine will result in _____.**
A. higher torque but lower brake horsepower
B. lower torque but higher brake horsepower
C. higher torque and lower brake horsepower .
D. lower torque and higher brake horsepower

784. **Which of the conditions listed would cause simultaneous high cylinder firing pressure and low exhaust temperature?**
A. Improper fuel rack positioning
B. Lengthy opening of the exhaust valve
C. Excessively early injection timing .
D. Extended light load operation

785. **One of function of diesel engine lubricating oil is to _____.**
A. induce carbon formation on cylinder walls
B. improve fuel penetration in the combustion space
C. form a friction reducing film between mating surfaces .
D. lubricate the fuel injection

786. **When used in conjunction with a turbocharger, the main function of an after-cooler is to _____.**
A. increase the density of the cylinder air charge .
B. prevent turbocharger overheating
C. liminate the need for a pre-cooler
D. remove moisture from air compressed by the turbocharger

787. **Which of the devices listed is installed on a diesel engine to isolate some of the crankshaft vibrations caused by rotational and reciprocating forces?**
A. Planetary gear set
B. Torsional vibration damper .
C. Friction clutch
D. Air bladder clutch

788. **Performance of a turbocharged engine can be improved by .**
A. decreasing the amount of valve overlap
B. preheating the air intake
C. after-cooling the intake air .
D. preheating light fuel

789. **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 _____.**
A. engine support vibration isolator
B. detuner or viscous fluid damper .
C. lightened crankshaft flywheel
D. spherically seated crankshaft bearing

790. **Early fuel injection timing is indicated by the cylinder pressure being _____.**
A. above normal with a below normal exhaust temperature .
B. above normal with a normal exhaust temperature
C. below normal with a normal exhaust temperature
D. below normal with an above normal exhaust temperature

791. **The purpose of an after-cooler is to_____.**
A. reduce the turbocharger operating temperature
B. increase the pressure of the inlet air

C. increase the density of the inter air .
D. reduce the blower operating temperature

792. **When fuel is injected in a diesel engine cylinder too early, _____.**
A. ignition may be delayed .
B. fuel economy is not affected
C. exhaust gas temperature will be unchanged
D. the exhaust will be clear

793. **Which of the listed set of conditions indicates early fuel injection timing?**
A. Loss of engine power and high exhaust temperatures
B. Higher than normal firing pressure and low exhaust temperatures .
C. High fuel consumption and high exhaust temperatures
D. Lower than normal compression pressure and high exhaust temperature

794. **The air supplied to the cylinders by a turbocharger is often reduced in volume by a/an _____.**
A. air compressor
B. diffuser
C. after-cooler .
D. ventilator

795. **A diesel engine will lose power if fuel injection occurs too early because the _____.**
A. fuel will not be properly atomized in the cylinder
B. ignition will be delayed due to low ignition temperature .
C. maximum fuel expansion will occur on the compression stroke
D. fuel will ignite before top dead center

796. **Which of the engine components listed increases air charge density and helps to improve engine operating efficiency?**
A. Intake manifold
B. Water-cooled exhaust system
C. After-cooler .
D. Exhaust diffuser

797. **In a diesel engine, exhaust valves open before the intake ports are uncovered to _____ Ⅰ reduce pumping losses Ⅱ reduce back pressure**
A. Ⅰ only
B. Ⅱ only
C. both Ⅰ and Ⅱ .
D. neither Ⅰ nor Ⅱ

798. **A fuel injection valve opening at pressure lower than normal will result in _____.**
A. late fuel injection
B. early fuel injection .
C. high exhaust temperature from that cylinder
D. decreased effective stroke from that injector

799. **In a four-stroke/cycle diesel engine, after the completion of the power stroke, the piston will move_____.**

A. up and draw in a fresh air charge
B. down to burn off fuel
C. down to compress the fuel air charge
D. up and force out the exhaust gases .

800. **A large, low-speed, crosshead, main propulsion diesel engine using residual fuel oils must have a cylinder oil having a _____.**

A. low TBN value
B. high alkaline reserve .
C. low flash point
D. high pour point

801. **Due to excessive water in the fuel, a diesel engine fails to startBefore the engine can be started, the water must be removed from the _____.**

A. fuel pumps
B. cylinders
C. fuel strainers
D. all of above .

802. **Faulty operation of diesel engine fuel injection nozzles can be directly caused by _____.**

A. water in the fuel oil supply .
B. excessive fuel nozzle holder cooling
C. a distorted fuel spray pattern
D. leakage past the plunger into the oil drain

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A. water in the fuel oil supply
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804. **When a ship is involved in an oil pollution incident in China, the ship must report without delay to .**

A. China Maritime Administration .
B. the company
C. the cargo owner
D. ship owner

805. **In a single acting, four-stroke/cycle diesel engine, the power impulse in an individual cylinder occurs _____.**

A. once every crankshaft revolution
B. once every two crankshaft revolutions .
C. once every piston stroke
D. twice every piston stroke

806. **Water in the fuel can prevent the engine from starting, prevent it from developing full power, or _____.**

A. run at an irregular speed .
B. create high lube oil temperature
C. cause the engine to over-speed
D. cause blue smoke in the exhaust

807. **Permitting a diesel engine fuel oil day tank to run dry can cause _____.**
A. overheated injection pumps
B. water condensation in the cylinders
C. fuel dilution of the lube oil
D. air in the fuel system .

808. **The purpose of an oil mist detector in a main propulsion diesel engine is to warn of _____.**
A. excessive mist density in the crankcases .
B. excessively high crankcase vacuum
C. excessively high bearing temperature
D. excessive carbon buildup in the lube oil

809. **In the two stage flash distilling plant, which of the pumps listed is vented to the shell of the second stage in order to remove vapor from the pump suction?**
A. Condenser circulating water pump
B. Feed-water heater drain pump
C. Distillate pump .
D. Air ejector condenser drain pump

810. **In a flash type evaporator, the brine overboard pump is vented directly to the .**
A. saltwater heater shell
B. the condensation of the saltwater feed
C. air ejectors, eductors, or a separate vacuum pump .
D. condensation of the distillate

811. **If a diesel engine runs out of fuel, you can expect trouble from _____.**
A. overheated injection pumps
B. water condensation in the cylinders
C. fuel dilution of the lube oil
D. air in the fuel system .

812. **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 _____.**
A. expansion of the combustion gases .
B. exhaust and intake valves just closing
C. maximum compression is just being attained
D. fuel injection occurring at that point and combustion begins

813. **Air in the fuel lines to the fuel injection nozzles of a diesel engine will cause the engine to _____.**
A. burn excessive amounts of lube oil
B. overheat without smoking

C. operate with reduce power or stop .
D. run away without load

814. **The condensers located in various stages of a flash evaporator are cooled by___.**
A. distillate
B. seawater .
C. brine
D. air

815. **Air in the fuel lines of a diesel engine can cause _____.**
A. ignition failure .
B. oxygen corrosion of the fuel lines
C. the pistons to seize
D. blue smoke

816. **Stating a large propulsion diesel engine using diesel fuel during cold weather conditions can be made easier by _____.**
A. increasing the quantity of starting air
B. increasing the lube oil pressure
C. heating the engine fuel supply
D. heating the engine jacket water .

817. **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 _____.**
A. fuel line connections to cylinder injection valves
B. gasket surfaces of the fuel oil filters
C. discharge fitting of the fuel injector pumps
D. suction side of the fuel oil tran .

818. **In a diesel engine, a positive displacement type blower is usually _____.**
A. gear drive by the engine .
B. driven by an exhaust gas turbine
C. driven by a camshaft
D. driven by separate motor

819. **Which of the following statements represents the reason for rolling over a diesel engine with the cylinder indicator cocks open prior?**
A. To test the starting system
B. To remove air bubbles from the jacket water
C. To ensure that the lube oil system delivers pressure
D. To ensure foreign material (water etc) is not present in the cylinders .

820. **A diesel engine is turned at normal cranking speed, but fails to fireThis can occur from _____.**
A. low lube oil temperature
B. low starting air temperature
C. air in the fuel injection .
D. water in the starting air system

821. **Sludge formation in a diesel engine lube oil system is caused by_____.**

A. carbonization of oils from the combustion chambers
B. emulsions of lube oil and water
C. coagulation of unburned fuel below the piston rings
D. all of the above .

822. **Before starting a diesel engine, you should always _____.**

A. check the pyrometer readings
B. check the crankcase oil level .
C. check the fuel oil strainers
D. clean the fuel system

823. **If the low level alarm of the diesel fuel day tank fails to function, you can expect trouble from_____.**

A. overheated injection pumps
B. water condensed in the cylinders
C. fuel dilution of the lube oil
D. air in the fuel system .

824. **Proper lubrication of the main bearings is more easily obtained in a single acting, four-stroke/cycle diesel engine than in a tow-stroke/cycle diesel engine because_____.**

A. The direction of pressure on the journal in four-stroke engine is continuously .
B. positive feed lubricators are installed on all bearings of four-stroke engine, whereas as a splash feed system is used on tow-stroke engine
C. four-stroke engines usually utilize a heavier grade of oil than tow-stroke engines
D. Low-stroke engines usually consume less lube oil than four-stroke engines

825. **An after-cooler installed between the turbocharger and the cylinder air inlet _____.**

A. increases the density of the air .
B. decrease the density of the air
C. increases the specific heat of the air
D. decreases the specific heat of the exhaust

826. **Which of the following should always be checked prior to starting a diesel engine?**

A. Air filters
B. Fuel oil strainers
C. Crank case oil level .
D. Pyrometer readings

827. **The amount of fuel injection into a diesel engine cylinder by a unit injector, is controlled by_____.**

A. the firing pressure in the cylinder
B. a metering helix inside the pump .
C. varying the physical length of the plunger stroke
D. varying the clearance between the injector cam and the injector rocker arm

828. **If cooling water flow through the after-cooler is interrupted, the power output of a turbocharged diesel engine will drop because the _____.**

A. turbocharger will stall

B. density of the air charge will decrease .
C. scavenge effect will increase
D. exhaust pressure will increase

829. **Which of the following procedures should be carried out to permit the use of a crosshead engine with an inoperable after-cooler?**
A. Bypass the after-cooler to operate at speed
B. Run at reduced speed until the cooler can be repaired or renewed .
C. Switch to diesel fuel and run at full speed
D. Nothing need to be done due to the low heating value of heavy fuel

830. **An increase in the load on a turbocharged diesel engine operating at constant speed will result in an increase in _____.**
A. exhaust
B. air box pressure
C. brake main effective pressure
D. all of the above .

831. **When attempting to restart a warm high-speed engine, which of the following reactions can you expect?**
A. Excessive fuel
B. Higher than normal temperatures for star up .
C. Longer starting periods
D. Higher than normal lube oil pressure

832. **The high air velocity leaving the compressor of an exhaust gas turbocharger is converted to pressure in the _____.**
A. inlet nozzle ring
B. turbine wheel blade
C. diffuser passages .
D. inlet vol

833. **Which of the following conditions would cause carbon deposits to form in the piston ring belt of a diesel engine?**
A. faulty combustion
B. excessive ring temperature
C. over lubrication
D. all of the above .

834. **Which of the following operating procedures should be carried out immediately after any diesel engine is started?**
A. Take all exhaust temperature reading
B. Check the sump oil level
C. Verify proper lube oil pressure.
D. All of the above

835. **Air in the fuel can cause_____.**
A. high lube oil temperature
B. blue smoke

C. the engine to stop .
D. piston seizure

836. **If a diesel engine starts firing, but is unable to come up normal speed, either without load or even under a small load, the cause may be _____.**
A. insufficient fuel supply
B. faulty governor
C. high exhaust back pressure
D. all of the above may cause this problem .

837. **After changing out the fuel filters the diesel engine fails to restart, the most probable cause for this condition is a/an _____.**
A. low compression
B. air-bound fuel system .
C. improper spark
D. change in viscosity

838. **When the load is increased on a turbocharged diesel engine, the amount of increased air supplied by the turbocharger will_____.**
A. lag behind the increased fuel supplied to the engine .
B. enter the engine along with the increase in the fuel
C. enter the engine before the increased fuel supply
D. leave the turbocharger as a negative pulse

839. **Faulty operation of diesel engine fuel injection nozzles can be a direct cause of_____.**
A. excessive fuel nozzle holder cooling
B. sediment in the fuel supply .
C. distortion of the fuel spray pattern
D. improper atomization of the fuel

840. **in a turbocharger, inlet air velocity is increased in the _____.**
A. inlet nozzle ring
B. stationary diffuser passages
C. compressor outlet volute
D. rotating impeller vanes .

841. **While underway, which of the following would be the FIRST step in reversing a direct reversing large, low-speed, main propulsion, diesel engine?**
A. Manually trip the over-speed device
B. Interrupt the fuel flow to the engine .
C. Disengage the safety interlock
D. Slide the camshaft to the neutral position

842. **Dirt in a fuel oil system of a diesel engine can cause _____.**
A. damage to strainers
B. over-speeding of the engine
C. excessive cooling of the engine
D. injector damage .

843. **The power developed by a large slow-speed main propulsion diesel engine is dependent upon the _____.**

A. quantity of air it takes in and retains in the cylinders during a given time period
B. proportion of trapped air that is utilized in the combustion process
C. thermodynamic efficiency of the engine cycle
D. all of the above .

844. **The most common diesel engine fuel system problems are caused by _____.**

A. incorrect adjustments
B. dirty fuel .
C. broken fuel lines
D. excessive vibration

845. **When a diesel engine is operate at partial load, as compared to full load ,a decrease will occur in the average _____.**

A. air quantity aspirated
B. fuel injection pressure
C. combustion pressure on the power stroke .
D. compression on the compression stroke

846. **Diesel engine fuel oil contamination often results in _____.**

A. governor malfunctions
B. fuel injection system malfunctions .
C. high cylinder lube oil temperatures
D. low intake temperatures

847. **A diesel engine should not be operated at low loads for long periods of time because_____**

A. heavy carbon deposits will buildup on the valves and in the exhaust
B. fuel dilution is increased at low load
C. exhaust valves may be damaged
D. all of the above .

848. **The major cause of fuel pump and injection system problems is _____.**

A. improper adjustments
B. contaminated fuel .
C. kinked fuel lines
D. excessive engine vibration

849. **A dirty fuel oil filter element can be detected by _____.**

A. Visual inspection of the element
B. the pressure drop cross the filter .
C. high fuel oil tank temperature
D. increase flow rate from the filter

850. **Operating a propulsion diesel engine at less than 30% of designed normal load for prolonged periods will result in _____.**

A. decreased fuel consumption per brake horsepower
B. more complete cylinder scavenging

C. extended valve life
D. carbon formation on combustion chamber surfaces .

851. **Turbocharged four-stroke/cycle diesel engines utilize valve overlap for_____.**
A. improving cylinder scavenging .
B. preheating the combustion chamber
C. reducing air charge density
D. preventing valve wear

852. **What harmful condition can result if a diesel engine is operated at very light loads for long periods of time?**
A. increased carbon buildup .
B. burning of intake valves
C. excessive firing pressures
D. increased fuel consumption

853. **A faulty injection in one cylinder of an operating diesel engine can be located by ____.**
A. cutting out individual injectors and noting engine performance .
B. checking lube oil temperature
C. checking cam position
D. using a timing light

854. **Early injection timing is indicated by _____.**
A. high exhaust temperature and low firing pressure
B. high exhaust temperature and high firing pressure
C. low exhaust temperature and low firing pressure
D. low exhaust temperature and high firing pressure .

855. **In a turbocharged four-stroke/cycle diesel engine, the exhaust valve remains open until after top dead center and the intake valve opens before top dead center to_____.**
A. produce a scavenging effect in the combustion space .
B. equalize cylinder and exhaust manifold pressures
C. alleviate the difference in valve size between the intake and exhaust
D. flush out condensate that collects after each compression stroke

856. **Operating a diesel engine under light loads and at low temperatures for an exhaust for an extended period can result in_____.**
A. formation of carbon on the intake and exhaust ports .
B. high water jacket temperatures
C. overheated pistons and cylinders
D. an increase in lube oil viscosity due to fuel dilution

857. **While maneuvering, you discover heavy smoke coming from the turbocharger casing, you should _____.**
A. check the air filter for dirt
B. check for an exhaust leak
C. check the cooling water temperature
D. notify the bridge that you are going to shut the engine down .

858. **A change in the quality of fuel atomization by a diesel engine fuel injector would be caused by a/an _____.**

A. increase in engine speed
B. increase in cylinder turbulence
C. leaking needle valve .
D. reduction in cylinder turbulence

859. **A turbocharged, four-stroke/cycle diesel engine has a larger valve overlap than a naturally aspirated four-stroke/cycle diesel engine, in order to in crease the _____.**

A. temperature of the exhaust gases
B. energy supplied to the turbocharger
C. air pressure to the intake manifold
D. purge of exhausted gases from the cylinders .

860. **In the construction of a diesel engine, what is the purpose of end plates?**

A. To provide accessibility to the cylinder liners
B. To add stability to the engine block
C. To add rigidity to the block and a surface for attaching other parts .
D. To make a surface for the base

861. **When fuel enters the crankcase of a diesel engine, it _____.**

A. dilutes the lube oil and reduces its viscosity .
B. forms sulfuric acid in the lube oil
C. causes pitting and failure of the bearings
D. causes sludge deposits on valve stems

862. **The exhaust ports of a diesel engine using the cross-flow scavenging method are opened and closed by the _____.**

A. reciprocating motion of exhaust valves
B. rotary motion of the camshaft
C. reciprocating motion of the piston .
D. developed differential

863. **The breaking-up of fuel as it enters a diesel engine cylinder is known as _____.**

A. airification
B. vaporization
C. atomization .
D. gasification

864. **If a tow-stroke/diesel engine is over-speeding due to leakage of lube oil into the cylinders, what should you do to stop the engine?**

A. Move the fuel control mechanism to the no fuel position
B. Block the fuel supply by closing the master fuel valve
C. Shut off the fuel supply and block the flow of intake air .
D. Relieve all pressure in the fuel system

865. **Which of the following statements concerning fuel atomization in a diesel engine cylinder is correct?**

A. The greater the atomization, the greater the penetration

B. The greater the atomization, the less the penetration .
C. The degree of atomization has nothing to do with the degree of penetration
D. Atomization and penetration are one and the same

866. **If a single cylinder relief valve on a main propulsion diesel engine begins to lift, but it is not possible to secure the engine, which of the following actions should be taken? .**
A. Increase the cooling water flow to the engine
B. Secure or reduce fuel to that cylinder.
C. Screw down on the pressure adjusting spring to decrease to decrease popping pressure
D. Readjust the injection timing

867. **Clogged diesel engine fuel oil filters can cause__.**
A. loss of power
B. misfiring
C. low fuel oil pressure
D. All of the above .

868. **Before shutting off the fuel supply to stop a medium or high－speed diesel engine, why is it necessary to allow the engine to idle for a few minutes?**
A. To prevent internal damage form local overheating.
B. To ensure the fuel nozzles are flushed clean
C. To clear the smoke stack
D. To let the waste heat boiler reduce its rate of steam generation

869. **When running a large, low-speed, main propulsion diesel engine on heavy fuel, which of the following precautions should be observed when switching back over to diesel oil? .**
A. The diesel oil must never be allowed to mix with the heavy fuel
B. The temperature of the fuel from the pre－heater should be gradually reduced after switching over the three－way valve.
C. The heating steam to the pre-heater should be secured as soon as the diesel fuel passes through the three-way valve
D. The heating steam must be secured before the diesel oil passes through the three-way valve

870. **Cylinder linings constructed as an integral part of the block, are characterized by which of the following disadvantages? .**
A. They conduct heat poorly
B. They are expensive
C. They cannot be replaced.
D. They require special tools for removal

871. **The main propulsion diesel continues running after you try to shut downYou should now attempt to__.**
A. stop the combustion air supply .
B. engage the jacking gear
C. secure the lube oil pump
D. shut off the fuel at the day tank

872. **Before being shut down, a diesel engine should idle a few minutes in order to __.**
A. prevent governor surging at shutdown

B. make sure the fuel nozzles are flushed clean
C. prevent pressure buildup in the fuel lines
D. prevent damage from localized overheating .

873. **Insufficient end clearance on newly fitted piston rings in a diesel engine will cause the rings to __.**
A. jam in the most worn part of the cylinder when the rings expand .
B. break in the most worn part of the cylinder when the rings expand
C. wear eccentrically on the side opposite the end gap
D. overheat and jam at the top center on the combustion stroke

874. **If the piston ring gap remains insufficient when installing new rings, you should__.**
A. install oversized rings
B. hone the cylinder liner to allow ring installation
C. compress the rings tighter with a compressing tool
D. file the ends of the rings .

875. **When installing rings on a diesel engine piston, you should check the ring__.**
A. diametrical tension
B. gap clearance .
C. radial thickness
D. face thickness

876. **Which of the following problems may occur if the clearance between a piston and cylinder liner is insufficient?**
A. Excessive wear
B. Scuffing of the liner
C. Piston seizure
D. All of the above .

877. **Which of the following problems should be taken when cleaning the air filter on a diesel engine equipped with a turbocharger? .**
A. Reduce engine speed to idle before removing the filter
B. Soak the dirty filter in kerosene only
C. Blow out the air inlet with compressed air
D. Cover the air inlet after removing the filter .

878. **Which of the following conditions may contribute to the formation of deposits on the blades of the turbocharger turbine?**
A. Poor combustion
B. High cylinder oil consumption
C. Leaking exhaust valves
D. All of the above.

879. **Following the failure of one turbocharger on a large, crosshead, main propulsion diesel engine, fitted with multiple turbochargers, which of the following actions should be taken prior to further operation of the engine? .**
A. Blank off the exhaust gas inlet to the damaged turbocharger
B. Secure cooling and lubrication to the damaged turbocharger

C. Lock the rotor of the damaged turbocharger
D. All of the above.

880. **A bright shiny appearance of the sealing surfaces on diesel engine compression rings indicates __.**
A. combustion gas blow-by
B. excessive lubrication
C. properly functioning rings .
D. insufficient cylinder cooling

881. **Visual inspection of chrome-plated piston compression rings reveals a black ring face at the position of the cylinder liner portsThis condition indicates a ring which .**
A. has a crown-face
B. exceeds wear limits through normal wear
C. has excessive blow-by .
D. is in good condition

882. **When inspecting piston rings through the ports of a two-stroke/cycle diesel engine, black areas on the sealing surfaces are the result of .**
A. insufficient lubrication
B. improper piston cooling
C. blow-by .
D. overload operation

883. **Black areas on the sealing surfaces of piston rings indicate__.**
A. lube oil pumping
B. rotating rings
C. gas pressure behind the ring
D. passage of hot gases .

884. **Which condition indicates the air side fouling of an after-cooler on a turbocharged diesel engine?**
A. An increased air temperature differential between the cooler inlet and outlet
B. A decrease in the air pressure differential across the cooler
C. Excessive condensate forming in the air box
D. A decrease in the air temperature differential between the cooler inlet and outlet.

885. **If sludge accumulates on the underside of a diesel engine piston, it will__.**
A. cause blow-by
B. chemically attack the piston skirt
C. form an emulsion of lube oil and water
D. raise the piston temperature .

886. **Which of the following conditions can cause below normal air pressure in the intake manifold of a turbocharged diesel engine? .**
A. Excessive piston blow-by to the manifold
B. Insufficient cooling water flow
C. Accumulated water in the air boxes
D. Clogged air intake filters.

887. **Which of the following problems can cause an above normal air temperature to develop in the intake manifold of a turbocharged and after-cooled diesel engine?**

A. Faulty turbocharger turbine diffuser ring
B. Faulty turbocharger compressor ring
C. Insufficient cooling water flow .
D. Clogged air intake filters

888. **The best tool to use for removing the carbon ridge at the top of an engine cylinder, prior to removing the piston, is to use__.**

A. an electric grinder
B. a metal scraper .
C. a reamer
D. a three-wing hone

889. **If the turbocharger of a four-stroke/cycle diesel engine fails to operate, which of the following statements best describes the probable effect? .**

A. Intake manifold pressure will be high
B. Intake manifold pressure will be unaffected
C. Exhaust temperatures will be high .
D. Exhaust temperatures will be low

890. **A substance found in residual fuels which tends to cause exhaust valve corrosion and grooving, is__.**

A. carbon
B. vanadium .
C. calcium
D. hydrogen

891. **If a crankcase explosion occurs in a diesel engine, which of the listed actions should be taken?**

A. Open the crankcase immediately to check for damage
B. Apply fire fighting water through the crankcase breather
C. Allow the engine to cool before opening the crankcase.
D. Assume that there is no damage to the crankshaft

892. **Which of the following statements is true regarding the installation of piston rings on two-stroke/cycle, diesel engines as compared to four-stroke/cycle, diesel engines? .**

A. In a two-stroke/cycle engine, the rings run hotter, requiring the end gap to be greater
B. Some provision must be made in a two-stroke/cycle engine to keep the rings from binding in the ports.
C. No gap is required to exist between the ends of the ring when cold in a two-stroke/cycle engine, but a small gap is required in a four-stoke/cycle engine
D. The gaps should be staggered on either side of a piston in a two-stroke/cycle engine, while staggering is not necessary in a four-stroke/cycle engine

893. **Which of the following precautions must be taken if an electric immersion heater is used to keep the coolant in a diesel engine warm during the time the engine is secured?**

A. The coolant temperature must be maintained at 180℃
B. The thermostatic bypass valves must be manually opened before the engine is started

C. The pressure cap must be removed while the engine is secured
D. Electrical power to the heater must be secured before the cooling system is drained.

894. **If a crankcase explosion occurs in a diesel engine, you should stop the engine and__.**
A. immediately open all crankcase relief ports
B. increase crankcase exhauster speed to draw cool air into the engine
C. allow the engine to cool naturally .
D. increase crank case scavenge air to remove unburned gases

895. **If the turbocharger failed on an auxiliary diesel engine, which of the following conditions would probably occur?**
A. Full power cannot be developed
B. The exhaust will contain black smoke
C. Complete combustion will be impossible
D. All of the above.

896. **The desirable properties of a marine fuel oil should include__.**
A. high flash point and high viscosity
B. low flash point and high viscosity
C. low heating value and high sulphur content
D. high heating value and low sulphur content .

897. **If a diesel engine has been stopped because of piston seizure due to severe overheating, the crankcase__.**
A. inspection covers should not be opened until the engine has cooled .
B. ventilation system should be continued in operation for one hour for cooling
C. scavenge pump should be immediately secured to prevent loss of lube oil
D. explosion covers should be opened slightly to provide extra ventilation

898. **A sudden power loss from a turbocharged and after-cooled diesel engine is an indication of a/an__.**
A. turbocharger malfunction or failure .
B. crankcase exhauster overload
C. overload on the intercooler
D. obstruction in the engine cylinders

899. **If a crankcase explosion has occurred in a diesel engine, and the crankcase remains intact, which of following precautions should be observed?**
A. The cylinder indicator cocks should be opened
B. The sump lube oil scavenge pump should be secured immediately
C. The explosion relief valves should be manually opened
D. The crankcase should remain unopened until the engine has cooled.

900. **Corrosion and grooving on the blade of an exhaust driven turbocharger is caused by certain components of residual fuel oilsThese components are vanadium, sodium, and__.**
A. copper
B. carbon
C. hydrogen
D. sulfur .

901. **If the back clearance of a piston ring is excessive, .**
A. compression pressure in the cylinder will be higher
B. carbon will accumulate behind the ring .
C. combustion gases will penetrate beneath the ring land
D. piston side thrust will be increased

902. **Leaking oil seals on a diesel engine turbocharger can cause**
A. the engine to run after the fuel has been secured
B. the engine to over-speed
C. a fire
D. all of the above .

903. **Burning fuel with a high sulfur content in a diesel engine will __.**
A. increase thermal efficiency
B. cause clogging of the fuel system
C. increase the ability of the engine to start in cold weather
D. produce corrosion in the cylinder and exhaust system at low loads .

904. **Which of the following problems may occur when using fuel oil with a high sulphur content?**
A. Injection lag
B. Lube oil dilution
C. Pre-ignition
D. Corrosion .

905. **The consistent burning of fuel oil with a high sulfur content in a diesel engine will result in .**
A. clogged fuel injection pumps
B. increased cylinder liner wear .
C. intake valve stem corrosion
D. varnish deposit on pistons

906. **The burning of fuel oil in a diesel engine having a high sodium content, will cause __.**
A. corrosion and grooving of exhaust valves .
B. corrosion and gumming of the fuel injection pump
C. salt deposits in the exhaust manifold
D. slag deposits in the fuel injection equipment

907. **Diesel engine starting difficulties due to cold intake air temperatures, can be overcome by using a/an__.**
A. increase in starting air pressure
B. increase in lube oil viscosity
C. compression expansion device
D. jacket water heater .

908. **The cetane number rates fuels for diesel engines according to its __.**
A. antiknock characteristics
B. ignition qualities .
C. rates of vaporization
D. viscosity

909. **In diesel engineering practice, the term used to express the ignition quality of a particular fuel is__.**

A. cetane number .
B. octane number
C. ignition index number
D. volatility point

910. **The rate of wear on a cylinder liner depends on the __.**

A. quality of air filtration
B. effectiveness of lubrication
C. type of fuel used
D. all of the above .

911. **Which of the following conditions may be attributed to a fouled turbocharger compressor inlet screen or filter? .**

A. Decreasing scavenge air pressure
B. Increasing exhaust temperatures before the turbine
C. Reduction in engine speed
D. All of the above.

912. **The ignition quality of diesel fuel is indicated by its__.**

A. octane number
B. cetane number .
C. viscosity in Saybolt seconds
D. air fuel ratio

913. **Cold weather starting of a diesel engine is more difficult than warm weather starting due to_____.**

A. use of low viscosity oil in cold weather
B. increased moisture content of inlet air in cold weather
C. increased drag of pistons and bearings due to increased oil viscosity .
D. higher compression pressures reached due to smaller clearances existing in the engine during cold weather

914. **Why will a turbocharger diesel engine produce black smoke if excessive additional load is applied too quickly?**

A. Exhaust energy would draw excess air
B. The inertia of the turbocharger rotor causes a time lag which delays the turbocharger speed increase .
C. Exhaust gas pumping losses are increased due to turbine windage
D. Exhaust gas back pressure falls slightly due to increased nozzle action

915. **Which of the listed factors will indicate the most about the ability of a fuel to ignite in a diesel engine?**

A. Viscosity
B. Sulfur content
C. Pour point
D. Cetane number .

916. **The cetane number of a diesel fuel oil indicates its_____.**
A. Viscosity
B. acid content
C. heating value
D. ignition quality .

917. **The cetane rating of diesel fuel is an indication of the _____.**
A. ignition quality of the fuel .
B. calorific value of the fuel
C. flash point of the fuel
D. rate of fuel consumption

918. **Which of the following conditions could contribute to the cracking of a diesel engine cylinder head?**
A. Leaking seal ring
B. Insufficient heat transfer from the exhaust valves
C. Block cooling water passages to the head .
D. Excessive scavenging air provided to the engine

919. **The ignition quality of a diesel fuel oil is indicated by the _____.**
A. specific gravity
B. cetane number .
C. viscosity
D. calorific valve

920. **The ignition quality of a diesel fuel is indicated by the _____.**
A. cetane number .
B. volatility point
C. viscosity index
D. octane number

921. **To determine the main bearing clearance of a propulsion diesel engine, you should measure the main bearing shell using a ball anvil outside micrometer and measure the crankshaft journal using a/an _____.**
A. telescoping
B. ring ‘snap’ gauge
C. inside vernier caliper
D. outside micrometer .

922. **On a large low-speed main propulsion diesel engine, lower main bearing wear is usually measured by using a/an _____.**
A. dial indicator
B. outside caliper
C. bridge gauge .
D. tram rod

923. **The ignition quality of a fuel oil is an important operational consideration because it_____.**
A. indicates the amount of abrasive material in the fuel
B. affects the starting ability of a cold engine .

C. determines the amount of fuel penetration engine
D. affects the compression ratio of an operating engine

924. **Fuel oil having a low cetane rating could result in_____.**
A. improved cold weather starting
B. excessive fuel oil consumption .
C. reduced ignition lag
D. smoother engine operation

925. **Which of the following statements is true concerning the cetane number of diesel fuel?**
A. The cetane number affects the amount of injection lag
B. The cetane number is an indication of the fuels viscosity
C. Ignition lag is reduced with fuels having a high cetane number .
D. The cetane number is of little significance in the combustion process

926. **Which of the following statements is true concerning the cetane number rating of diesel fuel? .**
A. The cetane number is obtained by comparing the fuel with cetane a colorless liquid hydrocarbon
B. The higher the cetane number, the shorter the ignition lag
C. The highest cetane number of fuel is 100
D. All of the above.

927. **The insertion of shims between the foot of a marine type connecting rod and a bearing box would result in _____.**
A. increased compression ratio .
B. decreased compression ratio
C. increased bearing clearance
D. decreased bearing clearance

928. **Intercoolers installed on starting air compressors, reduce the possibility of_____.**
A. dust entering the high pressure stage
B. lube oil carbonization .
C. discharge pulsations
D. inter-stage vapor lock

929. **The longer the ignition delay period resulting from improper use of low cetane fuel, the _____.**
A. less fuel will enter the cylinder
B. higher the cylinder combustion temperature
C. more complete the fuel combustion
D. more rapid the rise in combustion pressure .

930. **Which of the following operating conditions can occur when shims are removed from the joint between the foot of a marine type diesel engine connecting rod and the bearing box?**
A. Decreased connecting rod bearing clearance
B. Increased connecting rod bearing clearance
C. Decreased compression ratio .
D. Increased compression ratio

931. **A two-stroke/cycle diesel engine requires less starting air than a four-stroke/cycle diesel engine, of equal displacement, because the two-stroke/cycle diesel engine_____.**

A. has little or no internal friction
B. has a lower effective compression ratio
C. operates with scavenge air under a positive pressure
D. operates without energy absorbing intake and exhaust strokes .

932. **With respect to diesel fuel, the ease with which a cold engine will start is dependent upon the_____**

A. ignition quality of the fuel .
B. high heating value of the fuel
C. amount of carbon residue after combustion
D. internal flow resistance in the injectors

933. **Worn main bearing will cause the compression ratio of an auxiliary diesel engine to_____.**

A. increase
B. decrease .
C. remain the same
D. increase on compression decrease on expansion

934. **A mixture of 45%cetane and 55% alpha-methyl-naphthalene is found to have the same ignition delay as a sample of diesel oil .The sample can be described as having a/an_____.**

A. cetane number of 55
B. cetane number of 45 .
C. octane number of 55
D. octane number of 45

935. **In a large, low-speed diesel engine the clearance between the piston crown and cylinder head is found to be excessiveIn order to correct for this, you should_____.**

A. build up the piston crown by metal spraying
B. build up the cylinder head by metal spraying
C. insert shims between the crankpin bearing box and the connecting rod foot .
D. install a thinner head gasket

936. **Which of the listed types of starting systems is often used on large, low-speed, direct reversing, main propulsion diesel engines?**

A. Electric
B. Hydraulic
C. Air .
D. All of the above

937. **An acceptable method of measuring for the correct rotational force applied to the connecting rod and main bearing bolts, is to use a_____.**

A. torque wrench .
B. monkey wrench
C. pipe wrench
D. slugging wrench

938. **Which of the following relationships should occur between the temperature developed in a combustion space, and the compression ratio of the engine?**

A. Higher compression ratios create higher temperature .
B. Higher temperatures create higher compression ratios
C. low temperatures create higher compression ratios
D. Higher compression ratios create low temperatures

939. **Injection lag in a diesel engine may be caused by_____.**

A. a higher cetane number of fuel oil
B. the diesel fuel used having a high viscosity .
C. mechanical rigidity in the lube pump mechanism
D. a decrease rigidity in the fuel pump delivery pressure

940. **Abnormal crankpin bearing and piston skirt surface wear indicate_____.**

A. a restricted air intake
B. a clogged connecting rod oil passage
C. incorrect connecting rod alignment .
D. high cylinder firing temperatures

941. **Diesel engine injection lag is caused by_____.**

A. compressibility of the fuel .
B. high fuel oil supply flow
C. scored plunger and barrel packing
D. excessive air turbulence

942. **Fuel oil injected into the cylinder of a diesel engine just after the piston passes top dead center, will_____.**

A. increase engine power
B. increase engine load
C. decrease engine power .
D. improve fuel economy

943. **Diesel engine crankshaft deflection readings are generally taken at four crank positionsGood engineering practice requires the deflection gage or indicator to be_____**

A. placed as near the crankpin axis as possible
B. removed each time the crankshaft is repositioned
C. left in place for all four readings .
D. reset to zero for all four readings

944. **Heat for igniting the fuel oil in the cylinder of a diesel engine is generated by the _____.**

A. electronic ignition system
B. compression of air by the piston .
C. friction in the fuel injector
D. fuel oil bearing system

945. **One method of determining crankshaft misalignment is by_____.**

A. laying a straight edge across the crank webs at the crankpin and measuring the distance to the crankpin in two places
B. measuring the crank drop on either side of each crank throw while the crankshaft is slowly rotated

through one revolution

C. rotating the crankshaft through one revolution, pausing each 90oof rotation to measure bearing clearances, top and bottom

D. taking micrometer reading between the crank cheeks opposite the crankpin every 90° of crank angle rotation .

946. **The minimum fuel oil delivery pressure required for diesel engine injection depends primarily on the_____.**

A. degree of cylinder air turbulence
B. firing pressure in the engine .
C. quality of fuel to be injected
D. duration of the ignition delay period

947. **The timing of diesel engine air starting valves is controlled by_____.**

A. the air start valve timing gears and rods
B. a cylinder check valve
C. individual cams and valve gear .
D. an air manifold poppet valve

948. **Diesel engine air start valve timing is controlled by_____.**

A. engine operating speed
B. an air manifold
C. a hydraulic distributor
D. individual cams and valve gear .

949. **In the cylinder of a diesel engine fuel is ignited by the_____.**

A. spark from a plug in the pre-combustion chamber
B. electrical discharge from the distributor
C. heat of compression within the cylinder .
D. heat from the fuel injection nozzle

950. **A loud clicking noise from the valve compartment of an operating diesel engine would indicate_____.**

A. worn valve seats
B. worn main bearing
C. excessive valve clearance .
D. weak rocker arm springs

951. **Excessively worn, or polished ends on a diesel engine valve spring, indicate_____.**

A. burned exhaust valves
B. excessive spring compression
C. spring surge .
D. worn valve seats

952. **Fuel oil day tanks for diesel engines must be checked and cleaned and cleaned at regular intervals in order to remove_____.**

A. sludge
B. water

C. micro-organism growth
D. all of the above .

953. **Small crack in the crankshaft bearing surface of a diesel engine are an indication of____.**
A. corrosion fretting
B. insufficient lubrication
C. abnormal wear
D. fatigue failure .

954. **Which of the following methods is used to prevent throttling of compressed air through the diesel engine air starting valves?**
A. Holding the valve open for a long period
B. Increasing the starting air pressure used
C. Opening the stating air valve quickly .
D. Reducing the starting air valve size

955. **The depth of fuel oil in a tank is normally measured through the_____.**
A. vent line
B. overflow line
C. feed line
D. sounding tube .

956. **Starting air valves are held firmly on their seats by_____.**
A. cam rollers on the camshaft
B. spring force .
C. air pressure on top of the valve differential piston
D. air pressure on the bottom of the valve differential piston

957. **Fuel oil is regularly transferred to the day tank in order to _____.**
A. allow impurities to settle out of the fuel
B. allow air to escape from the fuel
C. make fuel available for immediate use
D. all of the above .

958. **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?**
A. Ensure proper cylinder lube oil flow
B. Open all air space drain cocks
C. Open all indicator valves
D. all of the above .

959. **If water is found in the crankcase of a diesel engine, the cause may be due to_____.**
A. a cracked cylinder head
B. a leaky cylinder head gasket
C. a cracked cylinder liner
D. any of the above .

960. **Standby or emergency diesel generator day tanks should always be kept full to reduce the possibility of_____.**

A. sediment contamination
B. fuel filter clogging
C. moisture formation .
D. inadequate transfer pump suction head

961. **How dose water enter the crankcase of a diesel engine?**

A. Through the crankcase exhauster
B. As water vapor contained in blow-by .
C. Demulsifying lube oil passing through the main bearings
D. Condensation from vapor formed in the expansion tank

962. **The device used to store a charged pressure for a hydraulic starting system is called the ___.**

A. reservoir
B. hand pump
C. accelerator
D. accumulator .

963. **Water accumulating in the crankcase of a diesel engine could indicate_____.**

A. a cracked cylinder liner .
B. excessive water in the fuel
C. a leaking intercooler
D. excessive moisture in the scavenge air

964. **On board supply vessels, a centrifuge is normally used to purify_____.**

A. cooling water
B. fuel oil .
C. sea water
D. diesel intake air

965. **The most effective method in removing water from diesel fuel oil is by_____.**

A. centrifuging the fuel .
B. using it in the engine
C. heating the fuel tanks
D. starting the fuel

966. **In a four-cycle diesel engine piston blow-by can result in increased_____.**

A. crankcase pressure .
B. compression pressure
C. scavenge pressure
D. exhaust manifold pressure

967. **Diesel engine piston ring blow-by is usually caused by excessive ring clearance at the ring_____.**

A. back
B. side
C. gap .
D. bottom

968. **For optimum results, centrifugal purification of heavy fuel oil should be accomplished with the fuel at the lowest practicable_____.**

A. throughput .
B. additive percent
C. cetane number
D. TBN number

969. **In a diesel engine, blow-by is generally the result of worn_____.**

A. valve guides
B. oil control rings
C. valve seats
D. compression rings .

970. **Heavy residual fuel oils are heated prior to centrifuging to _____.**

A. reduce fuel weight
B. increase specific gravity
C. separate fuel from lube oil
D. reduce fuel viscosity .

971. **Diesel engine ‘blow-by’ into the crankcase is caused by excessive ring_____.**

A. back clearance
B. side clearance
C. gap clearance .
D. taper clearance

972. **A centrifuge will satisfactorily remove which of the following contaminants from fuel oil?**

A. Gasoline
B. Water .
C. Lubricating oil
D. sulphur compounds

973. **In a diesel engine, blow-by is a result of combustion gases leaking into the crankcase past the _____.**

A. wrist pin bushings
B. compression rings .
C. cylinder liner seals
D. cylinder liner sealing ring

974. **Diesel engine blow-by is the leakage of combustion gases past the _____.**

A. oil rings only
B. compression and scraper rings .
C. cylinder liner sealings
D. cylinder liner ring grooves

975. **In large, low-speed, main propulsion diesel engine, position ring groove wear usually occurs at the_____.**

A. top of the ring groove
B. back of the ring groove

C. bottom of the ring groove .
D. piston ring end clearance

976. **A diesel engine cylinder head can crack as a result of _____.**
A. a leaking seal ring
B. heat transfer from exhaust valves
C. restricted cooling passages .
D. overheated intake valves

977. **Which of the listed design features is found in an exhaust valve and NOT in an intake valve?**
A. Hard alloy steel construction .
B. Beveled edges on the valve head
C. Low alloy steel construction
D. Poppet type design

978. **In an auxiliary diesel engine, the reason for knurling the piston skirt is to_____.**
A. improve skirt lubrication .
B. allow for expansion
C. transmit forces evenly
D. improve the piston seal

979. **Cracking of a diesel piston crown can result from_____.**
A. Excessive piston to liner clearance
B. The underside of the piston crown being excessively dirty lowering the rate of heat transfer
C. Faulty nozzle spray
D. All of the above .

980. **Many diesel engine exhaust valves are being constructed with hollow stems filled with sodium in order to _____.**
A. provide added wear protection against today’s corrosive quality of fuel
B. increase overall valve strength due to the high gas pressures
C. assist in dissipating heat due to the extreme operating temperatures .
D. reduce the overall weight of the valve thus helping eliminate valve spring surge and hammering

981. **Poor quality fuel being used in a turbocharged medium-speed, diesel engine could result in _____.**
A. hard starting
B. excessive fuel consumption
C. loss of power
D. all of the above .

982. **If clearance between a piston and the cylinder wall is excessive, piston slap will occurThe slap itself is caused by _____.**
A. alternation of side thrust .
B. a breakdown of the lube oil film on the cylinder wall
C. worn piston boss piston pin bearings
D. fluctuating gas pressure in the combustion space

983. **Which of the following statements concerning cylinder liner wear is true?**

A. Liner wear is distributed equally between the upper and lower portions of the cylinder
B. Excessive liner wear causes wear between piston ring and groove .
C. Excessive, but uniform liner wear will not cause wear between piston ring and groove
D. Liner wear is normally greatest in the middle of the cylinder

984. **To reduce the weight of the reciprocating parts, pistons of high-speed engines are made considerably shorterThis results in _____.**

A. less piston slap and quieter running
B. increased crankshaft bearing wear
C. slightly greater piston wear .
D. decreased side pressures

985. **When comparing different fuels for different engines, the ignition quality of diesel fuel oils becomes a less critical consideration as _____.**

A. the amount of lube oil additives increase
B. piston speeds increase
C. injection pressure decrease
D. engine speeds decrease .

986. **Scuffed cylinder liner surfaces in a diesel engine can result form_____.**

A. starting the engine hot
B. knurling the piston skirt
C. operating an overheated engine .
D. using scuff resistant piston rings

987. **The adverse effects of burning high sulfur fuel can be compensated for by using a cylinder oil having sufficient_____.**

A. dispersant additives
B. floc point
C. alkalinity additives .
D. ignition quality

988. **Many cast iron pistons are designed with heat dams, which serve to _____.**

A. keep piston crown temperatures elevated for smoother combustion
B. reduce the possibility of overheating the top compression ring .
C. help retain the heat of compression to prevent ignition delay
D. help retain the heat of compression to prevent combustion knock

989. **If the piston groove drain holes for the oil control rings become clogged, which of the following is likely to occur?**

A. The oil control rings will seal improperly and wear rapidly
B. The piston will overheat due to insufficient lubrication
C. Excessive oil will remain on the cylinder wall .
D. Light brown smoke will emanate from the engine exhaust

990. **The size of the exhaust valve opening is _____.**

A. most critical in a four-stroke cycle diesel engine
B. most critical in a two-stroke/cycle diesel engine .

C. most critical in a four-stroke/cycle diesel engine if it is turbocharged
D. of equal importance in a two-stroke/cycle diesel engine as in a four-stroke/cycle diesel engine

991. **Diesel engine electric starting motors generally require heavier duty motors and motors and operate at higher voltages than comparable starting motors for gasoline engines due to _____.**
A. higher speed required
B. flywheel-effect
C. lower starting temperatures
D. higher compression pressures .

992. **If the compression rings on a diesel engine piston become stuck in the ring groove, the cause may be due to _____.**
A. excessive ring action
B. excessive ring temperature .
C. improper ring rotation
D. excessive ring face wear

993. **Exhaust valve openings in a diesel engine cylinder head are made as large as practical to _____.**
A. increase back pressure during the exhaust process
B. facilitate periodic replacement of the valves
C. reduce the pumping loss associated with scavenging .
D. reduce tension on valve springs

994. **Cold clearances between the skirt of an aluminum piston and the cylinder liner is about _____.**
A. twice as large as with a cast iron piston .
B. the same size as with a cast iron piston
C. half as large as with a cast iron piston
D. the same size as the crown of an aluminum piston

995. **Improperly fitted piston rings in a diesel engine can cause_____.**
A. excessive lube oil consumption .
B. lower than normal lube oil temperature
C. higher than normal exhaust back pressure
D. excessive crankshaft end play

996. **Exhaust gases are generally removed from the cylinders of a two-stroke/cycle diesel engine by_____.**
A. natural aspiration
B. masked intake valves
C. air cells
D. scavenging air .

997. **Diesel engine piston seizure can be caused by _____.**
A. poor cooling of cylinder walls
B. improper cooling of the piston

C. insufficient piston lubrication
D. all of the above .

998. **In the cylinder head of a two-stroke/cycle diesel engine, valves are used for___.**
A. air intake
B. a fuel outlet
C. cooling water inlets
D. exhausting combustion gas .

999. **A six-cylinder, two-stroke/cycle diesel engine is fitted with a rotary distributing air starting systemThe speed of the rotating distributor disc is _____.**
A. one-half engine speed
B. the same as engine speed .
C. twice engine speed
D. four times engine speed

1000. **Incomplete combustion in a running diesel engine can cause piston rings to become stuck as a result of _____.**
A. residual carbon deposits .
B. lube oil viscosity breakdown
C. uneven heat expansion of the rings
D. uneven heat expansion of the piston

1001. **The exhaust system for a turbocharged two-stroke/cycle diesel engine functions to_____.**
A. discharge exhaust gases and smoke
B. furnish energy to the turbocharger
C. reduce engine room noise
D. all of the above .

1002. **One end of a diesel engine cylinder is sealed by the cylinder head and the other end by the _____.**
A. crankcase
B. piston .
C. cylinder liner
D. crank cheek

1003. **A sudden drop in compression pressure in one cylinder of a diesel engine can be caused by _____.**
A. a leaking fuel injector nozzle
B. a clogged air filter
C. excessively early fuel injection
D. malfunctioning valves .

1004. **The most common instrument used to measure diesel engine exhaust pressure is the _____.**
A. pyrometer
B. bourdon gauge
C. pneumercator
D. manometer .

1005. **Low compression in a diesel engine could be caused by_____.**

A. worn or broken cylinder liner sealing rings
B. high cooling water temperature
C. worn or broken piston rings .
D. low fuel oil pressure

1006. **When monitoring diesel engine performance, the most useful instrument to use is the _____.**

A. dwell-tachometer
B. exhaust gas pyrometer .
C. fuel flow rate mete
D. exhaust gas analyzer

1007. **Worn main bearings in a diesel engine can result in _____.**

A. decreased compression pressure .
B. increased lube oil pressure
C. lower lube oil temperature
D. excessive leakage past the piston rings

1008. **A pyrometer is an instrument commonly used to measure_____.**

A. cylinder pressure
B. flame intensity
C. exhaust gas temperature .
D. crankshaft axial alignment

1009. **During the power stroke of a four-stroke/cycle diesel engine, most of the side thrust of a trunk-type piston is absorbed by the_____.**

A. piston skirt .
B. pinion
C. crosshead
D. compression rings

1010. **Low compression pressure in a diesel engine can be caused by_____.**

A. improperly seating intake valves .
B. leaking cylinder liner seal rings
C. late fuel injection timing
D. carbon deposits on the piston

1011. **A pyrometer is an instrument used to measure the temperature of the diesel engine_____.**

A. exhaust .
B. fuel oil
C. cooling water
D. cylinder liner

1012. **Low compression pressure in a diesel engine is caused by_____.**

A. low water in the expansion tank
B. improperly seated valves .

C. low fuel oil pressure
D. worn or broken cylinder liner sealing rings

1013. **Thermocouple pyrometers are used on large, main propulsion diesel engines to indicate the temperature of the_____.**
A. cooling water leaving each cylinder
B. fuel oil entering the injector
C. exhaust gases at various locations .
D. lube oil at the bearing supplies

1014. **A connecting rod in a four-stroke/cycle diesel engine is subject to_____.**
A. tension load twice each crankshaft revolution
B. compression load during power and compression strokes .
C. inertia load once every four crankshaft revolutions
D. bending loads at bottom and top dead center

1015. **Exhaust gas pyrometers are useful for_____.**
A. detecting faulty combustion in individual cylinders .
B. adjusting fuel racks to maintain equal loading between cylinders
C. adjusting the load limit setting of the governor at idle conditions
D. calculating engine horsepower

1016. **Low compression pressure in a diesel engine may be the result of _____.**
A. insufficient fuel supply due to fuel pump valves sticking or leaking
B. excessive mechanical clearance between the piston crown and cylinder head .
C. excessively worn fuel pump plunger
D. excessive exhaust back pressure

1017. **For a diesel engine, individual cylinder performance is commonly determined by exhaust gas_____.**
A. chemical analysis
B. back pressure readings
C. pyrometer readings .
D. infrared analysis

1018. **Diesel engine air start system check valves are opened by _____.**
A. an air start cam
B. cylinder compression pressure
C. starting air pressure .
D. valve springs

1019. **In a four-stroke cycle diesel engine the intake valves open _____.**
A. before TDC and close after BDC .
B. after TDC and close after BDC
C. before TDC and close before BDC
D. after TDC and close before BDC

1020. **Low compression in a diesel engine can be caused by _____.**
A. clogged coolant passages

B. a leaking cylinder head gasket .
C. low fuel oil pressure
D. worn or broken cylinder liner sealing rings

1021. **Pyrometers commonly found on diesel engine exhaust systems, consist of_____.**
A. pyrostats and a voltmeter
B. a gas-filled bellows, a tube and a pressure gauge
C. thermocouples and a voltmeter .
D. ammeters and thermocouples

1022. **Excessive valve lash in an auxiliary diesel engine will cause the valves to open_____.**
A. later and close sooner .
B. sooner and close later
C. sooner and close sooner
D. later and close later

1023. **The loss of the diesel engine cylinder air charge through leaky valves, piston rings, worn or scored liners, would be indicated by which of the following sets of conditions?**
A. Low compression pressure and high exhaust temperature .
B. Low firing pressure and high exhaust temperature
C. Low compression pressure and low exhaust temperature
D. Low firing pressure and low exhaust temperature

1024. **Which of the general advantages listed does the electrical pyrometer have over the mechanical pyrometer? .**
A. When heated, it will move proportional to the amount the metal has lengthened or expanded
B. The pointer associated with the pyrometer scale can be made to also measure engine RPM
C. It can be utilized in exhaust manifolds and heat exchangers interchangeably
D. It can indicate temperature at a distant point from the source heat .

1025. **When an air started, four-stroke/cycle diesel engine is being cranked, the starting air is admitted to each cylinder during what would normally be the .**
A. intake stroke
B. compression stroke
C. power stroke .
D. exhaust stroke

1026. **Which of the listed problems can be a cause of low compression pressure in a diesel engine?**
A. clogged air filter
B. compression stroke
C. burned exhaust valves
D. all of the above .

1027. **Low cylinder compression pressure and a high exhaust temperature may indicate _____.**
A. early fuel injection timing
B. leaking valves .
C. a continuously open scavenge air port
D. low cooling water temperature

1028. **If a four-stroke/cycle diesel engine is started by injecting air into the cylinder, the pistons receiving the charge of starting air must be_____.**

A. on the power stroke .
B. on the exhaust stroke
C. at the end of the power stroke
D. at the start of the intake stroke

1029. **A drop in compression pressure in one cylinder of a diesel engine can be caused by_____.**

A. a leaking fuel injection nozzle
B. a clogged air filter
C. early fuel injection
D. burned valves .

1030. **If you increase the clearance between a valve stem and rocker arm, which of the listed condition will occur?**

A. valve will open later .
B. valves will close later
C. amount of fuel injected will be increased
D. amount of fuel injected will be decreased

1031. **Reducing the clearance between a valve stem and rocker arm will result in the valve _____.**

A. having a shorter duration of opening
B. having a longer duration of opening .
C. closing sooner
D. opening later

1032. **Which of the listed conditions can cause lacquer to be deposited on a piston skirt?**

A. High sulphur content fuel
B. High lube oil temperatures .
C. High vanadium content fuel
D. Excessive piston slap

1033. **A large two-stroke/cycle direct reversing diesel engine is to be reversedPrior to the admission of starting air you must _____.**

A. line up the engine fore restarting with light diesel oil
B. reposition the fuel injection cam .
C. change the intake and exhaust valve cam positions
D. place the starting cam in the intermediate position

1034. **Which of the routine maintenance procedures listed is required for starting air receivers?**

A. over-speeding
B. overload .
C. low exhaust temperature
D. high crankcase pressure

1035. **Which of the routine maintenance procedure listed is required for starting air receivers?**

A. Frequent draining of accumulated moisture .
B. Frequent testing of relief valves

C. A close watch on temperature to prevent fluctuations in pressure
D. Frequent cleaning to re move oil and foreign matter

1036. **If you were inspecting the valve springs on an auxiliary diesel engine, your best indication of impending spring failure would be _____.**
A. a glazed surface on the spring
B. nicks in the protective coating
C. a build up of sludge deposits
D. cracks in the surface of the spring .

1037. **Which of the conditions listed could cause the cylinder relief valves on a large, low-speed, propulsion diesel engine to lift?**
A. Plugged injector nozzles
B. Excessive fuel injection .
C. Very late injection timing
D. Incorrect crankshaft clearance

1038. **The exhaust system of a diesel engine is usually designed to remove exhaust gases and to _____.**
A. provide exhaust back pressure
B. prevent exhaust smoke emissions
C. power a reciprocating supercharger
D. muffle exhaust gas noise .

1039. **Which of the following reasons represents why the designed compression ratio of a gasoline engine is lower than that of a diesel engine?**
A. compression must be low for effective spark ignition
B. compression must be low for required horsepower and torque generation
C. compression must be low to prevent pre-ignition .
D. compression must be low to have effective pre-ignition

1040. **Which of the following operation will have a direct impact on the rate of wear in a cylinder liner _____.**
A. amount of scavenge air to the cylinder
B. quality of fuel injected .
C. viscosity of the lube oil
D. compression ratio of the piston

1041. **If the relief valve on a diesel engine cylinder lifts, the cause could be due to _____.**
A. liquid in the cylinder .
B. low compression in the cylinder
C. high exhaust temperature
D. poor fuel penetration

1042. **Scuffed cylinder liner wearing surfaces in a diesel engines can result from _____.**
A. chromium plating piston rings
B. knurling the piston skirt
C. extended maximum power operation
D. applying load to a cold diesel engine .

1043. **An increase in crankcase pressure generally indicates_____.**
A. worn connecting rod bearings
B. worn engine cylinder liners .
C. high cylinder firing pressure
D. stuck spring-loaded manhole covers

1044. **Exhaust pipes for separate diesel engines can be combined only when _____.**
A. space limitations prevent separately run pipes
B. the engines are small auxiliary units
C. they are arranged to prevent gas backflow to each engine .
D. a waste heat boiler is installed

1045. **Scuffed cylinder liner wearing surfaces in a diesel engines can result from_____.**
A. starting the engine while hot
B. knurling the piston skirt
C. operating the engine overheated .
D. scuff resistant piston rings

1046. **A substantial increase in crankcase pressure could be an indication of _____.**
A. excessive lube oil pressure
B. the proper seating of new rings
C. a worn cylinder liner .
D. a malfunctioning cylinder relief valve

1047. **You are inspecting the lower main precision bearings on a diesel engine .You observe that about half the thin Babbitt linings are of a milky white colourThis condition is caused by _____.**
A. large dirt particles in the oil supply
B. insufficient lubricating oil and overheating
C. normal wear
D. water contamination of the lube oil .

1048. **An increase in diesel engine crankcase pressure generally indicates excessive_____.**
A. compression pressure
B. lube oil header pressure
C. scavenge air pressure
D. piston ring blow-by .

1049. **A water jacket is placed around the exhaust manifolds of propulsion diesel engines to__.**
A. reduce heat radiation to the engine room .
B. aid in preventing turbocharger overheating
C. condense and drain moisture from exhaust gases
D. dampen exhaust gas pulsations in the manifold

1050. **A substantial increase pressure could be an indication of a/an _____.**
A. worn cylinder liner .
B. faulty cylinder relief valve
C. excessive lube oil pressure
D. excessive scavenge air pressure

1051. **If a diesel engine were running at 20% overload with a smoky exhaust, you should_____.**
A. stop the engine immediately to prevent damage
B. increase lube oil pressure
C. slow the engine allowing it to gradually cool .
D. decrease the cooling water it temperature to the water jacket

1052. **Diesel engine mufflers or silencers reduce the engine exhaust noise by ____.**
A. passing the exhaust through long head pipes
B. diffusing exhaust vibrations through activated carbon baffles
C. increasing the exhaust gas velocity
D. reducing the exhaust gas velocity .

1053. **The most practical way of detecting an overload in one cylinder of an operating large, low-speed ,main propulsion diesel engine is to _____.**
A. check the cylinder exhausts for black smoke
B. listen for combustion knock in that cylinder
C. isolate each cylinder and inspect the injector
D. check the cylinder exhaust temperature frequently .

1054. **An indication of an overloaded main propulsion diesel engine is ____.**
A. white smoke in the exhaust
B. high exhaust gas pyrometer readings .
C. sparks in the exhaust
D. blue smoke in the exhaust

1055. **Diesel engine mufflers accomplish noise reduction by _____.**
A. reducing exhaust gas velocity .
B. increasing the frequency of gas vibration
C. the use of long head pipes
D. the use of zinc electrodes

1056. **When a diesel engine compression pressure is checked, the indicator is connected to the ____.**
A. cylinder exhaust ports
B. injection line
C. cylinder indicator cock .
D. banjo oiler line

1057. **In a diesel engine exhaust system, the cooling of the exhaust gases below their dew point, will result in ____.**
A. increased engine back pressure
B. sulfuric acid corrosion .
C. surface pitting of the turbocharger
D. moisture impingement on the turbocharger compressor blade

1058. **Misfiring in a diesel engine at light loads can be caused by____.**
A. high lube oil temperature
B. low lube oil temperature
C. excessive cylinder cooling .
D. high air injection pressure

1059. **Diesel engine exhaust noise can be reduced in an exhaust muffler by ___.**

A. changing the direction of exhaust gas flow .
B. increasing the exhaust gas velocity
C. changing the exhaust gas weight
D. increasing the exhaust gas static pressure

1060. **An auxiliary diesel engine may fail to start due to_____.**

A. low exhaust back pressure
B. high lube oil temperature
C. insufficient cranking speed .
D. excessive fuel atomization

1061. **A condition contributing to diesel engine piston rings sticking in the ring grooves, is insufficient ring clearance at the ring_____.**

A. gap
B. side .
C. back
D. radial

1062. **One of the purposes for water cooling the exhaust manifold in marine diesel engine is to _____.**

A. reduce lube oil temperature
B. raise exhaust temperature reduce
C. excessive heating of engine room .
D. reduce load on cooling water pump

1063. **If a diesel engine driving a generator turns over freely but fails to fire properly, the cause could be _____.**

A. excessive compression pressure
B. air in the fuel lines .
C. high fuel pressure
D. excessive load

1064. **In a two-stroke/cycle diesel engine, the exhaust gases are expelled from the cylinder by the_____.**

A. exhaust manifold
B. valve bridge
C. pressure of the fresh air charge .
D. valve adjusting gear

1065. **When the normal compression ratio of a diesel engine is not very high, misfiring at light loads may be caused by _____.**

A. overloading the engine
B. low exhaust valve lift
C. excessive cylinder cooling .
D. insufficient mechanical clearance

1066. **Which of the listed diesel engine systems is likely to create the problem of a cylinder regularly misfiring?**

A. Lubrication
B. Cooling
C. Fuel .
D. Electric ignition

1067. **During the valve overlap period, the exhaust pressure of a turbochargers, four-stroke/cycle diesel engine must be less than the intake manifold pressure to ensure _____.**
A. effective cylinder scavenging and cooling .
B. constant pressure from the turbochargers
C. cooler operation of the exhaust system
D. effective constant pressure for turbocharger operation

1068. **Which of the following problems can occur if you continually fail to drain off condensate from a starting air receiver?**
A. Corrosion and eventual failure of the tank.
B. Gumming of the tank relief valves
C. Immediate failure of components downstream of the compressed air system
D. Boiling of the water oil mixture as pressure is reduced

1069. **A diesel engine experiences a sudden loss in speed, accompanied by black exhaust smoke, with the fuel rack at maximum, and speed remaining below normal .the probable ___.**
A. engine overload .
B. leaky valves
C. stuck or broken piston rings
D. low air injection pressure

1070. **Which of the listed items should be secured before performing any maintenance on a solenoid operated air start valve?**
A. Electric power and starting air .
B. Lube oil standby pump and control air
C. Hydraulic switch and engage jacking gear
D. Motor drain and pneumatic control system power

1071. **The exhaust gases in a supercharged two-stroke/cycle diesel engine are expelled from the cylinder by _____.**
A. pumping action of the piston
B. pressure of the fuel charge
C. vacuum developed in the manifold
D. pressure of the fresh air charge .

1072. **A diesel engine cranks properly during starting but immediately stallsWhich of the following systems is most likely at fault?**
A. Hydraulic starting
B. Electric starting
C. Ignition
D. Fuel .

1073. **If an auxiliary diesel engine frequently stalls, the trouble may be caused by ___.**
A. low exhaust back pressure

B. air in the fuel system .
C. gasket blow – by or leakage
D. incorrect assembly of idler springs

1074. **The satisfactory operation of diesel engine exhaust valves usually depends on ____.**
A. the proper back pressure
B. the cooling water temperature
C. correct timing and proper seating .
D. accurate metering and the exhaust temperature

1075. **If it becomes necessary to cutout an individual cylinder of a large, low-speed, main propulsion diesel engine, the fuel to that cylinder should be secured and its _____.**
A. fuel pump should be removed and all connections blanked off
B. cylinder oil feed rate should be increased slightly above that used at normal sea speed
C. cylinder oil feed rate should be reduced .
D. cylinder oil feed rate should be increased to the maximum flow capable of the metering pump

1076. **If a diesel engine turned over freely but failed to start, the cause could be _____.**
A. water in the fuel .
B. cold lube oil
C. excessive starting air pressure
D. excessive fuel pressure

1077. **A bronze bearing liner with a lead-tin flashing has a milky-white color over most of its surface and some areas of exposed bronze, the white coloring indicates_____.**
A. proper break-in wear
B. improper break-in wear
C. relocation of the overlay flashing
D. water contamination of the lube oil system .

1078. **If a diesel engine turned over at normal cranking speed but failed to start, the cause could be late fuel injection or _____.**
A. excessive fuel pressure
B. high lube oil viscosity
C. inadequate fuel injection .
D. excessive starting air pressure

1079. **Water accumulation in the cylinder of a secured engine is an indication that the _____.**
A. soft water pump was not secured along with the engine
B. jacket water thermostat has failed
C. cylinder liner may be cracked .
D. raw water pump is over-speeding just prior to engine shutdown

1080. **When restarting a heavy fuel diesel engine that has been stopped for some time, the engine should_____.**
A. increase the starting air pressure
B. use a higher than normal cranking speed
C. increase the fuel injection pressure
D. use a fuel having a lower ignition temperature .

1081. **If you notice smoke coming fro the crankcase exhaust fan outlet of an operating diesel engine, you would suspect_____.**

A. a cracked cylinder liner
B. clogged intake ports
C. broken piston rings .
D. a faulty head gasket

1082. **In a main propulsion turbocharged diesel engine, the speed of the turbocharger varies according to the _____.**

A. governor droop
B. speeder spring tension
C. fuel rack lag
D. load on the engine .

1083. **A four-stroke/cycle, 1000horsepower diesel engine fails to start at normal cranking speed with normal fuel pressure and ambient temperatureThe reason for the failure could be ___.**

A. glazed liners or pistons
B. high lube oil pressure
C. excessive compression ratio
D. worn valve seats and valves .

1084. **The operating speed of a turbocharger is directly dependent upon_____.**

A. engine speed
B. engine load .
C. intake manifold pressure
D. atmospheric pressure

1085. **The speed of the turbocharger for a four-stroke/cycle diesel engine driving a generator at constant speed depends on the _____.**

A. engine speed
B. kilowatt load .
C. fuel injection pressure
D. air intake manifold temperature

1086. **When attempting to start a main propulsion diesel engine, the engine, the engine turns at the proper speed but will not startYou should check the_____.**

A. starting air pressure
B. scavenge air pressure
C. over-speed trip .
D. banjo oiler line

1087. **When attempting to start a main propulsion diesel engine, the engine, the engine turns at the proper speed but will not startYou should check the_____.**

A. starting air pressure
B. scavenge air pressure .
C. over-speed trip
D. banjo oiler line

1088. **Which of the listed conditions will affective pressure the most in the cylinder of a diesel engine?**
A. TBN of the lubricating oil
B. Temperature of the lube oil
C. Completeness in the mixing of the fuel and air .
D. Temperature of the cooling (sea) water

1089. **(Piston area)X(Piston stroke)K(numbers of the cylinders)=engine_____.**
A. brake horsepower
B. displacement .
C. cylinder volume
D. cylinder clearance

1090. **The cubic inch(or liter) displacement of a cylinder is determined by the diameter of the piston and the _____.**
A. length of the crankshaft
B. volume of the clearance space
C. weight of piston
D. length of the stroke .

1091. **A disadvantage of a four-stroke/cycle diesel engine is_____.**
A. higher working temperature of piston and cylinder
B. the use of scavenge ports
C. fewer power strokes per revolution of the crankshaft .
D. part of the fuel is burned as the piston is moving away from top dead center

1092. **Compared to four-stroke/cycle engines, two-stroke/cycle diesel engines have the disadvantage of _____.**
A. less even torque
B. higher cylinder head temperatures .
C. fewer power strokes per revolution
D. greater weight/size requirements

1093. **A disadvantage of a two-stroke/cycle diesel engine is_____.**
A. more power strokes per revolution
B. the use of scavenge air
C. more complicated valve gear
D. higher working temperature of the piston and cylinder .

1094. **In comparing engines of equal horsepower, higher exhaust gas temperatures occur in a/an_____.**
A. opposed-piston engine
B. double-acting engine
C. two-stroke/cycle engine
D. four-stroke/cycle engine .

1095. **If all other conditions such as bore, stroke, speed, and mean effective pressures are equal, a two-stroke/cycle diesel engine will develop approximately_____.**
A. the same indicated horsepower as a four-stroke/cycle engine
B. twice the indicated horsepower as a four-stroke/cycle engine .

C. one half indicated horsepower as a four-stroke/cycle engine
D. one power stroke for every two crankshaft revolutions

1096. **The average pressure exerted on piston during each power stroke is termed_____.**
A. indicated horsepower
B. mean effective pressure .
C. exhaust back pressure
D. compression pressure

1097. **A piston is at bottom dead center when it is_____.**
A. opening the exhaust ports
B. closing the fuel ports
C. farthest from the cylinder head .
D. nearest to the cylinder head

1098. **During which of the listed piston stroke of a four-stroke/cycle diesel engine, is the piston moving downward?**
A. Intake stroke .
B. Compression stroke
C. Exhaust stroke
D. Pumping stroke

1099. **A piston is said to be at top dead center when it is _____.**
A. opening the exhaust ports
B. placed on top of the engine along its centerline
C. farthest from the cylinder head
D. nearest to the cylinder head .

1100. **On a large diesel engine installation, crankshaft axial alignment is maintained by the _____.**
A. piston rod guides
B. engine thrust bearing .
C. crosshead bearing
D. main shaft flexible coupling

1101. **Valves in the cylinder head of a diesel engine are opened by the direct action of the ____.**
A. exhaust pressure
B. valve spring pressure
C. rocker arm movement .
D. wrist pin movement

1102. **The intake ports of a two-strike/cycle diesel engine are opened and closed by the action of the _____.**
A. camshaft
B. piston movement .
C. exhaust valves
D. vertical drive

1103. **The connecting rod is fitted between the crosshead and the crankshaftI t transmits the firing force, and together with the crankshaft converts the _____motion to a _____motion.**

A. rotary/reciprocating
B. up and down/fore and aft
C. fore and aft /up and down
D. up and down/rotary .

1104. **As soon as a diesel engine has started, which of the listed engine operating parameters should be checked FIRST?**
A. Exhaust temperatures
B. Raw water pressure
C. Lube oil pressure .
D. Air box pressure

1105. **Trunk-type diesel engine pistons are most effectively cooled by heat_____.**
A. conducted through the engine block
B. conducted to water cooled cylinder walls .
C. conducted through the piston crown
D. loss to escaping exhaust gases

1106. **Immediately after starting a diesel engine, normal raw water and jacket water pressure are indicatedHowever, the jacket water temperature continues to rise, if there is no change in the sea temperature, you should suspect_____.**
A. overloading in all cylinders
B. a jammed three-way thermostatic valve .
C. chromate PH too low
D. a high level in the surge tank

1107. **The main propulsion diesel engine jacket water temperature rises above normal, with the raw water sea suction and the expansion tank water level being normalWhich of the following problems is most likely the cause?**
A. Faulty thermostatic bypass valve .
B. Eroded zinc pencils in the heat exchanger
C. Steam formation in the expansion tank
D. Excessive leakage from jacket water pump seal

1108. **Starting a large low-speed propulsion diesel engine on diesel fuel during cold weather conditions, will be made easier by _____**
A. increasing the quantity of starting air
B. increasing the lube oil pressure
C. heating the engine fuel supply
D. heating the engine coolant .

1109. **Cold weather starting of a diesel engine may be made easier by .**
A. decreasing the compression ratio
B. using a special fuel having a high ignition temperature
C. increasing the starting air supply
D. heating the jacket water .

1110. **During maneuvering operations for a direct reversing large, low-speed, main propulsion diesel engine, which of the following actions is used to stop the shaft from turning prior to**

reversing the engine rotation?

A. Flywheel inertia
B. Admission of starting air .
C. The way of the vessel
D. securing of fuel to the cylinders

1111. **Air in the fuel lines to the fuel injection nozzles of a diesel will result in _____.**

A. lower compression pressures
B. overheating without smoking
C. failure to start .
D. a run away without load

1112. **In the starting process of a diesel engine, the main object is to attain the compression conditions sufficient to _____**

A. turn the flywheel
B. reduce friction
C. overcome inertia
D. ignite the fuel .

1113. **Prior to starting, the purpose of turning over a main propulsion diesel engine with the cylinder test cocks open, is to _____**

A. test the starting system
B. remove condensation from the cylinders .
C. check the compression
D. check for proper lube oil pressure

1114. **As engine RPM is increased from idle speed to full load speed, which of the conditions listed will decrease?**

A. Compression ratio
B. Fuel/Air ratio .
C. Compression pressure
D. Lube oil pressure

1115. **A diesel engine fails to start because of water in the fuelIn order to start the engine, you should _____?**

A. turn engine with jacking gear
B. drain filters and strainers and bleed off water at each injection pump .
C. use ether to start the engine with blow-down valves open
D. blow through the cylinders and fuel lines with a drying agent

1116. **A diesel engine fails to start due to excessive water in the fuelBefore the engine can be started, the water should be removed from the_____.**

A. fuel lines .
B. lube oil filter
C. crank case pump
D. rocker arm reservoir

1117. **A diesel engine may fail to start due to _____.**

A. low air charge temperature .

B. high cranking speed
C. excessive fuel dilution of lube oil
D. high compression pressure

1118. **One of the factors limiting the amount of load which can be put on a modern marine diesel engine is the _____.**
A. governor sensitivity
B. exhaust temperature .
C. fuel injection pressure
D. speed of the can shaft

1119. **High exhaust temperatures from all of cylinder of a turbocharged, four-stroke/cycle diesel engine can be caused by an____.**
A. inoperative turbocharger .
B. inadequate fuel supply
C. overload on one cylinder
D. unequal load distribution

1120. **Combustion knock will most likely occur as a result of using a fuel with ____.**
A. low ignition quality .
B. a high volatility
C. low ignition delay
D. a high cetane number

1121. **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?**
A. White
B. Black .
C. Blue
D. Clear

1122. **A dark exhaust from a running diesel engine can be caused by ____.**
A. late ignition .
B. water in the fuel
C. high compression temperature
D. starting valve stuck open

1123. **Engine operating conditions may be indicated by the color of the exhaust smokeBlack smoke could indicate____.**
A. an insufficient speed droop setting
B. an overloaded engine .
C. clogged drain holes in the oil control rings
D. complete combustion

1124. **Black smoke exhausting from a diesel engine indicates____.**
A. proper fuel injection
B. water in the fuel

C. incomplete combustion .
D. burning of lube oil

1125. **When starting air is admitted, a diesel engine turns over very slowly without firingThe cause may be ____.**
A. an obstruction in an cylinder
B. water accumulation in some engine cylinders
C. low starting air pressure .
D. low scavenge air pressure

1126. **If a diesel engine rotates slowly when cranked, but does not fire, the____.**
A. fuel control rack had admitted excessive fuel
B. engine speed does not match the fuel rack setting
C. engine has failed to reach its firing speed .
D. starter pinion and ring gear contact is not correct

1127. **A diesel engine may be hard to start if the ____.**
A. air intake is restricted .
B. engine is cranked too fast
C. vibration dampener is faulty
D. exhaust back pressure is low

1128. **Which of the listed failures, occurring in an automated diesel generator system, should cause an audible alarm at the engine room control station?**
A. Low cooling water outlet temperature
B. High lube oil pressure
C. Low lube oil temperature
D. Low starting air pressure .

1129. **A diesel engine is turned at normal cranking speed and no ignition occursThis could be the result of ____.**
A. low lube oil temperature
B. low starting air temperature
C. air bubbles in the fuel oil system .
D. water in the starting air system

1130. **Clogged or partially obstructed exhaust ports on a diesel engine can cause____.**
A. over-speeding of the engine
B. failure of the engine to shut down
C. no effect of engine mounting bolts
D. high exhaust temperatures .

1131. **If you observe smoke coming from the turbocharger of an auxiliary diesel engine, you should_____.**
A. check the air filter for obstruction
B. check for an exhaust leak
C. check the exhaust temperature
D. secure the engine .

1132. **Excessive vibration in an operating diesel generator may be caused by _____.**
A. electrical overload
B. surging at governed RPM
C. loose engine mounting bolts .
D. coolant leaking into the cylinder

1133. **A diesel engine could fail to start because of ____.**
A. incorrect injection timing .
B. low exhaust back pressure
C. floating exhaust valves
D. excessive cranking speed

1134. **Which of the following procedures should be carried out when a large, low-speed, diesel engine is operated with one cylinder secured? .**
A. Lubrication to the defective cylinder should be increased
B. Cooling water temperature to the engine should be increased
C. Only the turbocharger speed should be reduced
D. Engine speed should be reduced.

1135. **A four-stroke cycle, turbocharged, 1000 horsepower diesel engine has been operating under loadThe load suddenly increases, causing excessive black exhaust smoke, and a rapid rise in the lube oil temperatureIn response to this condition, you should:**
A. reduce load .
B. check your exhaust
C. adjust cooling water temperature
D. increase lube oil flow

1136. **Some medium and high-speed diesel engines require reduction gear units to provide a useful propeller speedIn most reduction gears, the bull gear ____.**
A. must churn the oil in the sump
B. is connected to the propeller shaft .
C. is driven at the highest RPM
D. compensates for alignment variations between the engine and pinion gear

1137. **When used with reversing reduction gears, medium-speed diesel engines should be bolted to their foundations with fitted bolts at the drive end and clearance(loosely fitted) bolts in other locations .This is done to _____.**
A. maintain alignment when the ship’s hull is working in heavy seas
B. ensure engine vibrations correspond to the natural frequency of the hull
C. permit the engine to expand away from the driven equipment as the engine heats up and expands .
D. maintain engine thrust bearing clearances

1138. **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 _____.**
A. corrosion on the gears
B. excessive gear speed
C. dirt in the oil
D. misalignment of the gears .

1139. **When transmitted by a reduction gear, diesel engine speed is reduced and the torque available for work _____.**

A. remains the same
B. is reduced
C. is increased .
D. is eliminated

1140. **The thermal expansion valve reacts directly to the _____.**

A. temperature in the space being cooled
B. liquid refrigerant pressure at the solenoid valve
C. pressure drop across the evaporator coils
D. refrigerant gas superheat at the coil outlet .

1141. **In an operating refrigeration system low on refrigerant, a liquid line sight glass will_____.**

A. be clear
B. be blue
C. be light green
D. show bubbles .

1142. **In the presence of an open flame or hot surfaces, chlorinated fluorocarbon refrigerants decomposes and from _____**

A. petroleum crystals
B. phosgene gas .
C. water vapor
D. carbon monoxide

1143. **Before charging a refrigeration unit, the refrigerant charging lines should be .**

A. flushed with clean refrigerant oil
B. purged with the refrigerant .
C. washed with an ammonia and alcohol solution
D. grounded to compressor

1144. **If you find an extremely large refrigerant leak while using a halide torch, your flame will ___.**

A. change from blue to orange
B. ‘flare up’ and remain lighted
C. probably go out .
D. stay blue

1145. **When air is at its dew point it is at its_____.**

A. lowest absolute humidity
B. lowest relative humidity
C. highest absolute humidity
D. highest relative humidity .

1146. **To prevent the unnecessary loading of an air conditioning system while maintaining the designed dry bulb temperature and relative humidity in an air conditioning system, you should _____.**

A. admit only enough fresh outside air to provide proper ventilation .
B. reduce the air reheating system load

C. lower the compressor head pressure
D. operate the purge recovery unit continuously

1147. **A reservoir, as used in hydraulic systems aboard ship, is used to store hydraulic oilAnother function is to**
A. act as a shock absorber
B. maintain the stored oil under pressure
C. act as a base or foundation for the power unit .
D. eliminate pressure surges in the system

1148. **One function provided by a hydraulic accumulator is to .**
A. provide an area where air can separate from the oil
B. provide an area to separate solid contaminants from the oil
C. act as an oil and water separator
D. absorb shocks occurring in the system .

1149. **In the design of hydraulic piping and equipment consideration is given to minimize turbulence in the hydraulic fluid, as this will cause .**
A. molecular fluid vibration
B. energy losses .
C. wide pressure variations
D. mechanical damage to control valves

1150. **How can the chance of contaminating hydraulic fluid be decreased when working on hydraulic system?**
A. clean the fittings before they are disconnected .
B. Place drip pans under leaky fittings
C. Seal any cracks in lines with Permatex
D. Coat all threads with graphite oil

1151. **Air trapped in the hydraulic fluid of a steering system would be indicated by .**
A. an improper rudder response
B. hammering noises in the equipment or transmission lines
C. popping or sputtering noises
D. all the above .

1152. **Leakage of hydraulic fluid from around the shaft of a hydraulic motor may be caused by .**
A. permanent loss of pump suction
B. worn shaft seals .
C. high level in the oil sump
D. low motor RPM

1153. **Purging air from a hydraulic system is necessary when .**
A. adding small amounts of oil to the system
B. the system has been overheated
C. the system has been drained and then filled with new oil .
D. the system has been idle for a long period of time

1154. **An orifice-check valve placed in a hydraulic system is used to .**
A. regulate the fluid flow in either direction
B. restrict movement of hydraulic fluid in one direction, but allow free movement in the other direction
C. allow free movement of hydraulic fluid in both directions
D. allow a restricted fluid flow in one direction only .

1155. **In a shell-and-tube type hydraulic fluid cooler, the amount of heat transferred from the hydraulic fluid to the cooling water depends upon .**
A. the temperature of the hydraulic fluid
B. the flow rate of the hydraulic fluid
C. the temperature of the cooling water
D. all of the above .

1156. **In a fixed displacement axial piston hydraulic motor, the speed is varied by .**
A. regulating the ratio between torque and speed via the torque limiter at the motor
B. directing the motor output flow through a bypass line
C. maintaining a constant flow and pressure input
D. controlling the input flow rate .

1157. **As the designated rudder angle is being achieved, as a result of the original command input, the steering gear follow-up mechanism is .**
A. in motion, providing a null input
B. not in motion, thus providing a null input
C. in motion, providing an input to place the main pump on maximum stroke
D. in motion, providing an input to place the main pump at null stroke .

1158. **In an electro-hydraulic steering gear, any change in relative position between the synchronous receiver and the follow-up gear will result in .**
A. the pump going to full stroke
B. closing of the six-way valve
C. driving the rams up against the stops
D. a corresponding slowing or increasing of the pumped flow rate .

1159. **When the helm demands a 20° right rudder movement from an electro-hydraulic steering gear, which of the listed actions will be the FIRST action to happen when this rudder position is attained?**
A. The six-way valve opens
B. The steering service pump motor is stopped
C. The follow-up gear takes the pump off stroke.
D. The cylinder relief valves bypass oil to the suction side the pump

1160. **The follow-up gear on an electro-hydraulic steering gear .**
A. relieves excessive fluid pressure
B. takes the pump off stroke when the desired rudder angle is attained .
C. synchronizes wheel position with the rudder position
D. returns the rudder to midposition when the wheel is released

1161. **According to Regulations, a power driven auxiliary steering gear for a vessel capable of a 20 knot service speed, must be capable of producing a rudder movement at which of the minimum**

speeds listed below?

A. 7 knots
B. 10 knots .
C. 15 knots
D. 20 knots

1162. **According to Regulations, a power driven auxiliary steering gear for a vessel capable of a 12 knot service speed, must be able to meet the rudder movement requirements at which of the minimum vessel speeds listed below?**

A. 6 knots
B. 7 knots .
C. 9 knots
D. 12 knots

1163. **A power failure in the hydraulic system of a compact type steering gear would cause the rudder to .**

A. swing 35° right or left
B. remain locked in its last position .
C. move to the mid-ship position automatically
D. jam against the rudder emergency stops

1164. **If a severe leak develops in the electro-hydraulic steering gear unit is necessary when .**

A. Loss of vessel steering .
B. Overheating of the gyrocompass
C. Jamming of the six-way vale
D. Jamming of the follow-up device

1165. **The purging of air from an elector-hydraulic steering gear unit is necessary when .**

A. changing over to hand pump operation
B. engaging the trick wheel
C. the system has been filled with new oil .
D. the rudder angle indicator does not match the helm position

1166. **Air trapped in the hydraulic fluid of a steering system may be indicated by .**

A. the steering pumps overspeeding
B. a jammed open relief vale
C. a constantly occurring improper rudder response .
D. excessive ram pressure

1167. **Rudder motion is prevented from exceeding the movement of the steering wheel by the .**

A. return springs
B. six-way valve
C. follow-up gear .
D. differential gear

1168. **On an electro-hydraulic steering gear, which of the listed devices will keep the rudder from over-traveling the bridge signal?**

A. Rudder angle indicator
B. Follow-up gear .

C. Electric transmitter
D. Rudder angle limit switch

1169. **Most hydraulic steering gears are fitted with relief valves which .**
A. function when the rudder is amidships
B. relieve excess whip pressure from the hydraulic oil system
C. protect the piping assembly from external rudder shock .
D. relieve excessive telemotor pressure

1170. **In an elector-hydraulic steering system, rudder shock is limited by .**
A. a differential gear
B. return springs
C. a hydraulic accumulator
D. relief valves .

1171. **Rudder position is shown on the bridge by the .**
A. rudder angle indicator .
B. follow-up gear
C. telemotor position
D. relief valves

1172. **When the steering wheel is turned, oil is directed to the steering gear rams by .**
A. modulating the oil flow with the six-way valve
B. moving the automatic pressure differential valve
C. moving the receiving telemotor which regulates the tow-way valve
D. varying the eccentricity of a floating ring or angle of a tilting box .

1173. **The hydraulic oil most likely to thin out when hot and thick when cold would have a viscosity index of .**
A. 20 .
B. 40
C. 60
D. 80

1174. **When the tilting box of a variable stroke axial-piston pump is perpendicular to the pump shaft, which of the following conditions will exist?**
A. The pistons reciprocate
B. The ‘B’ end cylinder barrel rotates
C. There is no fluid flow .
D. Power is transmitted hydraulically

1175. **Auxiliary boilers can be classified as .**
A. water-tube natural circulation boilers
B. fire-tube boilers
C. water-tube forced circulation boilers
D. all of the above .

1176. **Which of the lists forms of heat transfer, if any, is illustrated by the flow of combustion gases through a boiler?**

A. Natural convection only
B. Forced convection only
C. Both natural convection and forced convection .
D. None

1177. **Auxiliary boilers are divided into several classifications, one of which is .**
A. fire-tube controlled circulation
B. fire-tube supercritical circulation
C. water-tube natural circulation .
D. water-tube express circulation

1178. **Diesel engine waste heat boiler construction is usually of the fire-tube or .**
A. cyclone furnace boiler type
B. dry back boiler type
C. water-tube type .
D. critical circulation boiler type

1179. **The boiler water alkalinity in a coil-type auxiliary boiler should be maintained at the pH recommended by the boiler manufacturer to .**
A. precipitate silica from solution
B. reduce corrosion in the heating coil .
C. prevent clogging and erosion in the coil
D. maintain zero water hardness

1180. **The purpose of the programmed purge cycle on an automatically fired auxiliary boiler is to .**
A. cool the furnace to prevent pre-ignition
B. remove explosive vapors from the furnace .
C. evaporate accumulated unburned fuel oil
D. provide sufficient air in the furnace to allow ignition of the fuel

1181. **Heavy soot accumulations in an auxiliary boiler could be caused by .**
A. water in the fuel oil
B. excessive cycling
C. high fuel oil pressure
D. improper burner maintenance .

1182. **Ignition failure in an automatically controlled auxiliary boiler could be caused by .**
A. carbon deposits on the flame scanner .
B. high fuel oil temperature
C. low fuel oil viscosity
D. high steam pressure

1183. **Which action should be taken when an auxiliary boiler in is operation?**
A. Clean all electrical connections
B. Lift the relief valves by hand
C. Inspect and clean all solenoid valves
D. Inspect for oil and water leaks .

1184. **Failure of the burner flame in an auxiliary boiler would probably be a result of .**
A. water in the fuel oil .
B. broken high tension leads
C. incorrect electrode setting
D. full fuel pressure at the nozzle

1185. **Which of the following procedures decreases the total dissolved solids concentration in the water of an auxiliary boiler?**
A. Hydrazine treatment of condensate
B. Frequent compounding
C. Chemical cleaning
D. Bottom blowing .

1186. **The water in an auxiliary boiler should be chemically tested daily for alkalinity and .**
A. soap hardness
B. nitrogen content
C. chloride content .
D. dissolved CO2

1187. **The purpose of designing some waste heat boilers with sinuous fire tubes, is to_____.**
A. increase exhaust gas velocity through the boiler
B. reduce accumulations of carbon deposits on the heat transfer surfaces
C. eliminate exhaust gas pulsations and noise
D. increase the rate of heat transfer to the waterside .

1188. **The amount of chloride content in the water of an auxiliary boiler can be reduced by .**
A. adding hydrazine
B. blowing down the boiler .
C. adding phenolphthalein
D. adding a sulfite chloride scavenger

1189. **When lighting off an auxiliary boiler, which of the problems listed could cause the burners to sputter? .**
A. cold fuel oil
B. low fuel oil pressure
C. low atomizing steam pressure
D. water in the fuel oil .

1190. **Which of the following actions should normally be taken during each watch when the auxiliary boilers is in operation?**
A. clean the flame scanner photocell window
B. Inspect and clean all solenoid valves
C. lift the safety valves by hand
D. Inspect for oil or water leaks.

1191. **Burner ignition failure in an automatically fired auxiliary boiler would be caused by .**
A. a burned out solenoid in the oil supply valve .
B. high temperature excess air

C. incorrectly setting the hot-well dump valve
D. an incorrectly positioned burner snubber realy

1192. **The purpose of a temperature sensing device installed in the stack of a small automatically fired auxiliary steam boiler is to secure the oil burner .**
A. in the event of a flame failure .
B. in the event of a stack fire
C. when the water level reach the crown sheet
D. when the feed pump discharge pressure drops to a preset minimum

1193. **In the event of a flame failure in an auxiliary water-tube boiler, you must_____.**
A. relight the boiler immediately to prevent loss of steam pressure
B. relight the fire off the brickwork as the bricks are cherry red
C. purge the furnace of any combustible gases before attempting to relight the fire .
D. speed up the feed pump to prevent dry firing when the burner flame is reestablished

1194. **Flame failure in an automatically fired auxiliary boiler can from a/an _____.**
A. incorrect electrode setting
B. incorrect nozzle position
C. clogged fuel nozzle .
D. broken high tension lead

1195. **The fuel oil supply system to an automatic auxiliary boiler, will automatically shutdown if the boiler _____.**
A. steam demand is high
B. salinity is high
C. safety valve simmers
D. burner flame is extinguished .

1196. **The diesel engine exhaust gas bypass, as fitted with some waste heat boilers, is installed to _____.**
A. prevent engine back pressure at heavy loads
B. increase total engine efficiency at low loads
C. prevent boiler corrosion at low engine loads .
D. improve engine fuel consumption at any load

1197. **A firebox explosion in an automatically fired auxiliary boiler may be the result of _____.**
A. excessive purging before lighting off
B. insufficient trail for ignition period
C. a faulty transformer in the ignition circuit
D. insufficient purging before lighting off .

1198. **A burner responsible for producing black smoke in an automatic auxiliary boiler, would be caused by a _____.**
A. defective solenoid valve
B. dirty fuel nozzle .
C. grounded high tension lead
D. faulty ignition cable connector

1199. **Bottom blow valves are installed on auxiliary water-tube boilers to _____.**
A. completely drain the boiler in an emergency
B. prevent sludge from forming in the drum
C. remove floating impurities from the boiler water surface
D. remove settled solids from the water drum .

1200. **The correct procedure for giving an auxiliary boiler a bottom blow, is to begin .**
A. when the boiler has been secured long enough for most solids to settle .
B. when the boiler has been cooled to ambient temperature
C. only after raising the water level to within 0.5 inch of the high water cutout only
D. after bypassing the low pressure

1201. **A smoking burner with a pulsating flame in auxiliary boiler, is an indication that the .**
A. fuel oil supply temperature is normal
B. burner electrode is incorrectly positioned
C. fuel / air ratio is incorrect .
D. ignition current is too low

1202. **Fins are installed on the fireside of water-tubes used in waste boiler to .**
A. decrease the velocity of gases flowing past the tubes
B. increase the rate of heat transfer .
C. reduce accumulations carbon deposits
D. direct the flow of gases

1203. **A distorted furnace in a fire-tube auxiliary boiler may be the result of .**
A. firing for extended periods in the low fire mode
B. overheating, due to waterside deposits .
C. varying the water level above the crown sheet
D. carrying excessive alkalinity in the boiler water

1204. **A pump is defined as device that**
A. produces pressure
B. imparts energy to a fluid to move it from level ‘A’ to level ‘B’ .
C. creates a vacuum to move a liquid in all installation
D. is to develop a pressure differential

1205. **The static suction head of is the _____.**
A. distance of the suction liquid level above the line of the pump .
B. distance the suction liquid level is below the center line of the pump
C. force necessary to overcome frictional losses in the pump and piping
D. amount in inches of mercury the total suction head is below atmospheric pressure

1206. **Which of the following statements is correct with regards to the operation of a centrifugal cargo pump?**
A. Oil is discharged from the impeller through the outlet
B. Gravity causes the oil to flow toward the discharge
C. The self-priming feature of the centrifugal pump enables it to draw its own suction as it starts
D. The discharge capacity varies directly with the speed of the impeller.

1207. **Increasing the speed of a centrifugal pump will result in an increase in its capacity in its capacityAnother means of increasing the capacity pump is to increase the .**

A. diameter of the discharge piping, with all other factors remaining the same
B. diameter of the suction piping, with all other factors remaining the same
C. width of the impeller only
D. diameter of the impeller .

1208. **The valve which is most suited for regulating the flow through a pipeline is a .**

A. gate valve
B. globe valve .
C. swing-check valve
D. plug-cock valve

1209. **If you heard a ‘crackling’ noise in centrifugal pump, the most probable cause of the problem would be ___.**

A. insufficient speed
B. cavitation .
C. excess discharge pressure
D. excessive net positive suction head B

1210. **Which of the equipment listed is most effective in processing bilge slops for overboard discharge?**

A. 100PPM oily water separator
B. Assembling the lube oil purifier as a separator and aligning bilge overboard
C. A 15PPM oily water separator.
D. A magnetic duplex strainer

1211. **In sewage treatment, the term maceration refers to the process of _____.**

A. breaking up solid matter into fine particles .
B. precipitating non-decomposed waste in a collection tank
C. chemically adjusting the sewage ph to 7.0
D. eliminating bacterium coli from the sewage

1212. **In a disk-type lubricating oil purifier, _____.**

A. the purifier driving gears are lubricated by the reclaimed
B. oil as it leaves the bowl all dirt and sludge are automatically discharged with the cooling water
C. sealing water must never be supplied until after oil is fed to the unit
D. deterioration of the bowl ring gasket will cause the purifier to lose its water seal .

1213. **The size of the discharge ring used for the efficient operation of a disk type purifier is dependent upon the ___.**

A. rated capacity of that purifier
B. viscosity of the oil being purified
C. maximum design speed of that purifier
D. specific gravity of the oil being purified .

1214. **Which of the following problems will occur if a disk-type centrifugal lube oil purifier is not properly primed prior to admitting oil flow to the bowl?**

A. Contamination of the lube oil by emulsification will result

B. The lube oil will not be subjected to the proper centrifugal force
C. The lube oil will overheat and flash
D. Oil will discharge from the heavy phase discharge port and be wasted.

1215. **Which of the substances listed is satisfactorily removed from the fuel by a centrifugal oil purifier?**
A. Carbon particles .
B. Lube oil
C. Gasoline
D. Diesel fuel

1216. **One engine manufacturer recommends heavy fuel oil should not be heated above 80℃ to 95℃ (176 ℉ TO 203℉) before purificationThis upper limit should be observed to ensure against_____.**
A. flattening of the bowl neoprene O-rings
B. operation within the explosive rang of the fuel .
C. excessive purifier operating pressures
D. excessive oil viscosity

1217. **If fuel oil were being discharged from the waster outlet of a fuel oil disk type centrifuge, operated as separator, you should_____.**
A. remove the discharge ring
B. re-prime the purifier .
C. the centrifuge to its proper speed
D. install an additional discharge ring

1218. **A centrifugal fuel oil purifier should be shut down if _____.**
A. more sealing water is needed
B. the cover clamp needs tightening
C. the purifier has a bad vibration when started .
D. water is discharged from the overflow line

1219. **If the bowl of a disk type centrifugal purifier when operated as a separator is not primed, the .**
A. oil has a tendency to emulsify in the bowl
B. purifier will act as a clarifier at the discharge ring
C. oil will be lost through the water discharge ports .
D. oil solids will be deposited only at the intermediate top disk

1220. **Which factor determines the ring dam size for a fuel oil, tubular bowl type, centrifugal purifier?**
A. The viscosity off the fuel
B. The quantity of water to be removed from the fuel
C. The specific gravity of the fuel .
D. The quantity of dirt to be removed from the fuel

1221. **Proper filtering and straining of diesel fuel is important because the .**
A. fuel oil pump will over-speed if dirt is not removed
B. fuel oil transfer pumps cannot tolerate small amounts of grit in the oil

C. fuel injectors may be damaged by foreign particles in the fuel oil dirty .
D. fuel will clog the intake air filter

1222. **Properties of a good refrigeration oil include_____.**
A. low wax content .
B. high pour point
C. high viscosity
D. all of the above

1223. **An important consideration in selecting a lubricating oil for use in a refrigeration compressor is for the oil to _____**
A. have a high viscosity index
B. mix readily with refrigerant
C. have a high freezing point
D. have a low pour point .

1224. **The heat removed from the refrigerant in the condenser of a refrigeration plant is the _____.**
A. latent heat of expansion
B. sensible heat of condensation
C. heat of compression .
D. all of the above

1225. **Refrigerant entering the compressor of a refrigeration system should be in which of the following conditions?**
A. Sub-cooled liquid
B. Sub-cooled vapor
C. Superheated vapor .
D. Liquid

1226. **A fluid coil will ____large quantities of heat when it changes state from a liquid to a vapor.**
A. release
B. absorb .
C. develop
D. regenerate

1227. **The pressure range between the system cut in and cut out pressures in a refrigeration unit is known as_____.**
A. opposing operational drag
B. pressure distribution
C. differential .
D. system purge

1228. **In a direct expansion type multi-box refrigeration system, the compressor is set up to cycle on and off by the_____.**
A. pressurestat
B. high pressure cutout
C. solenoid valve
D. low pressure cutout switch .

1229. **A pressure drop in the liquid line of a refrigeration system may cause_____.**
A. the solenoid valve to seize
B. the compressor to hunt
C. flash gas to form in the liquid line .
D. the expansion valve to freeze open

1230. **The purpose of the refrigeration system low pressure cutout switch is to _____.**
A. protect the compressor from liquid flood back
B. protect the compressor from low discharge pressure
C. start and stop the compressor upon system demand .
D. start the compressor after a drop in the evaporator pressure

1231. **The receiver used in a refrigeration system_____.**
A. stores liquid refrigerant .
B. collects non-condensable gases
C. allows refrigerant sub-cooling
D. prevents compressor surging

1232. **Thermostatic expansion valves can be adjusted for _____**
A. suction pressure only
B. head pressure only
C. superheat only .
D. suction pressure and box temperature

1233. **Hot gas bypass is one of the methods used to _____.**
A. relieve excessive compressor head pressure
B. produce flash gas at the expansion valve
C. reduce flooding of the receiver at low load
D. defrost the evaporator coils .

1234. **Constant superheat is maintained at the evaporator outlet of a refrigeration coil by a .**
A. solenoid valve
B. low pressure cutout switch
C. king valve
D. thermal expansion valve .

1235. **One function of the thermal expansion valve is to_____.**
A. act as a pilot from the solenoid valve
B. regulate the amount of refrigerant flow to the coil .
C. regulate the water flow
D. turn the compressor off and on

1236. **The thermal expansion valve reacts directly to the _____.**
A. temperature in the space being cooled
B. liquid refrigerant pressure at the solenoid valve
C. pressure drop across the evaporator coils
D. refrigerant gas superheat at the coil outlet .

1237. **In an operating refrigeration system low on refrigerant, a liquid line sight glass will_____.**
A. be clear
B. be blue
C. be light green
D. show bubbles .

1238. **In the presence of an open flame or hot surfaces, chlorinated fluorocarbon refrigerants decomposes and from _____**
A. petroleum crystals
B. phosgene gas .
C. water vapor
D. carbon monoxide

1239. **Before charging a refrigeration unit, the refrigerant charging lines should be .**
A. flushed with clean refrigerant oil
B. purged with the refrigerant .
C. washed with an ammonia and alcohol solution
D. grounded to compressor

1240. **If you find an extremely large refrigerant leak while using a halide torch, your flame will ___.**
A. change from blue to orange
B. ‘flare up’ and remain lighted
C. probably go out .
D. stay blue

1241. **The latent heat of water vapor in air is dependent upon the _____.**
A. dry bulb temperature
B. wet bulb temperature
C. dew point .
D. dry point

1242. **The latent heat of water vapor in air is dependent upon the _____.**
A. dry bulb temperature
B. wet bulb temperature
C. dew point .
D. dry point

1243. **When air is at its dew point it is at its_____.**
A. lowest absolute humidity
B. lowest relative humidity
C. highest absolute humidity
D. highest relative humidity .

1244. **The effective temperature of air is dependent upon_____. Ⅰ.relative humidity Ⅱair velocity**
A. Ⅰonly
B. Ⅱonly
C. Both Ⅰand Ⅱ .
D. Neither Ⅰnor Ⅱ

1245. **Which of the fluids listed is normally used to condense the primary refrigerant in a shipboard central air conditioning system?**

A. Air or Nitrogen
B. Seawater or Fresh water.
C. Sodium Nitrate brine
D. Calcium Sulfate brine

1246. **To add refrigerant to the low side of an air conditioning system, the refrigerant should be introduced through the _____.**

A. suction service valve as a vapor .
B. suction service valve as a liquid
C. discharge service valve as a vapor
D. charging valve as a liquid

1247. **To prevent the unnecessary loading of an air conditioning system while maintaining the designed dry bulb temperature and relative humidity in an air conditioning system, you should _____.**

A. admit only enough fresh outside air to provide proper ventilation .
B. reduce the air reheating system load
C. lower the compressor head pressure
D. operate the purge recovery unit continuously

1248. **A lower thermostatic temperature setting will provide a desired degree of comfort in a room where _____.**

A. low relative humidity is maintained
B. triple banded squirrel cage fans are used
C. air circulation is a maximum
D. high relative humidity is maintained .

1249. **In an air conditioning system, moisture is removed from the air by_____.**

A. filers
B. separators
C. ducted traps
D. dehumidifiers .

1250. **Routine maintenance on a Central Control Room hermetically sealed air conditioning unit should include _____.**

A. changing the air filter .
B. recharging the system
C. changing compressor lubricant
D. renewing container vacuum

1251. **As the amount of moisture in the air increases, the difference between the dry bulb and wet bulb temperature will _____.**

A. increase
B. decrease .
C. remain unchanged
D. be greatest at dew point

1252. **Which of the following methods is normally used to control the temperature of air distributed from individual cooling coils in an air conditioning system using a chilled water circulation system? .**

A. A room thermostat activates an electric heater at each individual chilled air outlet when necessary
B. Varying the number of passes the air makes across the coils
C. Varying the temperature of the water through the coils
D. Varying the quantity of water flowing through the coils.

1253. **A re-heater, as used in an air conditioning system, is designed to control the _____.**

A. chilled water temperature
B. dew point temperature
C. primary air temperature
D. dry bulb temperature .

1254. **A purge recovery system is used in a centrifugal air conditioning or refrigeration system to _____.**

A. purge lube oil from the liquid refrigerant
B. recover water purged from the system
C. separate foul gases from the receiver
D. purge non-condensable gases without losing refrigerant .

1255. **A cargo hold has been determined to have a relative humidity of 80% and a dry bulb temperature of 80 ℃ and a dry bulb temperature of 85℃.When the hold is sealed and the dry bulb temperature decreases, the relative humidity in the space will _____.**

A. decrease
B. increase .
C. decrease to zero
D. remain unchanged

1256. **The compressor in an air-cooled condensing refrigeration system is short cycling on the high pressure cutout switch.**

A. system is overcharged with refrigerant .
B. system is low on refrigerant
C. discharge valves are leaking excessively
D. discharge valves are leaking slightly

1257. **Which of the following influences the position of the interface between the liquid seal and the oil in a purifier?**

A. Height of the machine
B. Temperature of the liquid seal
C. Gravity disc .
D. Bowl diameter

1258. **In order to achieve greater dehumidification with an air conditioning system, you should ____.**
Ⅰ.reduce the cooling coil Ⅱ.temperature increase the re-heater temperature

A. Ⅰ only
B. Ⅱ only

C. Both Ⅰ and Ⅱ .
D. Neither Ⅰ nor Ⅱ

1259. **In an air conditioning system, low head pressure associated with a reciprocating compressor can be the result of ____.**
A. broken valve springs .
B. tight drive belts
C. high line voltage
D. air in the system

1260. **Which of the processes listed would be the most satisfactory method to use to lower the humidity of the air being circulated by an air conditioning system?**
A. Cooling the air to a temperature just above dew point
B. Heating the air to a point at which moisture will boil off ,then re-cooling it
C. Cooling the air to a point below dew point, then reheating it.
D. Heating the air and then cooling it to a point below dew point

1261. **Sludge may be formed in the oil in the crankcase of a reciprocating air conditioning compressor as a result of ____.**
A. refrigerant bubbles in the lube oil
B. refrigerant reducing the lube oil viscosity
C. oxidation of the lube oil from overheating .
D. reducing the floc or cloud point of the oil

1262. **One advantage of a flash distilling plant when compared to a submerged tube distiller is .**
A. greater distillate purity through high temperature evaporation
B. cold shocking for scale removal is not required .
C. less internal corrosion because of lower brine density
D. less feed-water is required for equal plant capacity

1263. **In the two stroke diesel engine, it is designed so that the oil impingement is timed to proceed only on the piston ring belt during .**
A. compression stroke .
B. suction stroke
C. expansion stroke
D. exhaust stroke

1264. **In a four stroke engine, which process lasts the longest period?**
A. exhaust and suction process .
B. suction and compression process
C. combustion and exhaust process
D. working and exhaust process

1265. **On what do you depend having the air cooler of main engine chemically washed?**
A. increased air pressure differenced before and aft air cooler
B. reduced exhaust temperature in all cylinders
C. reduced temperature difference between water inlet and outlet
D. both A and C .

1266. **When occurring a fire in the scavenge air box, the following measures should be taken except for .**

A. reducing speed to SLOW and asking bridge for permission to stop
B. stopping the fuel oil supply
C. switching-on the auxiliary blowers .
D. putting the scavenge air box fire extinguishing equipment into function

1267. **Continuous surging of turbocharger can be caused by .①crash stop of engine; ②increased back pressure after T.Ch.; ③fouled or damaged turbine nozzle ring.**

A. all are correct
B. ② and ③are correct .
C. none of the above is correct
D. ① only is correct

1268. **When a sudden increase in steam demand occurs from the boiler, the water level in the drum at the higher pressure will .**

A. rise quickly .
B. rise slowly
C. drop quickly
D. drop slowly

1269. **On modern ships, centrifugal pump with a self-primer has replaced reciprocating pump as bilge pump because .**

A. centrifugal pump is cheaper than reciprocating pump
B. the size of centrifugal pump with same capacity is smaller than that of reciprocating pump
C. centrifugal pump makes maintenance easier than reciprocating pump does
D. all of the above .

1270. **Which cause of following will not lead to refrigeration plant short-cycle?**

A. lack of refrigerant
B. refrigerant with much water
C. set defectively low pressure relay .
D. no cooling water

1271. **To receive oil residues from the purification of fuel and lubricating oils in the machinery spaces, what kind of tank(s) should be provided on board?**

A. bilge tank
B. sludge tank .
C. overflow tank
D. oil collecting tank

1272. **The oil discharge monitoring system in the oil tanker vessels is used for detecting the amount of oil discharged overboard to ensure that it does not exceed .**

A. 15 liters/ nautical mile
B. 30 liters/ nautical mile .
C. 60 liters/ nautical mile
D. 100 liters/ nautical mile

1273. **Which of following functions is not one of the functions of air conditioner?**
A. refreshing the air
B. making person upset .
C. adjusting the air humidity
D. adjusting the air temperature

1274. **Which of the following statements is not true concerning symptom of a fire in the scavenge air box?**
A. an increase in the exhaust temperature of the affected cylinder
B. the turbocharger may surge
C. the explosion pressure in all cylinders will rise violently .
D. smoke from the turbocharger air inlet filter will be seen

1275. **What type of electric motor is most commonly used on board ship?**
A. non-synchronous electric motor .
B. synchronous electric motor
C. fully enclosed electric motor
D. watertight electric motor

1276. **According to the principle of four stroke diesel engine, what is the number of its efficient work stroke per revolution?**
A. 1/2 .
B. 1
C. 2
D. 3

1277. **What is head tank in the closed cooling water system used for?**
A. for the release of air from the cooling water
B. providing expansion room for heated cooling water
C. a place for implementing water and water treatment agent
D. all of the above .

1278. **The function of synchronous compensating machine is to .**
A. improve power factor .
B. reduce voltage oscillation
C. increase the insulation of circuits
D. eliminate regenerated magnetic fields

1279. **A few spots of turbocharger can be caused by ①crash stop of engine; ②rapid increased of engine speed.**
A. ① only is correct
B. ② only is correct
C. both ① and ②are correct .
D. neither ① or ② correct

1280. **With one or more cylinders out of operation, the engine speed must be reduced because .**
A. in such cases, the air supply is no longer optimal, the thermal load will be higher
B. governor hunting will occur

C. torsional vibrations as other mechanical vibrations may occur
D. all of the above are correct .

1281. **The nameplate of an AC non-synchronous motor shows that running speed is 1460r/minfrequency 50HzYou can infer that the number of magnetic poles is .**
A. 2
B. 4 .
C. 6
D. 8

1282. **“380V/220V Y/△” noted on the nameplate of a non-synchronous motor means that .**
A. the armature terminals of the motor should be connected in star formation when voltage of power supply is 380
B. the armature terminals of the motor should be connected in star formation when voltage of power supply is 220
C. both A and B are correct .
D. the armature terminals of the motor should be connected in reverse ways of A and B

1283. **The initial voltage of self-excitation generator set up by .**
A. residual magnetism .
B. voltage regulator
C. electrical current for excitation
D. the other running generator

1284. **Which of the following equipment is not pollution prevention equipment?**
A. oily water separator
B. sewage treatment plant
C. fuel oil separator .
D. incinerator

1285. **The DC excitation to the field of brushless synchronous is generally produced by .**
A. an exciter driven by the same shaft with the generator .
B. an exciter driven by external prime mover
C. generator itself
D. either A and B

1286. **With reference to a two ram actuating mechanism, which one of the following statement is false?**
A. The rams work inside cylinders
B. The cylinders have glands sealing their open ends
C. The rams are connected to a cross-head
D. The cross-head is mounted on the rudder stock.

1287. **Which of the following pumps is most suitable for an oily water separator?**
A. reciprocating pump
B. vane pump
C. mono pump .
D. axial-flow pump

1288. **Which of the following pumps will most affect oily water separator performance and give the worst result?**

A. reciprocating pump
B. vane pump
C. screw pump
D. centrifugal pump .

1289. **According to the principle of two stroke diesel engine, what is the number of its efficient work stroke per revolution?**

A. 1/2
B. 1 .
C. 2
D. 3

1290. **There will usually be summaries or daily account tables for heavy oil, diesel oil, lubricating oil, and fresh water, which will be compiled .**

A. at the beginning of every watch
B. at the beginning of the first watch every day
C. at the completion of every watch
D. at noon every day .

1291. **However, where immediate action is necessary to ensure safety of the ship, its machinery and crew, it must be taken by the engineer in chargeWhat dose "it" mean in the sentence above?**

A. safety
B. the ship, its machinery and crew
C. immediate action .
D. the engineer in charge

1292. **What is used for preventing pollution damage to the sea from ships?**

A. MARPOL 73/78 .
B. SOLAS 74
C. STCW 78/95
D. ISPS 2002

1293. **During tours of inspection in the machinery space, you found a fire on a running generator, what should you do first?**

A. inform chief engineer officer immediately
B. stop the generator .
C. let the duty officer in bridge determine how to do
D. wait for help

1294. **If two fuel service tanks are installed, the empty tank should be pumped up directly it is emptyWhat is the meaning of "directly" in the sentence above?**

A. at once
B. as soon as .
C. quickly
D. straight

1295. **From viewpoint of practice, it is sometimes important to detect abnormal happenings in the running gear by .**

A. a keen sense of hearing .
B. rich theory
C. communicating ability with others
D. repetition work

1296. **Where is the cooling water from the compensating tank in the cooling water system of main engine lead to?**

A. discharge side of the centrifugal pump
B. suction side of the centrifugal pump .
C. the lowest point of the cooling water system
D. inlet of the main engine

1297. **Crude oil washing of cargo tanks has the following advantages except for .**

A. reducing the erosion of the cargo tanks
B. increasing the total quantity of oil to carry
C. reducing the quantity of water contained in oil
D. reducing cargo discharged time .

1298. **Which system(s) in the hydraulic systems of crane always hold(s) single side of load?**

A. hoisting system only
B. hoisting system and luffing system .
C. hoisting system and slew and slewing system
D. slewing system only

1299. **Which one of three elements for a fire on a tanker vessel is most difficult to eliminate (isolate)?**

A. a combustible element, fuel .
B. energy (resources for ignition) to start the combustion
C. oxygen to support the combustion
D. both A and C are correct

1300. **The crane jib is raised and lowered by means of .**

A. a mooring winch
B. a hoisting winch
C. a slewing winch
D. a luffing winch .

1301. **The gauge pressure inside a container is -0.5kg/cm2, then what is the absolute pressure exerted to the inside surface of thin container?**

A. 0.05Mpa .
B. 0.95Mpa
C. 1.05Mpa
D. 0.5Mpa

1302. **A process of comparing the actual performance of a machine with the intended performance, and the adjusting the machine to reduce and eventually eliminate the difference between the actual and intended performance is called .**

A. open loop control

B. feedback .
C. combining control
D. integral process

1303. **What is the result of converting 10℃ into degree of Fahrenheit?**
A. 0° F
B. 18 ° F
C. 32 ° F
D. 50 ° F .

1304. **When comparing the air with 50% of relative humidity with the air with 100% of relative humidity, which one will hold more water?**
A. the former
B. the latter
C. not for sure .
D. same each other

1305. **Which of the following equipment can not be used for the waste heat recovery of the M/E to further improve its thermal efficiency?**
A. M.E turbocharger
B. exhaust gas boiler
C. incinerator .
D. fresh water generator

1306. **For a given exhaust gas boiler, what is the quantity of its evaporation mainly determined?**
A. the temperature and flow quantity of the exhaust gas from M.E .
B. the quantity of steam demanded
C. the rotary speed and the cooling water temperature of main engine
D. efficiency of M.E turbocharger

1307. **The water level of an exhaust gas boiler which is independent of the auxiliary boiler and just as the extra heating surface of it ____.**
A. will be modulated in proportion
B. will be modulated in proportion and integral
C. will be modulated in proportion and differential
D. will not be modulated at all .

1308. **In heavy marine engine the practice is to drive the engine on____ which has previously been stored in starting air reservoirs.**
A. electric motor
B. hydraulic motor
C. compressed air .
D. turning gear

1309. **Which one of following statement is not true concerning the suitable sites of the direct acting relief valve and the pilot operated relieve valve?**
A. the direct acting relief valve is used for controlling lower flows and pressure
B. the pilot operated relief valve is used for controlling higher flows and pressure
C. the pilot operated relief valve is used for controlling lower flows and pressure .

D. the controlling accuracy of direct acting relief valve is worse than that of the pilot operated relief valve

1310. **Which of the following statements concerning the water tube and fire tube boilers is not true?**

A. natural circulation of the water in the water tube boiler is better than that in the fire tube boiler

B. for the same output the water tube boiler will carry less mass of water compared with the fire tube boiler

C. the water tube boiler will cost shorter time for steam raising

D. the water tube boiler require lower skill in operating and maintaining .

1311. **Aqueous Film Forming Foam (AFFF), commonly known as ‘light water’, is especially suitable for fighting ____.**

A. oil fires in the engine room bilges .

B. class B fires in paint lockers

C. any class D fire

D. all of the above

1312. **In most pumps and pump motors overpacking the ball bearings full of grease will result in ____.**

A. moisture emulsification of the bearing grease

B. insufficient circulation and overheating of the bearing .

C. proper grease circulation to cool the bearing

D. sliding friction between balls and races

1313. **The efficiency and output capacity of a low pressure distilling plant will be reduced if the last effect shell .**

A. pressure does not fluctuate rapidly

B. pressure remains steady and unchanged

C. brine density does not exceed 1.5

D. brine density is too low .

1314. **In a refrigeration system, which of the following statements describes the actions occurring when a solenoid valves, used in conjunction with an unloader head is energized? .**

A. The solenoid valves directs high pressure gas to the valve lifting device raising the suction valve off its seat and causing one specific cylinder to become unloaded

B. The solenoid valves directs high pressure gas to the underside of the unloading piston, causing it to rise and allowing the recirculating ports to be opened

C. When the solenoid valve becomes energized, the valve ports become closed, allowing discharge pressure to build up above the piston, shifting it and causing it to unload

D. The solenoid valve allows the refrigerant to pass from the suction chamber to the top of the unloader piston, causing the piston to lift and unload the cylinder .

1315. **The heated feedwater entering any flash chamber of a flash-type evaporator will .**

A. vaporize, with the unflashed water remaining at the temperature at which it entered the flash chamber

B. vaporize, with the unflashed water equalizing to the saturation conditions existing in the flash chamber .

C. vaporize, with the remaining water at the temperature greater than it entered the flash chamber
D. boil, allowing steam bubbles to rise through the brine at the bottom of the flash chamber

1316. **To avoid damaging the components of a printed circuit board when testing it with a DC volt-ohmmeter, you should .**
A. ground the board
B. avoid reversing the polarity of the leads .
C. isolate sensitive components with heat sinks
D. all of the above

1317. **Compensated flow control or constant flow valves are used in hydraulic systems to .**
A. compensate for major leaks in the system
B. maintain the original fluid viscosity
C. allow for changes in pressure and temperature within the system .
D. assure constant fluid temperature

1318. **Although lube oils used in the main lubricating service systems should have a relatively high flash point to avoid ignition, they can create smoke and fire hazards when they .**
A. are exposed to a vacuum
B. come in contact with extremely hot surfaces .
C. are reduced in temperature to just above the pour point
D. become extremely agitated or aerated

1319. **Hydraulically, servo-operated, automatic, change over valves, utilized in a two ram hydraulic steering gear, serve to .**
A. allow an alternate main pump to start in the fully loaded condition thus developing immediate full torque
B. prevent either main pump from being hydraulically motored when idle by cross pressure flow .
C. prevent both units from operating simultaneously which could result in doubling the flow of oil and pressure leading to over pressurization of the system
D. all of the above

1320. **Which of the following problems will occur if the internal drain at either end of a hydraulic, two-way, spool-type directional control valve cylinder were to become plugged?**
A. The reservoir would become vapor bound
B. The valve would be placed in hydraulic lock.
C. The spring loaded relief ports would open
D. The buffering chambers would be unable to function

1321. **The major difference between the discharge and suction valves installed in most low pressure, reciprocating air compressors is that .**
A. one valve seats upwards, while the other seats downwards.
B. the reed valves used on the discharge are made substantially thicker and heavier than the suction valves
C. the suction valve springs exert a greater tension than the discharge valve springs
D. the discharge valve springs exert a greater tension than the suction valve springs

1322. **CFC refrigerants exposed to high temperature or direct flame, will decompose and may produce .**

A. methyl chloride
B. ammonia
C. hydrofluoric acid .
D. ozone

1323. **Operational amplifiers, used primarily in analog circuits, are characterized by .**
A. high input impedance, high gain and low output impedance .
B. high input impedance, high gain and high output impedance
C. low input impedance, low gain and high output impedance
D. low input impedance, high gain and low output impedance

1324. **With No.1 and No.2 alternators running in parallel and the kW loads equally shared, one alternator is drawing much higher current than the otherWhat does this indicate?**
A. The alternators are not generating the same voltages and should be adjusted on automatic voltage regulator rheostats .
B. Alternator frequencies are different and should be adjusted on the governor speed controllers
C. Alternators are out of phase and should be tripped and paralleled again
D. One alternator has lost one of its phases

1325. **The cylinder covers are secured by eight elastic holding down arranged in four pairs.**
A. nuts
B. screws
C. studs .
D. flanges

1326. **There is a support ring between the cylinder block and collar of the cylinder liner, thus carrying both the liner and the cylinder coverIt also passes to the cooling bores and to the cover.**
A. cooling water .
B. cooling oil
C. refrigerant
D. lubricate oil

1327. **A clearly visible beneath of RT-flex engines is their operation at all ship speedsThis is achieved by the superior combustion performance.**
A. shockless
B. smokeless .
C. no vibration
D. noiseless

1328. **The key feature of the Sulzer RT-flex system is that it gives complete freedom in the and operation of fuel injection and exhaust valve actuation.**
A. metering
B. control
C. using
D. timing .

1329. **The development goals for a large marine engine are many often interact and in some cases even with each other.**
A. conflict .

B. accord
C. harmonize
D. struggle

1330. **The piston crown employs the usual jet-shaker principle with an arrangement of cooling bores in the crown so that the surface temperatures of the crown are moderate with a very even distribution.**
A. water cooling
B. oil cooling .
C. air cooling
D. combined cooling

1331. **The scavenge air receiver is of a simplified and modular design with integral non-return flaps, hanging cooler and two auxiliary air blowers.**
A. dozens
B. parcels
C. bundles .
D. gallons

1332. **For auxiliary engines the permissible overload is ____ for one hour every twelve hours.**
A. 10% .
B. 15%
C. 20%
D. 25%

1333. **Top piston rings are plasma coatedIt gives added safety for the of new lines.**
A. running-in .
B. running-out
C. running on
D. running down

1334. **Around the combustion chamber, all the main components are to give low thermal strains and the smallest, circumferentially symmetric deformations for good sealing between piston rings and liner.**
A. drill cooled
B. hole cooled
C. tube cooled
D. bore cooled .

1335. **Around the combustion chamber, all the main components are bore cooled to give low strains and the smallest, circumferentially symmetric deformations for good sealing between piston rings and liner.**
A. thermal .
B. mechanical
C. plastic
D. elastic

1336. **The top piston ring is plasma coated to give the lowest wear rate to reach the goal of two-years' with sufficient margin.**

A. TBO .
B. CEO
C. CFO
D. MCR

1337. **Great care is dedicated to the removal of from the scavenge air.**
A. gravity
B. viscosity
C. density
D. humidity .

1338. **The heavy-duty lubricating oil with chemical has been widely introduced in recent years.**
A. additives .
B. behavior
C. coolant
D. desiccant

1339. **on board ship are used to control and distribute the electrical energy generated by generators.**
A. Governors
B. Alternators
C. Blackboards
D. Switchboards .

1340. **These acid residues must be prevented from entering the crankcase, otherwise the lube oil would be .**
A. contaminated .
B. emulsified
C. deteriorated
D. oxidated

1341. **Main engines as well as auxiliary engines operating on heavy fuel should have continuous on the lubricating oil, either according to the bypass or batch principles.**
A. filtering
B. centrifuging .
C. depositing
D. operating

1342. **In engines with system, the lubricating oil can be added to the engine through the filling hole in the crankcase cover, by using a hand oil can, or through the separator pipe**
A. lubricating oil
B. dry sump
C. circulated tank
D. wet sump .

1343. **Governors are equipped with motors for synchronizing, load sharing and frequency control.**
A. speed setting .
B. load setting
C. speed changing
D. load setting

1344. **Engines, which are to be run in parallel have governors specially adapted for the same __ , about 4% to obtain basic load sharing.**

A. speed settings
B. speed droops .
C. speed drops
D. speed changes

1345. **The air required for combustion is taken from the engine room through a filter fitted on the turbochargerThis reduces the risk for too and contamination of the combustion air.**

A. high temperatures
B. low temperatures .
C. wet
D. dirty

1346. **The oil sump, a light welded design, is mounted on the engine block from below and sealed by .**

A. O-ring
B. gasket .
C. washer
D. packing

1347. **Modern centrifuge designs enable continuous over a considerable period of timeThis is achieved by which is timed to discharge the sludge at regular intervals.**

A. an injection process
B. an ejection process .
C. a separation process
D. a heating process

1348. **The switchboards are those in which all the live parts are installed behind the panels and only the operating handles and instruments are on the front.**

A. open
B. open front type
C. live front type
D. dead front type .

1349. **Where tanks are arranged for either oil or ballast __ must be fitted in the pipe so that only the ballast main or the oil transfer main connected to the tank..**

A. a sea water chest
B. a change-over chest .
C. a buffer tank
D. a three-way valve

1350. **The abbreviation ‘M/E’ is used to represent the .**

A. measure equipment
B. main electrical
C. my engine
D. main engine .

1351. **The camshaft drive is designed to maintain proper camshaft speed relative to crankshaft speedIn maintaining this relationship, the camshaft drive causes the camshaft to rotate at .**

A. one half crankshaft speed in a two-stroke cycle diesel engine .
B. crankshaft speed in a two-stroke cycle diesel engine
C. two times crankshaft speed in a two-stroke cycle diesel engine
D. one-fourth times crankshaft speed in a four-stroke cycle diesel engine

1352. **Main diesel engine control can be obtained by the bridge .**
A. at any time
B. only after the engine room control station is switched to ‘bridge control’ .
C. whenever the secondary station is switched to ‘bridge control’
D. whenever the engine side control station is switched to ‘bridge control’

1353. **If the effective bearing area has been reduced , remedial action should be taken.**
A. by more than 5 percent
B. by less than 10 percent
C. to 95 percent
D. to less than 90 percent .

1354. **If liquid freon should come in with your skin, you should .,**
A. wash with salt water
B. wash with sterile mineral oil .
C. treat it like frostbite
D. treat it like any burn

1355. **Before you begin administering artificial respiration, you should be sure the victim .**
A. is comfortable
B. is warm
C. is not bleeding
D. has a clear airway .

1356. **A portable foam fire extinguisher is placed in operation by ____.**
A. turning it upside down .
B. pressing the foam lever
C. squeezing the grip handle
D. opening the hose valve

1357. **Which types of portable extinguisher should you watch for the reflash of the fire?**
A. foam and water
B. CO2 and dry chemical
C. dry chemical and water.
D. foam and CO2

1358. **Which fire fighting agent has the greatest capacity for absorbing heat?**
A. water .
B. dry chemical
C. foam
D. CO2

1359. **The pollution prevention regulations state that slop oil and sludge that result as part of normal fueling operations should be disposed of by ____.**

A. discharging ashore into the sewer system
B. sealing in disposable plastic barrels aboard ship
C. discharging into a shore tank or stop barge .
D. dumping into the ship’s bunker tanks

1360. **What type of oil is not covered in the oil pollution law?**
A. mineral oil
B. machinery oil being transferred for shipboard use .
C. crude oil unrefined
D. normal bilge oil and water

1361. **The minimum amount of oxygen required to support life is __ .**
A. 14 percent
B. 15 percent
C. 16 percent .
D. 17 percent

1362. **Your assigned emergency station aboard ship can be found on the ship’s ____.**
A. station bill .
B. clearance papers
C. certificate of inspection
D. permit to proceed

1363. **The first step you would take in helping an unconscious victim who is not breathing is __.**
A. stop bleeding
B. open airway .
C. mouth-to-mouth respiration
D. call for help

1364. **The pollution prevention regulations do not apply to the transfer or discharge of ____.**
A. bunker fuel for use aboard ship
B. lubricating oil for use aboard ship .
C. coconut oil carried in tank vessels
D. oily water from a ships bilges

1365. **I find .**
A. it difficult for them to finish the job in time .
B. difficult for them to finish the job in time
C. they have much difficulty to finish the job in time
D. that difficult for them to finish the job in time

1366. **There is a danger of the starting current that the windings are burnt out.**
A. to increase
B. to be so increased
C. increased
D. being so increased .

1367. **A Document or Compliance differs from a Safety Management Certificate in that the latter is issued to ___ by the Administration.**

A. a ship .
B. a company
C. a charterer
D. a manager

1368. **The essence of an abandon ship drill is that the survival crafts are manned and operated by the crew members assigned to them on the____.**
A. tire control plan
B. fire drill
C. muster list .
D. All of the above

1369. **The fire of sodium is classified as_____ fire.**
A. Class A
B. Class B
C. Class C
D. Class D .

1370. **The fire of fuel oil is classified as____ fire.**
A. Class A
B. Class B .
C. Class C
D. Class D

1371. **The fire of electrical equipment is classified as fire.**
A. class A
B. Class B
C. Class C .
D. Class D

1372. **The fire of burning paper is classified as____ fire.**
A. Class A .
B. Class B
C. Class C
D. Class D

1373. **Which of the following represents the maximum percent of oxygen by volume required to be achieved by a ship’s inert gas system, prior to the commencement of crude oil tank washing?**
A. 6%
B. 8% .
C. 10%
D. 12%

1374. **____ , the repair in so short a time is unknown to us.**
A. How they finished .
B. How did they finished
C. That how they finished
D. That how did they finished

1375. **The oil mist detectors continuously_____ the crankcase atmosphere, via a pipe system, and move it past a sensitive and accurate opacity measuring track.**

A. detract
B. extract .
C. pump up
D. pump down

1376. **____ continuously extract the crankcase atmosphere, via a pipe system, and move it past a sensitive and accurate opacity measuring track.**

A. The oil mist detectors .
B. The smoke detectors
C. An oily water monitor
D. Oil discharge monitoring and controlling system

1377. **In general, the oil mist detectors include a built-in heating unit and a compact plug for electrical connectionThe function of heating unit is to ____.**

A. avoid false alarms as a result of condensing water vapor .
B. avoid danger of frost under very cold weather
C. reduce the viscosity of the crankcase atmosphere in order to improve the fluidity
D. keep the temperature of the oil mist detectors in an appropriate range

1378. **In general, the oil mist defectors include a base plate with air blast pumpThe function of air blast pump is to ____crankcase**

A. supply clean air to the measuring compartment of the units for more accuracy
B. generaate the pressure required for the extraction of the oil mist from the .
C. generate the pressure required for the extraction of the oil mist from the crankcase
D. supply clean air to the measuring track of the units for more accuracy

1379. **Always ensure that the turning gear is____, even at the quay, the wake from other ships may turn the propeller and thus the engine.**

A. disengaged
B. engaged .
C. assembled
D. disassembled

1380. **The scavenge port inspection should be carried out_____, to obtain the most reliable result with regard to the effectiveness and sufficiency of the cylinder lubrication and the combustion cycle (complete or incomplete).**

A. at the first stop after a long voyage e.gby anchoring if possible .
B. at the first stop after arrival at harbor
C. at the first stop after low load running
D. at the first stop after passing river or canal passage

1381. **The sealing function of the piston ring is brought about by the gas pressure above and behind the piston ring, which forces it ____ against the bottom of the ring groove, and ___ against the cylinder wall.**

A. upwards / inwards
B. upwards / outwards

C. downwards / inwards
D. downwards / outwards .

1382. **When good and steady service conditions have been achieved, the running surfaces of the piston rings and cylinder liner will be_____In addition, the rings will move freely in the grooves and also be well oiled intact, and not unduly worn.**
A. hazy light .
B. hazy light brown
C. hazy light blue
D. hazy light grey

1383. **If over a period of time, the oi1 film partially disappears, so that dry areas are formed on the cylinder wall, these areas and the piston surfaces will by frictional interaction, become finely scuffed and hardened, i.egood mirror surface" will have deteriorated What condition of the piston rings can result in this phenomenon?**
A. micro-seizure .
B. sticking
C. scratched
D. breakage/collapse

1384. **If due to thick and hard deposits of carbon, the piston rings cannot move freely in their grooves, dark areas will often appear on the upper part of the cylinder wall (may not be the risible at port inspection)What condition of the piston rings can result in this phenomenon?**
A. micro-seizure
B. sticking .
C. scratched
D. breakage / collapse

1385. **Broken piston rings manifest themselves during the scavenge port inspection by_____.**
A. Lack of elastic tension", when the rings are pressed into the groove by means of a stick:
B. Blackish appearance
C. Fractured rings and missing rings
D. all off the above .

1386. **If the gas pressure behind the ring is built up too slowly, and thereby exerts an inadequate outward pressureIn such a case, the combustion gas can penetrate between the liner and ring, and violently force the ring inwards, in the grooveWhat result will this type of sudden "shock" loading eventually lead to?**
A. micro-seizure
B. scratch
C. break .
D. stick

1387. **”Clover-leafing”is a term used to describe corrosive wear at several separate points around liner circumference- i.ein some cases the liner bore may assume a “clover-leaf” shape.**
A. transverse
B. longitudinal .

C. circumferential
D. radial

1388. **If there are micro-seized areas on the liner or skirt scratch-over manually with a coarse carbo-rundum stone (grindstone), moving the grindstone ____ at an angle of 20 to 30 degrees to horizontal.**
A. clockwise
B. anticlockwise
C. crosswise .
D. vertically

1389. **The cylinder oil is pumped into the cylinder (via non-return valves) when the piston rings pass the lubricating orifices during ____.**
A. the upward stroke .
B. the downward stroke
C. the power stroke
D. the suction stroke

1390. **Just after stopping the engine while the oil is still circulatingCheck that uniform oil jets appear from all the oil outlet grooves in the crosshead bearing lower shell and the guide shoesThe oil flow from ____ must be compared from unit; there should be a similarity in the flow patterns.**
A. the piston cooling oil return pipes
B. the main and crankpin bearings .
C. thrust and intermediate bearings
D. stern tube and thrust bearings

1391. **During check on top clearance in main bearings, turn the crankthrow for the relevant cylinder unit to ____ and stop the lube oil circulating pump.**
A. port side
B. starboard side
C. BDC position .
D. TDC position

1392. **____ are increasingly used as main engine on merchant vessels, because they have a high Hp/Weight ratio.**
A. Slow speed diesel engines
B. Medium-speed diesel engines .
C. Steam engines
D. Gasoline engines

1393. **Propulsion of the vast majority of contemporary merchant ships (especially containerships and VLCCs) utilizes____ as prime mover.**
A. gas turbine
B. diesel engine .
C. steam engine
D. gasoline engine

1394. **Typical marine propulsion plants include____ directly coupled to the vessel’s single large-diameter, fixed-pitch propeller.**

A. a single, long-stroke, slow-speed, turbocharged, two-stroke diesel engine .
B. a single, long-stroke, medium-speed, turbocharged, four-stroke diesel engine
C. two medium-speed, turbocharged, four-stroke diesel engines
D. a variable-speed AC generator

1395. **With____ the engine need not to be aligned with reduction gears or propeller shaft.**
A. Diesel engine propulsion
B. Diesel electric propulsion .
C. Steam engine propulsion
D. Gas turbine propulsion

1396. **In today’s practice, with cylinders of equal diameter of bore and equal revolutions, the two-cycle engine delivers a power about 80 percent ____ than that of the four-stroke one.**
A. greater .
B. better
C. smaller
D. less

1397. **Most often ____ is attached to the engine-propeller shaft for efficient electric power generation.**
A. a variable-speed AC generator .
B. a fixed-speed AC generator
C. an air blower
D. a DC generator

1398. **When the ships is going to enter into the harbor, _____.**
A. change from diesel oil to heavy fuel oil for mail engine
B. pump out bilge water
C. change sea chest form lower level one to high level one .
D. test emergency generator

1399. **When sailing in cold zones, the____ should be heated.**
A. the steering gear room
B. the fire fighting pipe line
C. the fuel oil tank .
D. the bath room

1400. **When sailing in cold zones, the____ should be drained of water.**
A. the ventilation pipe
B. the water line for fire fighting on the deck .
C. the fuel oil line
D. the water supplying line in bath room

1401. **Water lubricated tailshaft bearings wear, ____.**
A. the after one is more than forward one .
B. the forward one is more than after one
C. the forward one is the same with after one
D. it depends on the type of engine

1402. **Which is not the maintenance work for shaft bearings in transmission system?**
A. check oil level in bearing sump
B. check them for leakage c through end seals
C. pump bilges in time .
D. check temperature

1403. **Propeller running at ____ are generally efficient.**
A. high speeds
B. medium speed
C. low speeds .
D. the same speed with the engine

1404. **For a propeller direct driven by the engine, _____.**
A. the thrust pads are while metal faced on both sides .
B. the thrust pads are while metal faced only on the forward side
C. the thrust pads are while metal faced only on the after side
D. intermediate shaft usually supported by a plummer block

1405. **The propeller is pushed on to the tubeshaft taper and made tight by _____.**
A. a mechanical seal
B. keyway and key
C. a nut .
D. shrinkage

1406. **The lifting pressure of ____ is set in the presence of a Surveyor it is locked and cannot be changed.**
A. fuel valves of main engine
B. injector pump of main engine
C. safety valves of marine boiler .
D. safety valves of a reciprocating pump

1407. **The____ is fitted in the main steam supply line and is usually of the non-return type.**
A. main steam stop valve .
B. auxiliary steam stop valve
C. feed check or control valve
D. blow down valve

1408. **The____ is a smaller valve fitted in the auxiliary steam supply line, and is usually of the non-return type.**
A. main stem stop valve
B. auxiliary steam stop valve .
C. feed check or control valve
D. blow down valve

1409. **The____ is fitted in pair one is the main valve, the other the auxiliary or standby.**
A. main stem stop valve
B. auxiliary steam stop valve
C. feed check or control valve .
D. blow down valve

1410. **The ____ enables water to be blow down or emptied from the boilerIt may be used when partially or completely emptying the boiler.**

A. main stem stop valve
B. auxiliary steam stop valve
C. feed check or control valve
D. blow down valve .

1411. **A shallow dish positioned at the normal water level is connected to the____This enables the blowing down or removal of scum and impurities from the water surface.**

A. main stern stop valve
B. auxiliary steam stop valve
C. scum valve .
D. blow down valve

1412. **The forced draught fan should be started and air passed through the furnace for several minutes to "____" it of any exhaust gas or oil vapors.**

A. blow
B. clean
C. scavenge
D. purge .

1413. **Which one is not the normal operation for boiler shutdown?**

A. Carry out soot blowing if permissible
B. Change fuel supply to diesel oil
C. Close steam stop valves on boiler when pressure is reduced
D. Drain boiler empty when it has cooled down.

1414. **Water enters the rotating impeller through the entry, known as "_____", at the centre.**

A. eye .
B. hole
C. balance holes
D. opening

1415. **When installed for bilge pumping or ballast duty, centrifugal pumps require a ____ to remove air from the suction pipe.**

A. air chamber
B. head lank
C. primer .
D. prime mover

1416. **A centrifugal impeller consists of a number of vanes curving ____ from the direction of rotation.**

A. backwards .
B. forwards
C. upward
D. downwards

1417. **The volute of centrifugal pump also acts as a diffuser converting _____ into pressure head.**

A. mechanical energy

B. heat energy
C. potential energy
D. kinetic head .

1418. **The____ only allows for adjustment of temperature in each room by the occupant manually controlling the air volume admitted.**
A. central air condition system
B. high velocity system
C. low velocity system
D. single duct system .

1419. **With ducted air conditioning systems, the modern tendency is to use____.**
A. central air conditioning system
B. high velocity system .
C. low velocity system
D. single duct system

1420. **Which one is not the component of a typical, marine pattern self-contained unit?**
A. a centrifugal fan
B. a direct expansion cooler
C. a hermetic compressor
D. a centrifugal pump .

1421. **____ is used in typical marine pattern self-contained unit,**
A. a water cooled condenser .
B. a slop tank
C. a expansion tank
D. a centrifugal pump

1422. **Under normal conditions, the quantity of air circulation becomes less and lessWhat is the reason?**
A. dirty delivery ducts
B. too much refrigerant
C. the fouling filters .
D. high temperature outside

1423. **Under tropical conditions, control valves have fully opened, but the room still hotWhat measures can be taken in such a case?**
A. Keep the plant running all time
B. Start another blower
C. Increase the ratio of circulated to fresh air.
D. Reduce the seawater flow to the condenser

1424. **If plastic film insulation becomes damaged in air conditioning system, _____ may form within the film.**
A. evaporation
B. condensation .
C. liquefies
D. vaporization

1425. **The solid waste was charged into the incinerator through ____.**
A. the solid waste dump chute .
B. an access door
C. the same way for waste oil burners
D. a changing opening

1426. **During waste clothes being charged into an incinerator, the auxiliary burner____.**
A. should be stopped manually
B. keeps the combustion as usual
C. would be cut off by an interlock .
D. would replace the waste oil burner and keep going on

1427. **Which of the following would not be burnt in an incinerator on board?**
A. waste oil
B. waste cloths
C. Oil rags
D. Waste food .

1428. **A number of biological sewage treatments plants are in use at sea but nearly all work on the principle called ____.**
A. deoxygenating
B. extended aeration .
C. oxygenating
D. bubbling air

1429. **The extended aeration process consists of ____ the liquor either by bubbling air through it or by agitating the surface.**
A. deoxygenating
B. oxygenating .
C. chemicalizing
D. disinfecting

1430. **____ are used to digest the sewage to produce innocuous sludge in a biological sewage treatment plant.**
A. anaerobic bacteria
B. aerobic bacteria .
C. air bubbles
D. disinfection chemicals

1431. **In order to culture and propagate enough bacteria to treat the body and galley wastes____**
A. a new bacteria colony should be put into the plant in advance
B. the disinfection chemicals should be always used
C. the air blower should be started and keep running in advance .
D. the nutrient for bacteria should put into plant in advance

1432. **____with various arrangements of barrels are the usual mooring equipment used on board ships**
A. cranes
B. winches .

C. capstans
D. windlass

1433. **The ____ is used for hauling in or letting out the wires or ropes which will fasten the ship to the shore.**
A. cranes
B. winch barrel .
C. capstans
D. windlass

1434. **In automatic ____ the winch may be overhauled and wire is paid off the barrel at a pre-determined maximum tension**
A. cranes
B. windlass
C. capstans
D. mooring winches .

1435. **The majority of automatic mooring winches are spur geared to improve the backward efficiency of the gear train for rendering**
A. spur geared .
B. screw geared
C. worm geared
D. belt driven

1436. **Worm geared automatic mooring winches are ____ as the multi-start feature reduces the advantage of worm gear i.ethe high gear radio.**
A. popular
B. common
C. in lead position
D. uncommon .

1437. **The rotating unit of a spilt windlass consists of a____ with shaped snugs to grip the anchor cablea mooring drum for paying out or letting go of mooring wires and warp end for warping duties.**
A. cranes
B. mooring barrel
C. capstans
D. cable lifter .

1438. **The cable lifter, mooring drum and warp end of a split windlass may be separately engaged or disengaged means of a ____.**
A. dog clutch .
B. Pair of gears
C. worm gear
D. turning gear

1439. **The ____ in the steering gear system provides the force.**
A. control equipment
B. power unit .

C. transmission mechanisms
D. fittings and pipeline

1440. **The ____ returns the pump operating rod to mid position as soon as the helmsman stops turning the wheel**
A. hunting gear .
B. cut-off level
C. servo-motor
D. swivel block

1441. **The____ of the telemotor is built the steering wheel console and located on the bridge.**
A. transmitter .
B. receiver
C. pipes
D. charging unit

1442. **The____ of the telemotor is mounted on the steering gear**
A. transmitter
B. receiver .
C. pipes
D. charging unit

1443. **During steering gear test should be moved through its full travel in both directions.**
A. pump
B. the cylinder
C. the hunting gear
D. the rudder .

1444. **____ is electricity that is flowing where it’s not supposed to through water, fittings on your boat, wet wood, damp surfaces, etc.**
A. Stray current .
B. Rated current
C. Starting current
D. Earth current

1445. **If you must make an electricity connection in a poorly accessible spot, solder it and seal it against ____.**
A. metal
B. wood
C. water .
D. plastic

1446. **____ connectors hold best if a wire is accidentally pulled or a connection becomes loose.**
A. Ring type .
B. Fork type
C. Spade type
D. Push on pull off type

1447. **Wires should have each feature of the following except ____.**
A. flame retardant
B. moisture resistant
C. oil resistant
D. low conductivity .

1448. **The ground terminal of a starter should be connected to ____.**
A. the common ground point .
B. the starter’s frame
C. the commutator
D. the starter’s mounting bolts

1449. **During the watch keeping at sea, at appropriate intervals inspection should be made of ____, auxiliary machinery and steering gear spaces by the duty engineer.**
A. the main propulsion plant .
B. lifesaving jackets
C. lifeboat engine
D. state of emergency generator

1450. **During the watch keeping at sea, routine adjustments should be ____.**
A. made and noted as required by the duty engineer .
B. reported to chief engineer immediately after being made by duty engineer
C. never made before getting permission from chief engineer
D. made as required but not logged

1451. **During the watch at sea ____ should be logged or recorded in the engine log book.**
A. the running hours of the cooling water pump
B. chief engineer’s order
C. the main parameters of main and auxiliary equipment .
D. the position of the vessel

1452. **During the watch at sea, where situations occur in the machine apace which may affect the speed maneuverability, power supply or other essentials for the safe operation of the ship____ should be informed as soon as possible.**
A. the chief engineer
B. the master
C. the bridge .
D. the company superintendent

1453. **The fuel booster pump and steam to fuel heater, together with fuel pipe heater tracer line should be shut off as soon as the ____ order is acknowledged.**
A. finished with engines .
B. stop
C. stand by
D. full ahead

1454. **The ____ should be gradually reduced after F.W.E.**
A. fuel oil
B. cooling water .

C. starting air
D. auxiliary blower

1455. **The ____ should be kept running for about half an hour after F.W.E.**
A. crankcase lubricating oil pump .
B. fuel oil pump
C. air compressor
D. auxiliary blower

1456. **The____ should be shut once upon F.W.E.**
A. fuel oil .
B. cooling water
C. air compressor
D. auxiliary blower

1457. **When order spare part, you can directly fall back on ____.**
A. the manager
B. your agent .
C. the PSCO
D. the master

1458. **After receiving the stores you should sign on the ____.**
A. engine logbook
B. delivery docket .
C. store list
D. maintenance book

1459. **Usually____ handles the majority of the correspondence and negotiation needed during transactions of stores and spare parts in the engine department.**
A. the chief engineer .
B. the second engineer
C. the third engineer
D. the fourth engineer

1460. **A(n)____ is the documentary attestation for the delivery of stores and spare parts.**
A. informative note
B. consignment note .
C. store booklet
D. maintenance book

1461. **A(n)____ is the documentary attestation for the delivery of stores and spare parts.**
A. informative note
B. invoice .
C. store booklet
D. maintenance book

1462. **____, where minor repairs are carried out with a ship service, often during a stay in portThis may be remote from a ship repair site.**
A. voyage repairs .

B. routine docking
C. damage repairs
D. conversion

1463. **____, where extensive work, particularly to the ship's structure may be repairedThese are the result of groundings collisions and other accidents.**
A. voyage repairs
B. routine docking
C. damage repairs .
D. conversion

1464. **____, where a ship is refitted for a different use.**
A. Voyage repairs
B. Routine docking
C. Damage repairs
D. Conversion .

1465. **When is dock survey carried out?**
A. During annual repair
B. Usually during dock repair .
C. Before sea trial
D. After 5 years from last annual survey

1466. **The____ is a series of trials done at sea to determine whether the ship has met the specifications of design, modification, or repair.**
A. Sea trial .
B. Bed-test
C. Engine performance
D. PSC inspection

1467. **Prior to a ship's departure from any port ____ should be tested with deck officer to ensure satisfactory operation.**
A. fire fighting pump
B. the steering gear .
C. life boat engine
D. the main engine

1468. **Prior to a ship's departure, ____ may not always be tested.**
A. fire fighting pump
B. the steering gear
C. life boat engine
D. the main engine .

1469. **The shipboard oil pollution emergency plan will be invalid after ____.**
A. one year
B. two years
C. four years
D. five years .

1470. **The IOPP certificate is valid for __ _.**
A. one year
B. two years
C. four years
D. five years .

1471. **The International Sewage Pollution Prevention Certificate (ISPP) is issued to ____.**
A. ships of above 200 GT to MARPOL .
B. every ship of 400 GT and above
C. all ships
D. ships of more than 200 GT but less 400 GT

1472. **The International Air Pollution Prevention Certificate (IAPP) is issued to ____.**
A. ships of above 200 GT to MARPOL
B. every ship of 400 GT and above .
C. all ships
D. ships of more than 200 GT but less 400 GT

1473. **Before the oily water is installed on board ships, it must have ____.**
A. IOPP
B. type approval certificate .
C. cargo ship safety equipment certificate
D. cargo ship safety certificate

1474. **Which one is the ‘clear grounds’ for a more detailed inspection?**
A. paint peeling off the uptake
B. no operation procedures for the oil separators
C. one of ship’s certificates required is invalid .
D. damaged sanitary pump

1475. **Which one is NOT the ‘clear grounds’ for a more detailed inspection?**
A. absence of engine log book
B. serious corrosion on the hull
C. one page missing in the oil record book
D. paint peeling off some tailings in engine rooms .

1476. **Which one is NOT the ‘clear grounds’ for a more detailed inspection?**
A. the master and the chief engineer are unable to communicate effectively
B. serious corrosion on the hull
C. damaged sanitary pump .
D. one page missing in the oil record book

1477. **Which one is NOT the ‘clear grounds’ for a more detailed inspection?**
A. no operation procedures for the oil separators .
B. engine log book missing
C. the master and the chief engineer are unable to communicate effectively
D. absence of an up-date muster list

1478. **During the PSC inspection under the provision of SOLAS 74, which one may be regarded as clear grounds for ships' detainment?**

A. failure of proper operation of propulsion .
B. paint peeling off the uptake
C. no operation procedures for the oil separators
D. damaged sanitary pump

1479. **During the PSC inspection, under the provisions of SOLAS 74, which one may not be regarded as clear grounds for ships' detainment?**

A. excess amount of oily-water mixtures in bilges
B. insulation of piping including exhaust pipes in engine room contaminated by oil
C. improper operation of bilge pumping arrangements
D. paint peering off the uptake .

1480. **During the PSC inspection, under the provisions of SOLAS 74, which one may not be regarded as clear grounds for ships' detainment?**

A. failure of the proper operation of emergency generator
B. insulation of piping including exhaust pipes in engine room contaminated by oil
C. improper operation of bilge of bilge of bilge pumping arrangements
D. damaged sanitary pump .

1481. **During the PSC inspection, under the provisions of SOLAS 74, which one may not be regarded as clear grounds for ships' detainment?**

A. failure of the proper operation of the main steering gear
B. failure of the proper operation of electrical installations
C. leakage of domestic water pump .
D. insulation of exhaust pipes in engine room contaminated by oil

1482. **The purpose of PSC is ____.**

A. to check and inspect foreign ships
B. to verify the condition of a ship in compliance with requirements of international conventions .
C. to fine ships
D. to detain ships

1483. **Who will be responsible for ensuring that a ship maintains a standard at least equivalent to that specified in international conventions?**

A. Port state
B. The Administration .
C. The shipowner
D. The master

1484. **Who is in charge of the main engine?**

A. The chief engineer
B. The second engineer .
C. The third engineer
D. The fourth engineer

1485. **Who is in charge of the auxiliary engines?**

A. The chief engineer

B. The second engineer
C. The third engineer .
D. The fourth engineer

1486. **Who is in charge of the auxiliary boilers?**
A. The chief engineer
B. The second engineer
C. The third engineer
D. The fourth engineer .

1487. **The officer in charge of the engineering watch shall ensure that all machinery involved with the maneuvering of the ship can be immediately be placed in the manual mode of operation when notified that the ship is ____.**
A. at anchor
B. at unsheltered anchorage
C. in congested waters .
D. in an open road-stead

1488. **UMS are mainly unattended overnight and during this time ____ should have control of the main engine.**
A. the chief engineer
B. the engineer on cabin watch
C. the bridge officer on watch .
D. the master

1489. **In the event of minor emergencies when the machinery spaces unattended ____ will be informed of malfunction in the machinery by his cabin monitor.**
A. the chief engineer
B. the engineer on cabin watch .
C. the bridge officer on watch
D. the master

1490. **The Master should call ____ for permission to use chemical agents in response to oil pollution into sea.**
A. the flag state
B. the coastal state .
C. the port state
D. the shipping company

1491. **It is necessary for the ship to contact ____ for authorization prior to undertaking mitigating actions in an oil pollution incident.**
A. the port state
B. the shipping company
C. the coastal state .
D. the flag state

1492. **The ISM Code is a part of ____.**
A. SOLAS .
B. MARPOL

C. STCW
D. Ballast Water convention

1493. **The ISPS Code is a part of ____.**
A. SOLAS .
B. MARPOL
C. STCW
D. Ballast Water convention

1494. **SOLAS stands for____.**
A. the International Convention for the Safety of the Life at Sea .
B. the International Convention for the Prevention from ships
C. the International Convention on Standards of Training, Certification and Watch keeping for Seafarers
D. the International Convention for the Control and Management of Ship’s Ballast Water and Sediments

1495. **SOLAS regulations require that the inert gas system shall be capable of delivering inert gas with an oxygen content of not more than what percentage?**
A. 5% .
B. 8%
C. 6%
D. 3%

1496. **Under the terms of ISPS Code, shipping companies are required to designate a Company Security Officer for the Company and a____ for each of its ships.**
A. Ship Security Officer .
B. Designated Person Ashore
C. Internal Auditor
D. Patrol Team

1497. **The Ship Security Plan should be submitted to____ for approval.**
A. the SSO
B. the PSCO
C. the CSO
D. the Administration .

1498. **The Ship Security Plan should indicate the operational and physical ____ the ship itself should take to ensure it always operates at security level 1.**
A. precaution measures
B. safety measures
C. security measures .
D. emergency response measures

1499. **Under ISPS Code the ship to which it applies has to carry____.**
A. an International Ship Security Certificate .
B. an International Oil Pollution Certificate
C. a Safety Management Certificate
D. an International Ballast Water Management Certificate

1500. **Under ISM Code the ship to which it applies has to carry ____.**

A. an International Ship Security Certificate
B. an International Oil Pollution Prevention Certificate
C. a Safety Management Certificate .
D. an International Ballast Water Management Certificate

1501. **Under MARPOL Code the ship to which it applies has to carry ____.**

A. an International Ship Security Certificate
B. an International Oil Pollution Certificate .
C. a Safety Management Certificate
D. an International Ballast Water Management Certificate

1502. **____ shall set security levels and provide guidance for protection from security incidents.**

A. The Contracting Governments .
B. The Port Authorities
C. The Master
D. The Company Security

1503. **A ship can request completion of a ____ when the ship is at a higher security level than the port facility or another ship it is interfacing with.**

A. DOC
B. DOS .
C. SSP
D. SMC

1504. **If a ship is required by the Administration to set, or is already at a higher security level than that set for the port it intends to enter or in which it is already located, then the ship shall advise without delay, the ____ of the Contracting Government within whose territory the port facility security officer of the situation.**

A. competent authority .
B. CSO
C. PSCO
D. Master

1505. **In order to limit the introduction of alien species by ship, ____ was adopted on 13 Feb, 2004 at the IMO.**

A. Revised MARPOL Annex I
B. Revised MARPOL Annex II
C. International convention for the control and management of ships` ballast water and sediments .
D. ISPS Code

1506. **Ships do not permitted to the TBT paint after 2008It is required by ____.**

A. the International Convention for the Safety of the Life at Sea
B. the International Convention for the Prevention from ships
C. the International Convention on control of harmful anti-fouling system on ships .
D. the International Convention for the Control and Management of Ship’ s Ballast Water and Sediments

1507. **Engine parameters shall be corresponded to NOx Technical FilesThis is required by ____.**
A. MARPOL Annex III
B. MARPOL Annex VI .
C. MARPOL Annex V
D. MARPOL Annex VI

1508. **The pistons are cooled by ____ oil from the forced lubrication.**
A. being given
B. giving
C. supplying .
D. being supplied

1509. **The fire of burning plastics is classified as ____ fire.**
A. Class A .
B. Class B
C. Class C
D. Class D

1510. **When ship is fouled, increasing the fuel injection for keeping the normal speed will cause the main engine .**
A. to work as overload characteristic .
B. overspeed
C. over mechanical load only
D. over thermal load only

1511. **When a ship is fully loaded, it needs to prevent the main engine to be While a ship is fully empty, it needs to prevent the main engine to be .**
A. overspeed / overload
B. overload / overspeed .
C. over mechanical load / over thermal load
D. over torque / overspeed

1512. **If keep the fuel injection of main engine unchanged when ship is fouled, that will cause IThe speed of main engine to be reducedIIShip speed to be reducedIIIThe resistance torque of propeller to be increasedIVTrim at stern to increase.**
A. I + II
B. I ~ III
C. I ~ IV .
D. I + II + IV

1513. **While sailing under normal weather and sea condition, the basic parameter which is used to restrict the fuel injection of main engine is .**
A. power of main engine
B. turbine rotation speed .
C. speed of main engine
D. exhaust temperature

1514. **Whether a ship is sailing before the wind or sailing in the rough sea, we must reduce the fuel injection of the main engineFor the former one, it aims to prevent the main engine being , while for**

the later one, it aims to prevent the main engine being .

A. overspeed / overload .
B. overload / overspeed
C. over torque / overspeed
D. low mechanical efficiency / overload

1515. **When a ship is entering to shallow water, ship resistance will be increased and the speed of main engine reducedDue to the function of the governor, the main engine will .**

A. reduce fuel feeding
B. increase fuel feeding .
C. keep original fuel feeding
D. be overspeed

1516. **When a ship is entering to narrow waterway and the fuel feeding of the main engine is keeping unchanged, which of the following is the wrong conclusion?**

A. the power of main engine will be reduced
B. exhaust temperature will be increased
C. the speed of the ship will be reduced
D. the propulsion characteristic of propeller will keep unchanged .

1517. **The load limitation of governor should be reduced when ship navigating at sea, the main reason is to .**

A. prevent the diesel engine surging
B. prevent governor from being damaged because of swing
C. reduce the probability of the crank shaft being torsional vibrated and resonated
D. prevent the main engine being overload or overspeed .

1518. **When ship navigating in rough sea, the correct operation is .**

A. navigating with a low diesel engine speed .
B. navigating with a stable diesel engine speed
C. increasing the efficiency of propeller
D. increasing fuel injection

1519. **When ship navigating in rough sea, the first measure taken by the chief engineer to prevent the overload should be .**

A. cleaning fuel oil, lubricating oil and seawater filter
B. reducing fuel feeding of the main engine appropriately or reducing the pitch angle of propeller .
C. using low sea chest
D. closing the skylight and the ventilation opening, which doesn't affect the normal work of equipments

1520. **Generally, runaway means such situation when the speed main engine exceeds the rating speed by its ____.**

A. 10%
B. 15% .
C. 20%
D. 5%

1521. **If anything abnormal be found on the load change of main engine when the ship is entering in shallow waterway, before taking measuring the engineer on duty should ____.**

A. stop main engine immediately
B. ask the captain and the chief engineer’s permission for stopping the engine
C. initiatively inquire the bridge for the situation .
D. stop engine and inform bridge

1522. **While a ship with twin screw is making a turn, in order to prevent overload, the duty engineer should _____.**

A. reduce the fuel feeding of main engine of inner propeller
B. reduce the fuel feeding of main engine of outer propeller
C. firstly reduce the fuel of main engine of inner propeller, then reduce the fuel feeding of engine of outer propeller
D. reduce fuel feeding of two engines at the same time .

1523. **According to the Robinson Graph, suddenly astern maneuvering of main engine during navigating will cause____.**

A. rapid reduction of ship’s friction force
B. shaft system over mechanical load .
C. sharp growth of the torque of diesel engine
D. propeller torque change along J= 0 curve

1524. **When the vessel on the full speed ahead, if full astern immediately ____ the main engine start astern and fuel injection.**

A. after the thrust power is zero
B. after the torsion is zero
C. surpass the critical point on the water turbo phase
D. after the speed is zero .

1525. **In the navigation____ cause the shafting over load easily.**

A. the stopping engine suddenly
B. the sailing astern and changing direction suddenly .
C. the sailing from the shallow water area to the deep water area
D. the ship’s trim too much

1526. **The center line condition of the transmission shaft can be checked by ____.**

A. the border flange’s excursion and flection
B. the both end shafts line’s accordance
C. the border flange’s flection and the both end shafts line’s accordance .
D. the border flange’s accordance and both end shafts flection degree

1527. **Simplex tailshaft seal equipment’s working condition is terribleThe main cause is ____.**

A. the shafting’s vertical vibration
B. violent friction and sea water corrosive
C. friction and high temperature .
D. violent friction and high temperature

1528. **The main advantage of improved Simplex tailshaft seal are____.**

A. the good sealing performance and the simple structure

B. the good sealing performance and the short life expectancy .
C. the good sealing performance but the short life expectancy
D. the good sealing performance and the lower cost

1529. **In the process of the shafting management, special attention should be paid to____.**
A. on the sailing, the water in the aft peak tank should be excluded as much as possible
B. the stuffing style ahead sealing shouldn’t have any water leaking out
C. Simplex astern sealing shouldn’t have any oil leaking out .
D. Simplex ahead sealing can have some oil leaking out

1530. **Setting a sealing equipment astern on the tailshaft can’t ____.**
A. prevent the seawater from intergrating
B. prevent the lube oil from running out of the outside aboard
C. strengthen the intencity of the sterntube .
D. prevent the mud and sand from entering the lube oil system

1531. **When the vessel shafting are installed, the slightly inclined of the shaft line should be rectified by____.**
A. adjusting the position of the intermediate bearing .
B. changing the position of the main engine installation
C. adjusting the center line of the propeller
D. changing the position of the thrust block

1532. **The tailshaft sealing arrangement found a little lube oil leaky and caused a lot of seawater into the bearing, the step should be taken as a makeshift is____.**
A. dropping lube oil for lubrication, reducing the pollution to the sea
B. setting a temporary gravity oil tank and enhanced the position properly .
C. lubricating with the used lube oil
D. lubricating with the fresh water and navigation in a lower speed

1533. **The bearing of tailshaft sealing equipment, which adopting the oil nature circulation is hot, the reason is____.**
A. the rotate speed fluctuation
B. the ventilation tube clogged .
C. the main engine accelerate so fast
D. stormy waves

1534. **In the shafting management ____ should be paid more attentionIf the while metal tailshaft bearing is dripping oilIIif some area become blue during the runningIIIthe deformation of crankshaft.**
A. I
B. II .
C. III
D. II+III

1535. **In the management of the shafting, because____ carry heavy load and caused high temperature easily, it should be paid attention.**
A. the bearing near to the diesel engine
B. the intermediate bearing near to the thrust bearing

C. the intermediate bearing near to the sterntube .
D. the bearing located at the middle of the diesel engine and the sterntube

1536. **The humidifier’s valve of air-conditioner should be ____, when the temperature is 5~8° C in the winter.**
A. decreased
B. increased
C. fixed
D. closed .

1537. **The humidifier’s valve of air-condition should be ____, when the temperature is lower than 0° C.**
A. decreased
B. increased .
C. fixed
D. closed

1538. **The air-conditioner is running in the winter and to be stopped, we should ____.**
A. close Fan and Humidifier at the same time
B. firstly close Fan and then close humidifier immediately
C. firstly close humidifier and then close Fan immediately
D. firstly close humidifier and then close Fan after 30 seconds .

1539. **When starting air-conditioner in the winter, we should open____ in sequenceIvalve of warming IIvalve of humidifier IIIFan**
A. III .II .I
B. III .I .II
C. I.III .II .
D. II .III .I

1540. **Because the flow rate of supply water pump is too large, oily water separator does not work wellWhich of the following is not the reason?**
A. the monitoring equipment is out of order.
B. separating effect becomes bad
C. inner wall is contaminated
D. separating effect becomes bad and inner wall is contaminated

1541. **Oily water separator mis-alarms, the most possible reason is ____.**
A. separating oil too fast
B. the sensor flushed badly .
C. the discharge solenoid value out of order
D. too low heating temperature

1542. **The pressure difference of the gauge on the oily water separator increases greatly, the reason is____.**
A. the filter is clogged .
B. bilge suction value is clogged
C. suction value and discharge value of the pump do not open fully
D. screw pump is worn seriously and volumetric efficiency is decreased

1543. **The time of discharging oil is short, but oily water separator discharges oil frequentlyThe possible reason is ____.**

A. the sensor of low oil level is fully covered by sludge .
B. the coarse strainer before the pump in suction system is clogged
C. the screw pump is worn seriously and volumetric efficiency is decreased
D. bilge suction value is clogged

1544. **Before the oily water separator put into operation, it should be ____.**

A. filled with bilge water
B. filled with oil
C. filled with clean water .
D. be emptied

1545. **After stopping oily water separator, sea water should be permitted for ____ minutes, ____ should be closed after stopping pump to reduce oxidation corrosion of inner wall.**

A. 15 / inlet value
B. 15 / inlet and outlet value .
C. 30 / inlet value
D. 30 / inlet and outlet value

1546. **If found oil when we open low oil level plug of separator, it indicates ____.**

A. the separator is overload .
B. the monitor equipment of separator fails
C. the discharge pump of separator can not work
D. the temperature of oil water is low

1547. **If separating effect is not good, we can improve it by ____.**

A. flushing separator with hot water
B. increasing water supply flow
C. heat oily water properly .
D. opening manual oil discharge value

1548. **If separating effect is not good, which measure should be taken ____.**

A. working at intervals and properly heating .
B. warming up to 70℃, increase water supply flow
C. improving impulse of water supply
D. reducing water supply flow

1549. **The following measures can be used to improve oily water separator’s separating effect except ____.**

A. overhauling every two year .
B. working at intervals
C. renewing filtration material
D. pumping bilge water from different layers respectively

1550. **When oily water separator is operating, which measure ____ is wrong.**

A. pay attention to operating parameters
B. renew and clean separating units in time

C. check oil level in separator to prevent overload
D. check separating effect, if it is bad, flush with large capacity water pump .

1551. **Which of the following is wrong about operation of oily water separator?**
A. filled with clean water before operation
B. keep air cushion in oil collecting space during running .
C. check oil level during running
D. clean inner separator with low pressure stream

1552. **When does auxiliary burner of incinerator put into operation? Istart incinerator when it is cold IIthe sludge for dealing with is little IIIthe sludge for dealing with is large IVthe water and impurity in sludge are too much Vthe temperature in incinerator is low VIdealing with little solid rubbish**
A. I+II+III+V
B. I+II+III+IV
C. I+IV+V+VI .
D. I+II+III+VI

1553. **Concerning the incinerator’ s operation, which of the following is not correct?**
A. Scavenging time should be more 30 seconds before igniting
B. The temperature of sludge tank is 80~100℃
C. First igniting the incinerator with diesel oil, when the temperature of health is about 600℃, the sludge oil drawn in
D. The ash can be dumped into sea when the distance is more than 3 miles from land.

1554. **When the incinerator is stopped, which of the following is wrong?**
A. After stopping supplying sludge oil, the value and pipe should be flushed by flushed by diesel oil and the incinerator continue burning for 10 minutes
B. Close auxiliary burner firstly and then close main burner
C. After stopping fuel, restoring the position of main fuel supply valve
D. Stop blower as soon as stopping supplying fuel oil.

1555. **When does auxiliary burner of rotary nozzle incinerator begin to work? Iwhen igniting IIthe sludge for dealing with is too much IIIbefore stopping incinerator**
A. I+II
B. I+III .
C. II+III
D. I+II+III

1556. **Before marine sewage treatment plant works ____ should be filled with fresh water.**
A. deposition chamber
B. oxidation pool .
C. disinfection chamber
D. all chamber

1557. **Disinfector in the sewage biological treatment plant usually is ____ .**
A. chlorine water
B. ozone

C. hypo-calcium chloride .
D. calcium oxide

1558. **Concerning the management of sewage treatment plant using activated sludge, which of the following is correct?**
A. the plant should be prohibited to supplying air
B. the plant should work at intervals
C. the plant should be added disinfector in time .
D. we should check strength of activated sludge, ivory-white color is best

1559. **When two oil separators are working in series, they should work with ____.**
A. both as clarifiers
B. first one as clarifiers, second one as purifier
C. both as purifiers
D. first one as purifier, second one as clarifier .

1560. **One of the reasons that cause oil flowed from sludge outlet of a self-cleaning separator is ___ .**
A. seal water supply be cut off
B. make up water supply be cut off .
C. oil outlet valve closed or not open sufficiently
D. the flow rate of oily water is too much

1561. **When separating lube oil separator, the optimal separating quantity is ___ of the rated quantity on name plate.**
A. 100%
B. 1/2
C. 1/5
D. 1/3 .

1562. **When separating fuel oil in oil separator, the separating quantity is____ of the real quantity.**
A. 100%
B. 80%
C. 1/2 .
D. 1/3

1563. **The separating effect of oil separator is not very good, the reason may be ___ .**
A. too little seal water
B. improper gravity disc .
C. oil discharging pump not working very well
D. low water level of the working water

1564. **When separating the lube oil without additive, it is usually cleaned with hot water; the aim is to remove ____ from it.**
A. acid .
B. sludge
C. mechanical impurity
D. salinity

1565. **When finish work on the oil separator, you should____ firstly.**

A. cut off the power
B. cut off the oil inlet .
C. open guide water valve
D. close oil outlet value

1566. **____ can cause oil flow from water outlet of a separator.**

A. Oil inlet valve opening too quickly .
B. Oil temperature too high
C. Diameter of gravity disc too small
D. Viscosity of oil too low

1567. **____ can not cause oil flow from water outlet of self-cleaning separator.**

A. Oil temperature too high
B. Diameter of gravity disc too large
C. Oil temperature too low
D. High level tank out of water .

1568. **____ can cause oil flow from sludge outlet of self cleaning separator.**

A. Too much sludge accumulated in separator bowl
B. Diameter of gravity disc too large
C. High level tank lack of water .
D. Oil input too rapidly

1569. **Check value is used to control ____.**

A. direction of oil flow
B. back pressure of return oil
C. bypass of filter
D. high pressure overflow .

1570. **Hydraulic control check value is generally used to ___ in the marine hydraulic mechanism.**

A. control the back pressure of return oil
B. lock the oil lines under some conditions .
C. change the direction of oil flow
D. act as relief valve

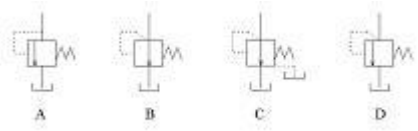
1571. **Overflow valve is used to ____.**

A. control the fluid flow through it
B. prevent the pressure before it over the specified valve .
C. make the pressure after it steady
D. control the direction of oil flow

1572. **Generally the symbol (GB786.1-93) of overflow valve is ___**

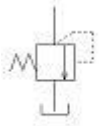
A.
B.
C.

D. .



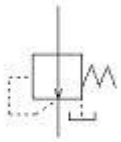
1573. **The symbol (GB786.1-93) at right side represents ____.**

A. overflow valve .
B. reducing valve
C. relief valve
D. sequence valve



1574. **The symbol (GB786.1-93) at right side represents ____.**

A. overflow valve
B. reducing valve .
C. relief valve
D. sequence valve



1575. **____ can be used to prevent hydraulic system overloaded or keep the pressure of oil outlet from pump constant**

A. Overflow valve .
B. Reducing valve
C. Balancing valve
D. Reducing valve or balancing valve

1576. **____ is not installed on the emergency switchboard.**

A. Control panel
B. Paralleling panel .
C. Load panel
D. Busbar

1577. **____ is not installed on the emergency switchboard.**

A. Ammeter and changeover switch
B. Speed governor device
C. Synchroscope .
D. Wattmeter

1578. **____ belongs to emergency power supplying equipments.**
A. Navigation lamp .
B. Windlass
C. Main sea water pump
D. Compressor

1579. **____ belongs to emergency power supplying equipments.**
A. Accommodation lighting .
B. Windlass
C. Main sea water pump
D. Compressor

1580. **____ belongs to emergency power supplying equipments.**
A. Emergency fire pump .
B. Windlass
C. Main sea water pump
D. Fresh water pump

1581. **____ belongs to emergency power supplying equipments.**
A. Cargo winch
B. Windlass
C. Steering gear .
D. Air compressor

1582. **____ is not installed on the emergency switchboard.**
A. Ammeter
B. Voltmeter
C. Wattmeter
D. Synchroscope .

1583. **Emergency generator is installed on board mainly to ____.**
A. connect to the busbar when the load increasing
B. supply power specially to charging panel
C. be put into operation during the ship arriving at or leaving port
D. ensure the power supply to critical equipment after the main switchboard out of power .

1584. **After resolving the trouble of main power supply, main switch of emergency generator should____, if power supply is refreshed.**
A. be switched off by the duty officer
B. be switched on by the duty officer
C. be switched off automatically .
D. be switched on automatically

1585. **____ are supplied by main switchboard directly.**
A. Suez Canal searchlight, air compressor and air conditioning compressor
B. Air compressor, boiler blower and refrigeration plant
C. Boiler blower, Suez Canal searchlight and refrigeration plant
D. Suez canal searchlight, air compressor and boiler blower .

1586. **____ is not a part of the main switch board.**
A. Control panel of main generator
B. Control panel of emergency generator .
C. Paralleling panel
D. Load panel of main generator

1587. **____ is not a part of the main switchboard.**
A. Busbar
B. Load panel of main generator
C. Paralleling panel
D. Shore connection box .

1588. **____ is used to control, modulate, monitor and protect generator set.**
A. Control panel .
B. Load panel
C. Paralleling panel
D. Busbar

1589. **____ is not installed on the main switchboard.**
A. Ammeter and changeover switch
B. Power factor meter
C. Synchroscope
D. Reverse sequence relay .

1590. **To ____ , the power is supplied by main switchboard directly not though sub-board.**
A. save network cost
B. improve the reliability of supplying power to important load .
C. prevent sequence reverse
D. increase the power factor of important load

1591. **Synchrocope and synchro light are located on ____ of main switchboard.**
A. load panel
B. emergency generator control panel
C. battery changing and discharging panel
D. paralleling panel .

1592. **Insulation light is located on ____ of main switchboard.**
A. Paralleling panel
B. Load panel .
C. Emergency generator control pane
D. Main generator control pane

1593. **____ are located on the road panel of main switchboard.**
A. Megohm meter, insulation light and synchroscope
B. Synchroscope, synchro light and megohm meter
C. Shore power switch, insulation light and synchroscope
D. Megohm meter, insulation light and shore power switch .

1594. **____ is power supplied by main switchboard directly not through sub-board.**

A. Deck machinery
B. Little power load
C. Some important load .
D. stationary submersible pump

1595. **____ is (are) not power supplied by main switchboard directly.**

A. Steering gear and windlass
B. Navigation light and radio power panel
C. Navigation device power box
D. Daily fresh water pump .

1596. **When stand-by before sailing, the duty engineer and officer should check clock, engine telegraph and rudder, and then write it in the ____.**

A. engine room logbook
B. voyage logbook
C. engine room logbook or voyage logbook
D. engine room logbook and voyage logbook .

1597. **One hour before sailing, the duty engineer and officer should check ____.**

A. tachometer and engine telegraph
B. oil and water reserves
C. clock and engine telegraph and test the rudder .
D. crews

1598. **When the ship in the condition of stand-by and engine trials, usually put the engine telegraph in the ____ position.**

A. stand by .
B. slow ahead
C. slow astern
D. B or C

1599. **Which of the following is false?**

A. preparation for stand-by should be organized by engine room
B. engine trails should be agreed with bridge, and then do it
C. As to engine trials of the twin diesels and two propellers, the two diesels should use “slow ahead” at the same time .
D. After engine trials, the handle of the engine telegraph should be put in the “stop” position

1600. **Which is false about engine trials?**

A. engine trails should be done after finishing the operation of turning the engine with the turning gear and starting the engine on air briefly
B. in the operation of engine trails, the main engine should be running in low-speed
C. As to the ship equipment with twin main engine, engine trials should be done with one engine ahead and another engine astern at the same time
D. the order “engine trials” should be given by the bridge .

1601. **The purpose of engine stand-by is that ____.**

A. the main engine in the stand-by condition

B. auxiliary machinery in the stand-by condition
C. dynamical equipments in the stand-by condition and could be used immediately .
D. A and B

1602. **The main purpose of starting the diesel engine on air briefly is .**
A. to inspect if the cylinder has the water leakage
B. to expel out the residual water /gas /oil from the cylinder
C. to check if fuel supply is normal
D. A and B .

1603. **The main purpose of warming the parts of the main engine is ____.**
A. to reduce heat stress
B. to reduce low temperature corrosion
C. to improve firing and starting performance .
D. fuel saving

1604. **In the process of the stand-by, warm-up the engine usually through give preheat of which parts of the diesel engine?**
A. cooling water of the cooling system
B. fuel of the F.O system
C. L.O of the L.O system
D. cooling water of the cooling system and L.O of the L.O system .

1605. **Before engaging the turning gear and turning the diesel engine, which of the following operation should be done except ____.**
A. open the indicator cocks
B. supply some L.O to cylinder liner wall with lubricator
C. put the fuel handle in the "stop" position
D. pump up the air bottle .

1606. **If the main engine starting consecutively failed ____ times, it should be found the cause before another starting**
A. 2
B. 3 .
C. 4
D. 5

1607. **During the running of the diesel engine, if the supply of cooling water is interrupted or the temperature of cooling water out of the cylinder is too high, the duty engineer should ____.**
A. notify the duty officer, reduce the engine speed, take some measures to remove failures .
B. notify the duty officer and stop the engine immediately, find the cause and remove failures
C. notify the C/E
D. notify the captain

1608. **The normal color of the exhaust gas of the diesel will be ____.**
A. achromatism or thin gray .
B. thin white
C. sky-blue
D. black

1609. **During the diesel engine running, the water level of F.W expansion tank should normally kept in the ____ level of glass tube.**

A. the highest
B. above 3/4
C. 1/2 -3/4 .
D. the lowest

1610. **The main purpose of inspection for a running diesel engine is____.**

A. testing for the mechanical load and the thermal load
B. inspecting thermal and mechanical condition of the engine .
C. inspecting each system and exhaust temperature
D. testing for compress pressure and explosion pressure

1611. **Which of the following item is the cause to the damage of parts and excess wearing?**

A. overload
B. the odds of the load
C. the default of parts
D. overload and the odds of the load .

1612. **After received the "finished with engine" instruction, which of the following operations is false?**

A. shut off the starting air receiver outlet valve
B. stop the F.O priming transfer pump and shut off the correspondence inlet and outlet valve
C. stop the S.W pump immediately and shut off the correspondence inlet and outlet valve
D. stop the F.W pump immediately and shut off the correspondence inlet and outlet valve .

1613. **After finished the engine, which of valves cannot be shut off by the duty engineer?**

A. fuel valve
B. the starting air valve
C. the sea chest .
D. the main sea pump inlet valve

1614. **When the diesel is stopped, which of the following items is wrong?**

A. keep all systems in normally running
B. the main engine is stand-by
C. shut off the starting air bottle outlet valve .
D. pay attention to the changes of the system parameters

1615. **When received the order "finished with engine" which of the following operations is wrong?**

A. stop the L.O pump, S.W pump, F.W pump .
B. stop the priming F.O transfer pump
C. engage the turning gear
D. open the scavenge air belts drain valve and cover the turbocharger silencer with the dustproof cover

1616. **The cooling water of the diesel engine should be treated, because it has ____.**

A. alkalescence
B. acidity
C. salinity .
D. impurity

1617. **Why the cooling water of the diesel engine should be treated? Because the ____.**

A. Cooling water is alkalescence
B. cooling water is acidity
C. cooling water has salinity .
D. cooling water has impurity

1618. **When replacing a part with a spare one, we should fill in tile spare parts consume table in time and make a mark in brief for ____.**

A. the reason of replacing .
B. the course of replacing
C. crews who do this work
D. where and when the replacing being done

1619. **If the ordered spare parts have been modified by manufacturer, which of the following should be pay attention to?**

A. quality
B. reliability
C. price fluctuating
D. applicability .

1620. **We should apply for annual spare parts according to____Ithe need of annual overhaul IIthe storage of spare parts IIIthe storage capacity of spare parts room**

A. I
B. II
C. I + II .
D. III

1621. **When ship in the dock repairing, engine department should emphasize on the inspection of ____.**

A. sea valve chest, sect valve, thruster .
B. bilge motherboard, steering and the shaft system
C. sea water system
D. fresh water system

1622. **Which of the following items don’t belong to dock repair works?**

A. the S.W outboard valves
B. the tailshaft L.O stop valve .
C. the drain valve of the boiler
D. propeller shaft sealing device

1623. **Which of the following items don’t belong to dock repair works?**

A. making the repair list, booking spare parts and special tools for the dock repair
B. shutting off all of the S.W valves to outboard .
C. the sketches or diagrams used for the dock repair
D. cleaning up the oil tank and boiler before enter the dock

1624. **To ensure the quality of dock repair, C/E should know very well ____.**

A. the repair standard of main docking repair item .
B. the special tool for repair item

C. the skill of repairer
D. the status of docking repair equipment

1625. **During the deck repair, ____ should be measured firstly before tail shaft is drawn out.**
A. the sinking of tail shaft .
B. the clearance of stern bearing
C. the total flexure of both end bearing
D. main engine crankshaft deflection

1626. **When the dock is refilled with water after docking repair, the first work which should be done by engineers is ____.**
A. igniting boiler
B. releasing air in sea water system .
C. starting generator
D. cut off shore power

1627. **When the vessel entering the dock, the first work that engineer should contact with the shipyard ____.**
A. releasing the boiler water
B. the explosion detecting and cleaning for the fuel tank
C. the docking project related item
D. shore power and fire fighting water supply .

1628. **During the dock repair, when installing the tail shaft and propeller, who should be on the spot to supervise?**
A. chief engineer .
B. the engineer
C. captain
D. any member of the engine department

1629. **During the dock repair, each sea valve must be disassembled, cleaned and ground wellBefore it reassemble the sealing surface between the valve and the valve seat should be checked by ____.**
A. chief engineer
B. surveyor
C. the engineer .
D. the technique personnel of the shipyard

1630. **According to the regulation of the voyage trial on new ship, ____ is one of the trial items of the UMS ship bridge control.**
A. starting and direction changing trial
B. cancelling accelerating function trial .
C. lowest stable speed trial
D. continuous running trial

1631. **____does not belong to the mooring trial item.**
A. generator sets running trial
B. shafting intensity trial .
C. the trail for pumps that working for M.E
D. M.E safety devices trial

1632. **When carrying out mooring trial, the ____ trial of the M.Eis not necessary.**
A. starting
B. torsion vibration .
C. direction changing
D. running

1633. **When carrying out mooring trial, if the M.Ecan’t start normally, you should ____.**
A. take a further inspection in the voyage
B. check and repair, then retrial .
C. do as the surveyor’s requirement
D. retrial

1634. **In the M.Emooring trial, the starting trial is carried under ____.**
A. cold condition .
B. stillness condition
C. certain air pressure
D. the surveyors supervision

1635. **After repair, the voyage trial of the M.Eshould be done ____.**
A. after the mooring trial has passed .
B. before the mooring trial
C. under the surveyors supervision
D. after repair

1636. **When carrying out the voyage trial, the M.Eis not necessary to take ____ trial.**
A. starting
B. running
C. running-in .
D. direction changing

1637. **_____ is/are the legal survey institution(s) that stated by PRC.**
A. Ship Survey Bureau .
B. CCS
C. Maritime Safety Administration
D. all of the above

1638. **In the first survey, _____ compiles the survey report and fills in certificate.**
A. surveyor .
B. chief engineer
C. captain
D. chief mate

1639. **The first survey has two situations, one is changing ____ survey, the another is making survey.**
A. registry .
B. ship hull
C. nationality
D. replacing machineries and electric devices

1640. **Medium survey should be carried out _____ times during the valid period of the certificate.**
A. 2
B. 3
C. 4
D. 1 .

1641. **If some surveys refer to statutory survey and ship classification survey but occur temporarily, we call them ____.**
A. periodic survey
B. statutory survey
C. additional survey .
D. annual survey

1642. **_____is not the main function of CCS.**
A. ship products survey
B. notarization survey
C. ship safety inspection .
D. counseling service and publishing ship name list

1643. **Statutory survey could be divided into two kinds, they are ____.**
A. first survey and certificate exchange survey
B. first survey and operation survey .
C. first survey and periodic survey
D. classification survey and certificate exchange survey

1644. **In the voyage, duty officer should inform ____ situation to the duty engineer immediately.**
A. in /out port
B. passing through big bridge
C. big steering angle for direction changing
D. in /out port and passing through big bridge .

1645. **When anchoring in open anchorage, chief engineer should consult with captain _ _ .**
A. if the ship must be stand by
B. if M.Eshould be stopped
C. if keep-watching as in voyage .
D. if the ship must anchor two anchors

1646. **The duty officer and engineer should obey regulation for the speed of the M.Ethat established by ____.**
A. captain
B. chief engineer
C. chief engineer and captain consult together .
D. chief engineer and superintend consult together

1647. **After arrived at the port, if it is necessary to lift the piston out and inspect the M.Etemporarily, the chief engineer should report the situation to the____, and the operation could be performed only after having the approvement of relevant department.**
A. maritime safety administration
B. ship survey bureau

C. company manager
D. captain .

1648. **In PRC, the administration for implementing SOLAS convention is ____.**
A. the harbor bureau
B. the government of the flag state .
C. the ship classification society
D. ship company

1649. **The SOLAS convention about "passenger ship and dried food ship damage control" prescribes that the engine room emergency bilge water suction should connect with ____.**
A. the main S.Wpump
B. ballast pump
C. air-conditioning water pump
D. the main S.Wpump or ballast pumps that have the biggest output .

1650. **According to the SOLAS convention, the bilge water system .**
A. must connect the bilge well suction directly
B. should not pump out the water accumulated in the cargos
C. should not used for emergency drainage in case of ship collision
D. should connect to the fire fighting system directly .

1651. **The SOLAS convention prescribes that the emergency steering drill should be carried out one time every ____ months.**
A. 4
B. 3 .
C. 2
D. 1

1652. **According to the ship emergency plan, when average accident happened and the captain made the decision to withdraw from the engine room before leaving the engine room, the wrong operation is that ____.**
A. the chief engineer leaves the engineer room with the engine room log book at first .
B. releasing compressed air in the air receiver and closing the watertight door
C. stopping all the running machineries and electric devices
D. closing the quick-closing valves of all the oil tanks, stopping the boiler and releasing gas

1653. **In the voyage, when carrying out abandon ship drill ____ should be test every time.**
A. the emergency lighting system for muster and abandon ship .
B. air oil emergency shut-down
C. M.Eemergency operation
D. main auxiliary steering gear changing

1654. **In the emergency alarm signals, if the alarm or whistle two long sounds followed by one short sound for 1 minute, it is the ____ emergency.**
A. fire fighting
B. leakage blocking .
C. abandon ship
D. integration

1655. **The alarm signal for engine room catching fire is a blast of random bell follow by ____.**

A. two knock
B. three knocks
C. four knocks .
D. five knocks

1656. **The ship emergency plan item should not include ____Ilifesaving, fire fighting, leakage blocking, abandon ship IIfirst aid IIIintegration emergency**

A. II .
B. III
C. .II+III
D. I

1657. **Propulsion engines and the vast majority of auxiliary generator engines are designed to allow a generous through-flow of scavenge air in order to control ____.**

A. the lubricating oil consumption
B. the turbine blade temperature .
C. the flow rate of fuel
D. scavenge air pressure

1658. **When a ship in loaded condition floats at arbitrary water line, its displacement is to the relevant mass of water displaced by the ship.**

A. equal .
B. larger
C. smaller
D. equivalent

1659. **The displacement of a ship is to the total weight, all told, of the relevant loaded ship.**

A. larger
B. equal .
C. smaller
D. equivalent

1660. **Which one is not true? .**

A. Two main areas of skill are involved in the construction of ship
B. There are distinct divisions in responsibilities between naval architects and marine engineers.
C. Each ship will assume varying proportions according to its type
D. Ships can be divided into different categories from different perspectives

1661. **Why a gearbox is needed in a ship driven by a medium-speed diesel engine? .**

A. To reduce the main engine speed
B. To increase the main engine speed
C. To govern the main engine speed
D. To fix the propeller shaft.

1662. **A propeller, in order to operate efficiently, must rotate at a relatively _____ speed.**

A. high
B. low .

C. fast
D. lowly

1663. **In a diesel engine, offers the heat energy directly; works as working medium and changes the heat energy to mechanical energy.**
A. the burning of the fuel; medium shaft
B. fuel spray; fresh air
C. fuel; fuel spray
D. the burning of the fuel; the burned gas mixture .

1664. **In a diesel engine, works as working medium and changes the heat energy to mechanical energy, changes the reciprocating movement to rotary moment.**
A. fuel spray; the burning of the fuel
B. the burned gas mixture; connecting rod .
C. medium shaft; crankshaft
D. the burned gas mixture; piston rod

1665. **One of the differences between a two-stroke engine and a four-stroke engine is, .**
A. a two-stroke engine works without exhaust operation
B. a two-stroke engine works without compression stroke
C. a two-stroke engine works without expansion stroke
D. a two-stroke engine works without suction operation .

1666. **One of the differences between a two-stroke engine and a four-stroke engine is, .**
A. a two-stroke engine can’t work without cylinders
B. a two-stroke engine can’t work without pistons
C. a two-stroke engine can’t work without crankshafts
D. a two-stroke engine can’t work without a blower .

1667. **In a diesel engine, when the fuel is injected into the cylinder, .**
A. the piston is just coming upward from the bottom dead center
B. the piston has moved about one-fifth of the way up
C. the piston has moved most of the way up and almost reached the TDC.
D. the piston has just past the TDC

1668. **is the main reason that reduces the power advantage of a two-stroke engine over a same size four-stroke one to about .**
A. Inefficient scavenging; twice
B. Inefficient scavenging; 1.8 times .
C. Fewer strokes in a circle; twice
D. Fewer strokes in a circle; 1.8 times

1669. **If the engine is naturally aspirated, or is a small high-speed type with a centrifugal turbocharger, the period of valve overlap, i.ewhen both valves are , will be and the exhaust valve will close some 10° top dead canter.**
A. open; short; after .
B. closed; short; after
C. open; long; before
D. closed; long; before

1670. **In a two-stroke engine, there are always a series of openings known as , and in some circumstances, there are also openings known as , in the part of the cylinder liner.**

A. scavenging air ports; exhaust ports .
B. inlet ports; scavenging air ports
C. scavenging air ports; inlet ports
D. exhaust ports; inlet ports

1671. **In some type of two-stroke engines, besides some small holes for , starting valve, safety valve, indicator cock, and central opening in each cylinder cover for mounting the .**

A. fuel valves; exhaust valve .
B. exhaust valves; inlet valve
C. fuel valves; inlet valve
D. exhaust valves; fuel valve

1672. **In a two-stroke engine, the piston consists of a lower part, which is named as and usually made of , and a upper part, which is referred to as and made of .**

A. low-half, cast iron; top-half, heat-resistant steel
B. low-half, aluminum; top-half, stainless steel
C. piston skirt; cast iron; piston crown; heat-resistant steel .
D. piston skirt; aluminum; piston crown; stainless steel

1673. **In order to keep the oil film on the cylinder liner during the running-in period, the piston rings are slightly rounded .**

A. on both the external and internal top edges
B. on both the external top and bottom edges .
C. on both the external and internal bottom edges
D. on all the four edges

1674. **In order to control thermal stresses, some types of modern engines use pistons with .**

A. heavy wall and intensive cooling
B. heavy wall and no cooling
C. thin wall and no cooling
D. thin wall and intensive cooling .

1675. **In order to improve the working conditions of the crosshead bearings, the bearing pressure is made and the peripheral speed is made in later designs.**

A. smaller, higher .
B. higher, smaller
C. smaller, smaller
D. higher, higher

1676. **When the heavy fuel oil is heated to achieve the viscosity of 10-15 cSt, may occurTo avoid this, a system is used in most occasions.**

A. boiling and cavitations; low temperature
B. boiling and cavitations; pressurized .
C. leaking and boiling; low temperature
D. leaking and boiling; pressurized

1677. **The fuel from the bunker tanks must be treated by before entering the service tanks, from where the fuel enters .**

A. centrifugal separators; the engine cylinder
B. oily water separators; the engine cylinder
C. oily water separators; the fuel supply system
D. centrifuges; the fuel supply system .

1678. **A full-flow 50μ m filter is installed , so the injection system components on the main engine are safeguarded.**

A. as close to the main engine as possible .
B. as close to the main pump as possible
C. just before the fuel valve
D. just before the booster pump

1679. **The booster pump, which supplies diesel oil to , should have a possibility of being powered by compressed air or by emergency power.**

A. the main engines
B. the auxiliary engines .
C. the emergency generator engine
D. the auxiliary engines and the main engine(s)

1680. **is harmful for fuel pumps, fuel valves, cylinder liner, exhaust valve seats, and the turbocharger blades as well.**

A. Bad combustion of the fuel
B. Bad atomization of the fuel
C. Liquid contaminants
D. Solid contaminants .

1681. **As an alternative to the conventional seawater cooling system, is based on principles about cooler locations, flow control and preheating, but with a central cooler and one additional set of pumps.**

A. the central cooling system, different
B. the central cooling system, the same .
C. the open cooling system, different
D. the open cooling system, the same

1682. **An alarm device inserted between the deaerating tank and the expansion tank can notify the on-watching crew that .**

A. the expansion tank is lack of water
B. the expansion tank is over flowing
C. there is something wrong with the cooling system
D. there is something wrong with the engine .

1683. **The cooling system needs least maintenance work for in this kind of system.**

A. open, the minimum components
B. open, the high cooling efficiency
C. central, there are more coolers and a extra set of pumps
D. central, there is only one component contacts seawater .

1684. **About the jacket water, that of the auxiliary engines usually is circulated by pumps, and the main engine usually .**

A. an engine-driven, as well
B. an engine-driven, has an independent pump .
C. an independent, as well
D. an independent, has an engine-driven pump

1685. **In order to maintain a constant outlet water temperature of 80-85℃ from the engine, a three-way valve is installed .**

A. at the jacket cooler outlet to control the flux through the engine
B. at the jacket cooler outlet to control the flux through the cooler .
C. at the engine outlet to control the flux through the engine
D. at the engine inlet to control the flux through the engine

1686. **In modern installations, the main engine and the standby auxiliary engines .**

A. can be started at low temperature and are free from preheating
B. usually are preheated by steam before being started
C. are kept at a constant temperature and free from preheating .
D. are kept at a low temperature to save energy

1687. **A marine diesel engine is started by .**

A. supplying high pressure oil into a hydraulic motor
B. supplying high temperature air into the cylinder
C. supplying high pressure air into the cylinder .
D. electrical igniting

1688. **In the starting system, the automatic valve is controlled by , and the cylinder start valves are controlled by .**

A. pilot air; pilot air .
B. handle; solenoid
C. handle; pilot air coming through the distributor
D. solenoid; pilot air coming through the distributor

1689. **The starting air entering the cylinder begins when the piston .**

A. has nearly come to the TDC
B. has just past the TDC .
C. has nearly come to the BDC
D. has just past the BDC

1690. **When starting an engine, the compressed air enters the cylinder when the corresponding piston is in position of its .**

A. suction stroke
B. compression stroke
C. power stroke .
D. exhaust stroke

1691. **When an engine is starting and has got a sufficiently high speed, say about 20 rpm, .**

A. the starting air supply is cut off and fuel is injected into the cylinders .
B. the fuel feeding is cut off and the turning gear is put in

C. the starting air supply is cut off and turning gear is taken out
D. the electric blower is shut down and fuel is injected into the cylinders

1692. **The air distributor is conventionally driven by and distributes into each cylinder by certain sequence.**
A. camshaft; fresh air
B. camshaft; starting air .
C. electronic motor which is controlled by a computer; fresh air
D. electronic motor which is controlled by a computer; starting air

1693. **The following options are all the functions of lubricating oil except .**
A. removing heat and deposits
B. neutralizing acidic products
C. lubricating
D. improving combustion efficiency .

1694. **_____ diesel engines generally have two systems of lubrication: a total loss system feeding and a circulating system lubricating the running gear and cooling the pistons.**
A. Large crosshead type, crossheads
B. High speed, the cylinders
C. Large crosshead type, the cylinders .
D. Four-stroke, pistons and cylinders

1695. **In some diesel engine designs, the injection of cylinder oil is timed to impinge when the piston and only impinge on .**
A. is coming upward, cylinder ring belt
B. is going downward, piston ring belt
C. is coming upward, piston ring belt .
D. is going downward, cylinder ring belt

1696. **Large crosshead type engine generally has two lubrication systems, a function performed only by cylinder oil system is .**
A. lubricating
B. cooling
C. sealing .
D. cleaning

1697. **Large crosshead type engine generally has two lubrication systems, a function performed only by crankcase oil system is .**
A. lubricating
B. cooling .
C. cleaning
D. neutralizing

1698. **“The use of a poor quality oil can lead to rapid deterioration of its properties with the resultant formation of deposits in the piston crown which in turn results in a considerable reduction in heat transfer with subsequent overheating and thermal cracking.” According to this sentence, we can know that the principle reason of the overheating and thermal cracking is .**
A. the use of a poor quality oil

B. the deterioration of its properties .
C. the formation of deposits
D. the reduction in heat transfer ability

1699. **Gas exchange, which is a basic part of the cycle of an internal combustion engine, is .**
A. the supply of normal air and removal of compressed air
B. the supply of fuel oil and combustion of the atomized oil
C. the supply of fresh air and removal of exhaust gases .
D. the supply of fresh air and removal of the extra heat

1700. **"This increase in charge air density is accomplished on most modern diesel engine types by use of exhaust gas turbo-charging, in which a turbine wheel driven by exhaust from the engine is rigidly coupled to a centrifugal type air compressor." According to this sentence, we can know that increases density, drives the compressor directly.**
A. a modern diesel engine, a turbine wheel
B. a modem diesel engine, exhaust gases
C. a compressor, an exhaust gas turbocharger
D. a compressor, a turbine wheel .

1701. **When the air charge contacts with the cylinders and pistons and mixes with the residual gases, it will .**
A. increase in temperature .
B. lose its energy partly
C. expand and do work
D. begin to be compressed

1702. **Usually we take the cooling effect of the air flown through the cylinder during the overlap period as .**
A. inevitable
B. harmful
C. helpful .
D. unacceptable

1703. **In slow speed two-stroke engines, the fresh air entering begins when and stops as .**
A. the inlet port is opened by the up coming piston; the port is closed by the down going
B. the inlet valve is opened by the down going piston; the inlet valve is closed
C. the inlet port is opened by the down going piston; the port is closed by the up coming .
D. the inlet valve is opened

1704. **The is employed to warm up a large diesel engine before its starting.**
A. hot air
B. hot boiler water
C. cylinder water .
D. hot seawater

1705. **Which one of the followings may not be checked before engine starting?**
A. tank level
B. Various filters

C. Drains
D. seawater temperature .

1706. **When the direction handle of telegraph is moved, the relative position of camshaft and crankshaft will be_____ .**
A. changed accordingly .
B. unchanged
C. positioned ahead
D. positioned astern

1707. **Which of the followings will affect the spray of fuel oil?**
A. coke deposits .
B. cylinder water temperature
C. asphalt in fuel oil
D. lub oil

1708. **The transmission system transmitting power from the engine to the propeller is composed of shafts, bearings, and_____ .**
A. propeller .
B. flying wheel
C. main engine
D. crankshaft

1709. **The thrust from the propeller to the hull of the ship is transferred by .**
A. tie rod
B. thrust block .
C. bedplate of main engine
D. frame of main engine

1710. **_____ is used to prevent the entry of sea water to the machinery space.**
A. A special sealing gland
B. Propeller
C. Tailshaft
D. Sterntube bearing .

1711. **Oil pressure in the lubrication system is_____ than the static sea water head to ensure that sea water cannot enter the sterntube in the event of seal failure.**
A. higher .
B. lower
C. very higher
D. very lower

1712. **The propeller consists of a _____ with several blades of helicoidal form attached to it.**
A. shaft
B. boss .
C. wheel
D. lever

1713. **The difference between Fixed pitch propeller (FPP) and Controllable pitch propeller (CPP) is in that_____ .**

A. for FP, once fitted, the position of the blades can also be changed in operation
B. for CP, once fitted, the position of the blades can also be changed in operation.
C. the CP type has a relatively smaller hub compared with the FP propellers
D. the FP type has a relatively larger hub compared with the CP propellers

1714. **In conventional systems, the injection pressure_____, while it's_____in common rail diesel engines.**

A. fluctuates with the engine speed to some extent, independent of the engine speed .
B. keeps constant at all engine speed, dependent on the engine speed to some extent
C. keeps constant at all engine speed, independent of the engine speed
D. is decided by the engine speed, constant at all engine speed

1715. **In common rail engines, the fuel is_____ before is injected into the cylinders.**

A. stored in a common fuel line .
B. pumped by the injection pump
C. at low pressure
D. already atomized

1716. **In a common rail engine, the fuel is injected into cylinders .**

A. by injection pumps
B. at a time decided by the injection pump timing
C. by a signal opening the magnetic valves .
D. at a time decided by the cam directly

1717. **_____uses one or two high pressure pumps for all the cylinders with one more____ standby, while_____have a separate high-pressure pump for each cylinder.**

A. A common rail engine, conventional engines .
B. A conventional engine, common rail engines
C. A marine diesel engine, most other engines
D. A two-stroke engine, four-stroke engines

1718. **A common rail engine has only one or two high pressure pumps in operation at the same____time, and the injection into each cylinder .**

A. can't be controlled very precisely
B. can't be controlled as flexibly as the separate pump system
C. can be controlled as flexibly as the separate pump system
D. can be controlled more precisely and flexibly .

1719. **The common rail engines show great advantages in combustion especially_____ .**

A. at high speed and full load
B. at low speed and part load .
C. when heavy fuel oil is used at sea
D. when the ships run long distance

1720. **To meet the market requirements, a marine diesel engine should not be of .**

A. big size .
B. fuel economy

C. low speed
D. high power

1721. **The main purpose of changing main engine to electronic controlled is not to .**
A. control fuel injection time more precisely
B. control fuel injection rate more precisely
C. meet the environmental requirements
D. meet high engine speed requirements .

1722. **If a cam-controlled engine has a normal injection pressure at rated speed, the injection pressure will be_____at slow speed.**
A. a little lower .
B. a little higher
C. too low
D. exactly the same

1723. **If a camshaft-less engine has a normal injection pressure at rated speed, the injection pressure will be at slow speed.**
A. too low
B. a little lower
C. a little higher
D. exactly the same .

1724. **_____is not a feature of the electronic controlled engines.**
A. Lower fuel consumption
B. Better balanced cylinder power
C. A shorter overhaul period .
D. Less smoke emission

1725. **The mechanical exhaust valve operation system is replaced by_____in an electronic controlled ME engine.**
A. a system with a Hydraulic Power Supply (HPS) unit .
B. a system with roller guides for exhaust valves
C. a system with an electronically controlled Alpha Lubricator
D. a system directly powered by electric motor

1726. **The valve that prevents water from backing out of the boiler into the feed line is the_____.**
A. bottom-blow valve
B. skin valve
C. feed-check valve .
D. feed-stop valve

1727. **Soot blowers should be used in proper sequence so that_____.**
A. excess stresses will not be set up in the boiler
B. the decks will not be covered with soot
C. the soot will be swept toward the uptakes .
D. there will not be a loss of steam pressure

1728. **What is the first thing you would check on taking over a watch?**
A. the bilges
B. the periscope
C. the water level .
D. the oil pressure

1729. **One of the main purposes of refractories in a boiler furnace is to____.**
A. help preheat the air for the furnaces
B. help preheat the feedwater
C. protect economizer from excessive heat
D. prevent excessive furnace heat losses .

1730. **When the heat load begins to increase, the needle valve of an expansion valve will_____.**
A. move in an opening direction .
B. move in a closing direction
C. either open or close
D. not move at all

1731. **When the refrigeration demand is small,_____.**
A. the expansion valve will move toward the wide open position
B. the expansion valve will move toward the closing position .
C. the feeler bulb will conveys the high temperature
D. the superheat degree will raise

1732. **The thermostatic valve has a throttling action, that is to say the valve can .**
A. stop the refrigerant from flowing
B. force the refrigerant to flow
C. cause the refrigerant pressure to rise
D. cause the refrigerant pressure to fall .

1733. **The thermal expansion valve responds to the_____.**
A. amount of superheat in the vapor leaving the coil .
B. amount of superheat in the liquid
C. temperature in the evaporator coils
D. pressure in the evaporator coils

1734. **The bulb for the thermal expansion valve is located_____.**
A. in the middle of evaporator coils
B. near the evaporator coil outlet .
C. near the evaporator coil inlet
D. on the bottom row of evaporator coils

1735. **If the compressor runs continually, the cause might be the .**
A. high-pressure cutout switch is jammed open
B. low-pressure switch is jammed shut .
C. thermal bulb is not operating properly
D. scale trap is clogged

1736. **The solenoid valve can be typed as a .**
A. thermal valve
B. magnetic stop valve .
C. bellows valve
D. bimetallic valve

1737. **In terms of pressure and temperature in the refrigerant in the compressor, what happens to the primary? .**
A. its pressure and temperature are both lowered
B. its pressure and temperature are both raised .
C. its pressure is lowered and its temperature is raised
D. its pressure is raised and its temperature is lowered

1738. **What is the purpose of sub cooling R-12 in the condenser? .**
A. to increase the system efficiency by sensible heat transfer
B. to stop the liquid from flashing .
C. to reduce the load on the compressor
D. to remove latent heat of vaporization and the suction piping transfer

1739. **The purpose of the purge valve at the top of the condenser in a refrigerating system is to .**
A. remove any air that may accumulate in the system .
B. take out unpleasant fumes from the refrigerant
C. vent off excess refrigerant in an emergency
D. permit opening the refrigerating system for cleaning and inspecting

1740. **The device used for low-pressure control and high-pressure cutout on a compressor is called a .**
A. cutout
B. pressure controller .
C. controller switch
D. cutout switch

1741. **Where are the zinc plates located? .**
A. saltwater side of the condenser .
B. refrigerant side of the condenser
C. in the evaporator coils
D. in the suction strainer

1742. **Air or noncondensable gas is removed from a refrigeration system by a .**
A. separating chamber
B. system of baffles
C. purge valve .
D. vacuum reducing valve

1743. **If the temperature in the icebox is too high, the trouble could be .**
A. a clogged scale trap
B. air in the system
C. automatic controls not functioning properly .
D. insufficient cooling water to the condenser

1744. **If no gaskets are used in the piping joints of a Freon system, the joints must be .**
A. finished joints
B. welded joints
C. ground joints .
D. soldered joints

1745. **If the head pressure is too high, .**
A. the relief valve should open before the high-pressure cutout
B. the relief valve should open and let excess refrigerant go to receiver
C. the high-pressure cutout switch should operate before the relief valve opens .
D. close in on the suction valve

1746. **If the compressor-discharge temperature is higher than the receiver temperature .**
A. increase the amount of cooling water to the condenser .
B. decrease the amount of cooling water to the condenser
C. add more refrigerant to the system
D. remove some of the refrigerant from the system

1747. **The relief valve is located on the .**
A. discharge side of condenser
B. discharge side of compressor .
C. outlet of the evaporator
D. receiver tank

1748. **The scale trap is located between the .**
A. king valve and the expansion valve .
B. solenoid valve and expansion valve
C. evaporator and receiver
D. compressor and evaporator

1749. **If the high-pressure switch on the compressor opens and stops the compressor a possible cause could be:**
A. too much cooling water going through the condenser
B. not enough refrigerant in the system
C. a leak in the evaporator coils
D. no enough cooling water going through the condenser .

1750. **Which of the following would not cause high suction pressure?**
A. insufficient refrigeration .
B. leaky suction valves
C. expansion valve stuck open
D. suction valve not adjusted properly

1751. **If a compressor runs continuously, the cause might be a .**
A. defective thermal bulb
B. clogged scale trap
C. stuck high-pressure switch
D. stuck low-pressure switch .

1752. **The main distribution duct in an air conditioning system which contains the cooling coils and filters is called the .**

A. manifold .
B. condenser
C. chamber
D. plenum

1753. **In a centrifugal Freon refrigeration system, the overall capacity of the system is increased by .**

A. opening more bypass lines
B. opening additional expansion valves
C. adding refrigerant
D. speeding up the machine .

1754. **The humidity of the atmosphere can be determined by the use of the .**

A. anemometer
B. potentiometer
C. manometer
D. psychrometer .

1755. **The device, which is installed in the compressor suction line to prevent liquid from entering the compressor when hot gas defrosting, is called a .**

A. re-evaporator .
B. receiver
C. dehydrator
D. solenoid

1756. **A centrifugal compressor’s purge recovery unit .**

A. reclaims water
B. purges air without losing refrigerant .
C. purges air with some loss of refrigerant
D. purges lube oil from the refrigerant

1757. **Which one of the following is not generally recognized as one constitute of bilge water? .**

A. Oil leaking from tanks inside engine room
B. Engine room cleaning water
C. Water leaking from the separator sludge tank
D. Sewage .

1758. **When bilge water is heated in a holding tank, which one of the following statements is not accurate? .**

A. The high temperature facilitates primary gravity separation
B. Most of the oil and organic solvents are raised to the top layer
C. The high the temperature is, the more the top oil will be collected
D. The high temperature has little use on the separation of emulsified oil .

1759. **When discharging bilge water, which criteria must be observed? .**

A. The requirement for the oil content of bilge water discharged is 15 ppm
B. No discharge in sensitive waters

C. Any discharge in sensitive waters
D. International, national or local requirements have to be observed .

1760. **Which of the following methods might be used as the treatment on emulsified oil? .**
A. gravity separation
B. centrifuge
C. Cyclone
D. Cross-flow membrane filtration .

1761. **What’s the advantage of oily water separator that meets the requirement of MEPC 60(33) over MEPC 107(49)?**
A. more economic
B. larger capacity on oil treatment
C. less costive
D. more capable of separating emulsified oil .

1762. **Which of the following methods might favor oil emulsion in bilge water?**
A. Raising temperature
B. less use of surfactant
C. more use of solvent .
D. polishing device fouling prevention

1763. **Which of the following methods can not remove the non-separable emulsified oil in bilge water?**
A. gravity separation .
B. use of adsorbents
C. use of flocculents
D. use of chemical addition

1764. **Disposal of all kinds of garbage but is prohibited within Special Areas.**
A. plastics
B. comminuted or ground papers, rags, glass, metal etc
C. food waste comminuted or ground .
D. Incinerator ash

1765. **When the garbage is mixed with some discharges having different disposal or discharge requirements, shall apply.**
A. any requirement appointed by the Officer
B. the most suitable requirement
C. the most stringent requirement .
D. no requirement

1766. **The basic process of biological sewage treatment consists of the liquor either by bubbling air through it or by agitating the surface.**
A. oxygenating .
B. oxidizing
C. deoxygenating
D. proportioning

1767. **It is that reduce the BOD by converting the organic content of the sewage to a chemically and organically inert sludge.**

A. the bacteria .
B. oxygen
C. oxidizing function
D. agitation function

1768. **Bacteria which live are said to be aerobic.**

A. in the presence of oxygen .
B. without oxygen
C. in the presence of nutrition
D. without nutrition

1769. **When anaerobic bacteria convert the sewage to an inert sludge, .**

A. no oxygen is needed .
B. oxygen is necessary
C. oxygen is given off
D. no gas is produced

1770. **The treatment of the fuel oils involves storage, heating, filtering and .**

A. centrifuging .
B. pressurizing
C. atomization
D. igniting

1771. **"A centrifuge consists of an electric motor driving a vertical shaft on the top of which is mounted the bowl assembly." According to this sentence, we can know that is mounted on the top of the vertical shaft.**

A. a centrifuge
B. an electric motor
C. a bowl assembly .
D. a driving motor

1772. **A centrifuge of which the bowl is arranged as the upper and lower parts separate discharges the sludge .**

A. by opening the separator manually
B. by separating the lower part from the upper part automatically .
C. by separating the upper part from the lower part automatically
D. continuously

1773. **Before the sludge in a purifier is ejected, .**

A. the oil feeding is stopped and replaced by admitting flushing water .
B. the flushing water feeding is stopped and replaced by admitting oil
C. the feeding of dirty oil and flushing water is stopped
D. the feeding of dirty oil and flushing water is admitted

1774. **A flash-type evaporator discharges heated seawater into a chamber that is maintained at a pressure than the vapor pressure of the entering heated seawater, and subsequently the flashed water vapor thereby produced.**

A. lower condensing .
B. higher cooling
C. lower cooling
D. higher condensing

1775. **The design of for a flash type evaporator is of critical importance because it must provide an optimum feedwater spray pattern that facilitates the flashing process, and it must also maintain a pressure differential between successive stages.**
A. condenser
B. flashing device .
C. lashing device
D. vacuum pump

1776. **Which one of the followings might not be employed to create vacuum for flash type evaporator? .**
A. high-pressure steam-driven air-ejector
B. motor-driven vacuum pump
C. water-motivated air eductor
D. centrifuge pump .

1777. **The flash-evaporator is different with the submerged-tube evaporator in that for the former .**
A. Water is heated into vapor on heating surfaces
B. Water is vaporized by pressure difference .
C. There are no heating-transfer surfaces
D. There are more heating-transfer surfaces

1778. **For a flash type evaporator, the seawater heater will have to maintain a enough temperature to minimize scale formation.**
A. lower
B. higher
C. low .
D. high

1779. **For a flash type evaporator, a demister is located the condenser.**
A. After
B. before .
C. inside
D. outside

1780. **When the power is shut off, the wire .**
A. becomes slack
B. can not be paid out unless the brake is overhauled or recover wire unless manually operated .
C. will be let out because the brake is out of work
D. may be pay out due to no power

1781. **In an automatic mooring winches, the wire is paid off the barrel at a tension and is recovered at tension.**
A. lower/higher
B. maximum/higher

C. predetermined minimum/higher
D. predetermined maximum/lower .

1782. **The spur geared mooring winches have advantages over worm geared ones in .**
A. higher efficiency of the gear train while reversing .
B. the higher gear ratio
C. the multi-start feature
D. higher recovering speed

1783. **The advantage of the control equipment is .**
A. that the transmitter is on the bridge
B. that local manual control can be achieved
C. that remote control can be achieved
D. simple in construction and reliable in operation .

1784. **The function of the cut-off lever is .**
A. to provide electrical signal
B. to provide feed-back .
C. to provide local manual control
D. to provide right rudder angle

1785. **Aother name for the "swash plate" in the variable delivery pump is**
A. tiltable disc .
B. gravity disc
C. distributing disc
D. catch plate

1786. **Which of the following is NOT true according to the passage?**
A. Both the main steering gear and the auxiliary steering gear should be operated
B. The alarms fitted to the remote control system should be operated
C. The emergency generator compartment should be checked .
D. The communication system between the bridge and the steering gear compartment should be operated

1787. **According to the passage, during the tests, .**
A. the rudder should be moved through its full extent .
B. the rudder should be moved in starboard direction
C. the rudder should be moved with the ship at maximum speed
D. the rudder should be moved with the ship at minimu

1788. **The actual rudder angle reading is .**
A. the rudder angle indicator reading
B. the desired rudder angle reading
C. the measured rudder angle reading .
D. the intended rudder angle reading

1789. **What would the amps be at 240 volts with an 8 ohm resistance?**
A. 32.5 amps
B. 25 amps

C. 1.5-amps
D. 30 amps .

1790. **If two ACgenerators are operated in parallel, the load is distributed evenly by .**
A. a rheostat
B. a balancing coil
C. changing field excitation
D. adjusting the governor settings .

1791. **The voltage output of an A.Cgenerator is controlled by .**
A. varying the D.Cexciter voltage .
B. varying the reluctance of the air gap
C. regulating the speed of the prime mover
D. shorting out part of the armature windings

1792. **Generator brushes are staggered to .**
A. reduce current pulsations
B. reduce brush chatter
C. prevent uneven commutator wear .
D. allow greater power generation

1793. **Which is an acceptable means of correcting high mica between commutator bars?**
A. undercutting .
B. sanding
C. burnishing
D. filing

1794. **When current and voltage reach maximum values at the same time, the power factor is .**
A. minimum
B. maximum .
C. leading
D. lagging

1795. **If a voltmeter is connected across a line, it must be protected with a .**
A. shunt .
B. high-resistance coil in the armature circuit
C. low-resistance coil in the armature circuit
D. shunt and a coil of high resistance

1796. **If two A.Cgenerators are to be operated in parallel, the load is distributed evenly by .**
A. means of rheostat the governor settings
B. a balance coil excitation
C. adjusting the governor settings .
D. changing excitation

1797. **A circuit that has one wire in contact with the hull of the ship is a .**
A. series circuit
B. grounded circuit .

C. short circuit
D. closed circuit

1798. **D.Cgenerators are classified according to the manner in which .**
A. they are used
B. the field windings are connected to the load
C. the armature circuit is connected to the load
D. the field windings are connected to the armature circuit .

1799. **The purpose of the commutator and brushes on a D.Cgenerator is to .**
A. change A.Cto DCcurrent .
B. change DCto A.Ccurrent
C. neutralize a armature reaction
D. carry current to the outside circuit

1800. **The load between two steam-driven alternators operating in parallel may be adjusted by varying .**
A. the speed of the alternators
B. the field strength of the machines
C. the power factor of the alternators
D. steam supply to the prime movers .

1801. **When would you ground an electric hand tool? .**
A. When it is a D.Cmachine
B. When it is an A.Cmachine
C. Any machine that operates on over 100 volts .
D. Only when working on wet steel plates

1802. **All of the following operating characteristics are listed on the name- plates of motors used aboard ship except the .**
A. temperature rise
B. input kilowatts .
C. horsepower
D. operating voltage

1803. **A probable cause for a turbo generator tripping out on overspeed is a sudden .**
A. loss of field excitation
C. total loss of load
B. large increase in load .
D. loss of steam pressure

1804. **The correct phase rotation of a three-phase alternator can be checked with a .**
A. dynamometer
B. power factor meter
C. three-phase motor .
D. polyphase voltmeter

1805. **When two D.Cgenerators operate in parallel, they are protected against motorizing by .**
A. blow out coils

B. governor relay
C. under voltage trips
D. reverse current trips .

1806. **The frequency of the alternating current generated by a synchronous generator is governed by the speed and the .**
A. full excitation
B. load
C. power factor
D. number of poles .

1807. **The load rating of an A.Cgenerator is determined by the .**
A. internal heat it can withstand .
B. load it can carry continuously
C. load it is capable of supplying
D. overload it can carry for a specified time only

1808. **Which of the following is NOT the advantages of the remote control and automation of engine operations? .**
A. Routine supervisory labor particularly the unproductive night-service labor is reduced
B. Engine mal-operation is automatically sensed and manned
C. The engine room need be manned at night in bad weather or close waters .
D. Some remedial measures can be taken automatically

1809. **In the event of failure of an auxiliary such as a lubricating pump, the standby pump is started and put on the line automatically“the line” in this sentence refers to .**
A. fuel manifold
B. lubricating pipe line .
C. auxiliary engine pipe line
D. generator output line

1810. **TWO STEP CONTROLER ACTION is mainly .**
A. proportional control
B. integral control
C. derivative control
D. on-off control .

1811. **The word "offset" most probably means .**
A. predetermined value
B. measured value
C. off-limit
D. sustained deviation .

1812. **Which kind of the following controllers is the most sophisticated controller? .**
A. Proportional controller
B. Integral controller
C. Derivative controller
D. PID controller .

1813. **From the passage, we can learn that the simplest controller action is**
A. two-step controller action .
B. proportional, controller action
C. integral controller action
D. derivative controller action

1814. **The closed-loop system differs from the open-loop system by .**
A. the lack of a feedback
B. the presence of a feed back .
C. the lack of a computer
D. the presence of a computer

1815. **A feedback is an input .**
A. which governs the state of a variable
B. which provides a visual and audible alarm
C. which indicates values of controlled variables
D. which measures the state of the controlled variable .

1816. **The monitoring function may serve all of the following purposes except .**
A. instigating corrective action .
B. indicating values of controlled variables
C. warning of off-limit conditions
D. providing record of performance

1817. **When stand-by engine instructions have been received, it's necessary to make it sure that all valves in the various systems are .**
A. operational .
B. open
C. closed securely
D. at middle position

1818. **When preparing an engine for water temperature .**
A. should be kept at a proper level by a cooler
B. should be raised to about 80℃ by a heater
C. should be raised gradually .
D. should be lowered to about 60℃

1819. **The oil pressure and flow from each bearings can be checked when .**
A. the lubricating pumps are stopped and the access doors are opened
B. the lubricating pumps are running and the access doors are opened.
C. the engine is running and the access doors are closed
D. the engine is stopped and the access doors are closed

1820. **Before starting an engine by air, the engine must .**
A. be turned by a turning gear for at least one minute
B. be turned by a turning gear for at least two minutes
C. be turned at least one complete turn .
D. be turned at least two complete turns

1821. **The guard, fencing or shielding for moving parts or machinery can be removed for repair only when the machinery it belongs to .**

A. stays at rest .
B. is working stably
C. is worn out
D. is in good operation

1822. **In machinery space, the valves, pipes should be .**

A. arranged as close to each other as possible to save space
B. arranged far away from each other for convenient operation
C. be fixed or clamped to avoid vibration .
D. kept easy removable as to convenient repairing work

1823. **All items such as steam pipes, exhaust pipes and fittings which, because of their location and operating temperature, present a hazard should be adequately laggedThat means the items should .**

A. not be put into operation too early
B. be pay adequate attention to
C. be used only when necessary
D. be coated with certain material .

1824. **Waste oil should .**

A. be treated according to the C/Es command exactly
B. be treated according to MARPOL .
C. accumulate in bilges or on tank tops in accordance with MARPOL
D. discharge to sea at the specified areas

1825. **In order to remove the carbon deposit from the threaded recess, we can use .**

A. a driver .
B. a scraper
C. a tap
D. a file

1826. **Any friction fit, tightness or adhesion of the part of any load being lifted should be broken by wedge or tapping and not by increasing the load on the applianceAccording to this sentence, .**

A. the lifting appliance can always lift the freight within its rated load
B. attention should be paid in order not to break the wedge when lifting cargo
C. sometimes the lifting work needs other assistance other than the lifting appliance .
D. lifting work should be done with every part fit, tightness or adhesion

1827. **If there were a fire in the bunker tanks, you would .**

A. close the vent .
B. pump out the tank
C. activate the fixed CO2 system
D. cut off the heating coils

1828. **All classes of fires can be safely combated using .**

A. foam
B. CO2 .

C. low velocity water fog
D. high velocity water fog

1829. **Spontaneous combustion could occur in .**
A. paint thinner in an open can
B. fuel accumulation in the bilge
C. oily rags in an unvented compartment .
D. gasoline stored in steel drums

1830. **If a fire occurs in the boiler room because of a leaking fuel line to a burner, you shut off the fuel using the .**
A. burner valve
B. root valve
C. quick closing valve .
D. oil return valve

1831. **Fires in escaping flammable gas are quickly brought under control by .**
A. stopping the flow of gas .
B. reducing the chemical chain reaction
C. increasing the oxygen supply
D. cooling below the autoignition point

1832. **A large oil fire is best extinguished with .**
A. soda acid
B. foam .
C. CO2
D. sand

1833. **Water is a very effective fire extinguishing agent because it .**
A. will remove all the toxic fumes from the air
B. has the greatest cooling ability .
C. will leave no harmful residue
D. completely removes combustible vapors from the air

1834. **Which one is not the personal safety equipment?**
A. Lifejackets
B. Survival at Sea manual
C. lifeboat .
D. torch

1835. **Which one might be used most likely in case of a fire?**
A. lifejacket
B. SCBA
C. lifeboat
D. torch .

1836. **Which one is not important for your safety on board ship?**
A. know where the lifejacket is stowed
B. know where the life-saving craft are fitted on the ship

C. know the escape routes
D. Good professional knowledge .

1837. **Which one is true as regards to the hardhat according to the passage?**
A. It needs not to be regularly replaced
B. It is designed to protect from possible impact .
C. It is required to be worn on deck at all times by all ships
D. fibreglass hardhat should not be used on board ships

1838. **Which one of the following information can not be found in engine room induction according to the passage?**
A. special precautions to deal with heat
B. engine room safety procedures such as earmuffs, safety glasses, work clothes
C. emergency escapes
D. the location of safety equipment around the ship .

1839. **Which one of the following is not true according to the passage?**
A. It’s important to make clear the chain of command within the vessel
B. It is primarily your own responsibility to look after your person safety
C. The porthole is the first choice to escape when in emergency.
D. all cabins are fitted with a Survival at Sea Manual

1840. **Which of the followings needs not to be considered for bunkering? .**
A. When to bunker?
B. Type of FO
C. Pollution prevention measures
D. Engineer to be responsible for.

1841. **Which of the followings needs not to be considered during bunkering?**
A. All scuppers plugged by carpenter .
B. Tanks sounded from time to time
C. Watch kept for leakage
D. Take oil samples

1842. **Who will mainly handle the negotiation during store and spare parts transaction?**
A. Chief engineer .
B. Second engineer
C. Master
D. Chief engineer

1843. **When you are asked to assist in accepting delivery of goods, you should .**
A. make clear of your authority .
B. make friends with ships crew
C. call the first engineer if there is a problem
D. call the master if there is a problem

1844. **When accepting engine room spares, you should .**
A. send a requisition list to the supplier
B. check that whether the items ordered have been already delivered .

C. make the chief engineer on sport
D. follow a preset procedure

1845. **In order to improve the efficiency of the communication with shore personnel, you should .**
A. inform the chief engineer whenever there are problems
B. reduce the time wasted on checking items
C. know who is responsible for the domestic cleaning equipment
D. know the chain of authority on the ship .

1846. **Why shiprepair is an inherently difficult business to manage in the conventional sense? .**
A. Because it is difficult to plan and manage .
B. Because it is cannot be well categorized
C. Because it is a difficult work for people to undergo
D. Because it is seldom researched by research

1847. **Which one of the following repair will cost the least cost? .**
A. Routine docking repair
B. Voyage repair .
C. Damage repair
D. Conversion

1848. **The guide shoes are secured to the crosshead by means of .**
A. through bolts
B. end chock bolts
C. side chock bolts
D. tap-bolts .

1849. **For a general cargo ship, is not the necessary certificate/document that the PSCO will examine.**
A. Survey Report File .
B. Minimum Safe Manning document
C. Certificates of Competency
D. International Oil Pollution Prevention

1850. **If , the PSCO should proceed to a more detailed inspection.**
A. the PSCO’s general impression confirm a good standard of maintenance
B. the certificates are valid
C. the PSCO believes the ship doesn’t meet the requirements .
D. the PSCO can’t find deficiencies at first glance

1851. **If the PSCO has clear grounds for carrying out a more detailed inspection,_____.**
A. the master should be immediately informed .
B. the master will be prohibited from contacting the Administration or other organization
C. he will carry out the inspection after the master be informed and be ready
D. he will carry out the inspection without informing the master

1852. **The main purpose of port State control is not to_____.**
A. prevent an unsafe ship proceeding to sea
B. prevent a ship threatening the marine environment

C. fine the ships .
D. confirm a safe sailing

1853. **In deciding to detain a ship or not, the PSCO would better not_____ .**
A. make his decision independently .
B. request the owner’s representative to provide proposals
C. cooperate with the flag State Administration’s representatives
D. consult the organization responsible for issuing the relevant certificates

1854. **Which of the followings is not an indication of a bad maintenance? _____ .**
A. a pipe with welded connections .
B. a pipe with several clips
C. a cement box
D. a leaking valve

1855. **When the chief engineer is in the machinery spaces, the officer in charge of the engineering watch shall_____ .**
A. continue to be responsible for machinery space operations despite the presence of the C/E .
B. hand over the responsibility actively
C. be responsible for the watching together with the chief engineer
D. assistant the chief engineer to control the machinery

1856. **The responsibilities of the engineer officer in charge of the watch do not include _____ .**
A. to ensure the main propulsion plant are kept under constant surveillance
B. to ensure the auxiliary systems are kept under constant surveillance
C. to inspect the steering gear spaces at suitable intervals
D. to inspect and overhaul the equipments in his charge .

1857. **When the engine room is put in standby condition, the engineer in charge of the watch need not to _____ .**
A. ensure all machinery which may be used during maneuvering is in ready
B. ensure an adequate reserve of power is available for steering gear and other requirements
C. keep the main propulsion unit controls continuously attended when in the manual mode of operation
D. ensure all machinery which may be used during maneuvering is running stably .

1858. **At an unsheltered anchorage the chief engineer officer shall consult with the master whether or not to maintain an underway watch“An underway watch” means_____.**
A. a watch which is kept with lower standard
B. a watch which is kept when the ship isnt sailing
C. a watch which is kept when the ship is sailing .
D. a watch which is kept when the ship is in a restricted visibility area

1859. **The MARPOL Convention is the main international convention .**
A. about marine pollution prevention .
B. covering marine protection of life
C. about marine
D. about ship and port security

1860. **According to Annex I of MARPOL 73/78, oily waste from cargo tanks of oil tankers can be discharged when the ship is more than_____ away from the nearest land.**

A. 50 nautical miles .
B. 30 nautical miles
C. 15 nautical miles
D. 12 nautical miles

1861. **According to Annex I of MARPOL 73/78, the instantaneous discharging rate of the oily waste from cargo tanks of oil tankers must be lower than .**

A. 30 liters per nautical mile .
B. 15 liters per nautical mile
C. 30 ppm
D. 15ppm

1862. **According to Anneal I of MARPOL 73/78, the discharging oil content of the machinery space bilges must be lower than .**

A. 30 liters per nautical mile
B. 15 liters per nautical mile
C. 30 ppm
D. 15ppm .

1863. **According to Annex IV of comminuted and disinfected sewage using an approved system can be discharged when the ship is more than away from the nearest land.**

A. 3 n mile .
B. 5 n mile
C. 12 n mile
D. 25 n mile

1864. **According to Annex V of MARPOL 73/78, the dunnage, lining and packing materials which will float can be discharged when the ship is more than_____away from the nearest land.**

A. 3 n mile
B. 5 n mile
C. 12 n mile
D. 25 n mile .

1865. **The latest annex of MARPOL 73/78 is about .**

A. the Prevention of Pollution by Oil
B. the Prevention of Pollution by Noxious Liquid Substances in Bulk
C. Prevention of Pollution by Garbage from Ships
D. Prevention of Air Pollution from Ships .

1866. **The SOLAS Convention is the main international convention .**

A. about marine pollution prevention
B. covering safety of life .
C. about marine
D. about ship and port security

1867. **A Convention about safety of life at sea was adopted in 1974 which included a new amendment procedure, according which an amendment shall enter into force .**

A. after being accepted by more than two thirds of the Parties
B. after being accepted by more than half of the Parties
C. within a specified period of time with no objections .
D. within a specified period of time with no exceptions

1868. **According to SOLAS, 1974, as amended, the shipowner or any person who has assumed responsibility for the ship (the "Company") must .**
A. establish SMS in accordance with ISM .
B. establish ISM in accordance with SMS
C. establish ISM and SMS
D. both B and C

1869. **To proceed to the assistance of a ship in distress is .**
A. an obligation for masters of passing by ships .
B. optional for masters of passing by ships when the weather is fine
C. prohibited by the Convention SOLAS, 1974, as amended
D. prohibited by the convention STCW 78/95

1870. **We generally take the convention of safety of life at sea adopted in 1974 as a completely new convention, the reason is .**
A. it included the amendments agreed up until that date
B. it included none of the amendment agreed up until that date
C. it required two thirds of the Parties' acceptance for a amendment to enter into force
D. it included a tacit acceptance procedure .

1871. **The main objective of the SOLAS Convention is .**
A. to provide a solution of lowering pollution at sea
B. to specify minimum standards for the members composing the watch at sea
C. to specify minimum standards for ships considering their safety .
D. to tell the company how to go about running their business

1872. **The objective of ISPS Code is .**
A. to protect the marine environment
B. to provide a method to avoid an accident
C. to protect the ship from collision
D. to keep terrorism action away from ships .

1873. **The ISPS Code consists of a mandatory section-Part A, which shows .**
A. the detailed security-related requirements .
B. guidelines to meet security-related requirements
C. the detailed security-related requirements and the guidelines to meet them
D. how to run a shipping company considering the potential terrorism action

1874. **According to the ISPS Code, for a sailing ship, the following except_____should be onboard.**
A. a ship security plan
B. a ship security officer
C. a company security officer .
D. certain onboard equipments

1875. **In order to communicate the threat at a port facility or for a ship, the Contracting Government will set the appropriate security levelsSecurity level 1 corresponds to .**

A. normal situations .
B. medium situations
C. high threat situations
D. special situations

1876. **New adopted regulation of master shall_____when maintaining the security of the ship.**

A. take actions by he company’s order
B. take actions by the ship owner’s order
C. exercise his professional judgment .
D. exercise his professional judgment but be constrained by the company

1877. **When the ship security alert system is activated, it shall not .**

A. initiate a ship-to-shore security alert
B. transmit a ship-to-shore security alert
C. initiate an alert identifying the ship, its location
D. raise a security alarm on-board the ship indicating that the ship is under threat .

1878. **The International Management Code for the safety operation of ships and for Pollution Prevention is referred to as .**

A. ISM Code .
B. IOPP Code
C. IMS Code
D. ISPS Code

1879. **Which of the following about ISM Code is not right? .**

A. It aims to ensure safety at sea
B. It aims to avoid damage to the environment
C. It aims to prevent human injury or loss of life
D. It aims to provide a method to run a company .

1880. **Which kind of vessel is not required to comply with the ISM code until 2002?**

A. Passenger ships and high-speed crafts of 500 gross tons or more
B. Oil tankers and Chemical tankers and Gas carriers
C. Bulk freight vessels
D. General cargo vessels .

1881. **Which of the following is false? .**

A. A company should develop a SMS and implement it
B. A company implementing a SMS properly may obtain a DOC
C. Once a company obtains its DOC, each vessel of this company will obtain a SMC .
D. DOC is valid for 60 months unless “major non-conformity” is found

1882. **Which of the following is true? .**

A. A company should develop an ISM and implement it
B. A company implementing an ISM properly may obtain a DOC
C. Once a company obtains its DOC, each vessel of this company will obtain a SMC
D. DOC is valid for 60 months unless “major non-conformity” is found .

1883. **In the ISM code, “company” doesnt mean .**

A. the ship owner
B. the manager or bareboat charterer
C. a person assuming the responsibility for ship operation
D. a business enterprise dealing with freight .

1884. **According to Maritime Labour Convention, 2006, the maximum hours of work shall not exceed .**

A. 14 hours in any 24-hour period .
B. 77 hours in any seven-day period
C. ten hours in any 24-hour period
D. 88 hours in any seven-day period

1885. **According to Maritime Labour Convention, 2006, the maximum hours of work shall not exceed .**

A. 10 hours in any 24-hour period
B. 72 hours in any seven-day period .
C. ten hours in any 24-hour period
D. 88 hours in any seven-day period

1886. **According to Maritime Labour Convention, 2006, The minimum age at the time of the initial entry into force of this Convention is _____years.**

A. 18
B. 16 .
C. 22
D. 20

1887. **According to Maritime Labour Convention, 2006, the minimum age at the time of the initial entry into force of this Convention is 16 yearsNight work of seafarers under the age of _____shall be prohibited.**

A. 18
B. 16 .
C. 22
D. 20

1888. **The Company should ensure that _____ involved in the Company’s SMS have an adequate understanding of relevant rules, regulations, codes and guidelines.**

A. masters
B. chief engineers
C. crew
D. all personnel .

1889. **The Company should ensure that the master is fully _____ with the Companys SMS.**

A. familiar .
B. understand
C. conversation
D. confused

1890. **The SMS should provide for _____ ensuring that the Companys organization can respond at any time to hazards, accidents and emergency situation involving its ships.**
A. programs
B. progress
C. members
D. measures .

1891. **An oil in water monitor is required in order to measure _____.**
A. the oil content in water .
B. the water content in fuel oil
C. the water level in bilge well
D. the oil level in bilge well

1892. **A vessel is required to carry an Oil Record Book Part I to log entries in the book regarding the _____.**
A. discharge of ballast or cleaning water from fuel tanks .
B. sounding levels of all fuel tanks on a daily basis
C. grade and specific gravity of all fuel oil carded
D. fuel consumption rates on a weekly basis

1893. **A segregated ballast system is a system where _____.**
A. all ballast is processed through the oily water separator
B. ballast is taken on and discharged through a separate main deck riser
C. ballast and cargo tanks are separated by cofferdams
D. all ballast lines, tanks, and pumps are independent of those used for oil .

1894. **The abbreviation "GM" is used to represent the _____.**
A. height of the metacenter
B. fighting arm
C. righting moment
D. metacentric height .

1895. **Which of the following statements describes one of the functions of the ballast system?**
A. To permit flooding of any fuel oil storage tank on any class of ship
B. To use it as a secondary service system
C. To store reserve feed or potable water for extended cruises
D. To stabilize the ship by flooding certain designed tanks with seawater.

1896. **The lowest temperature at which the vapor formed from a liquid ignites and continues to burn steadily in the presence of an ignition source is called the _____.**
A. flash point
B. fire point .
C. upper explosive limit
D. lower explosive limit

1897. **Which of the following operations aboard a tanker must be recorded in the Oil Record Book _____.**
A. Any internal transfer of oil cargo during a voyage
B. The discharge overboard in port or at sea of any bilge water accumulated in machinery spaces

C. The loading or unloading of any or all oil cargo

D. All of the above .