Objective question of Diesel trade theory MDT-02

1. What is the full form of IC Engine?
   a) Internal combustion b) inside combustion c) integrated combustion d) none

2. In a Diesel locomotive which type of engine is used
   a) Compression ignition b) spark ignition c) forced ignition d)none

3. In how many revolution of crack shaft there is one power stroke in four stroke engine
   a) two b) three c) four d) none

4. In how many revolution of crack shaft there is one power stroke in two stroke engine
   a) two b) one c) four d) none

5. In entry of fresh air inside the closed chamber of engine is called
   a) suction b) compression c) ignition d) exhaust

6. In travel of piston from BDC to TDC of engine is called
   a) suction b) compression c) ignition d) exhaust

7. In travel of piston from TDC to BDC of engine is called
   a) suction b) compression c) ignition d) exhaust

8. The diagram which shows the movement of valves relative to movement of crank shaft is called
   a) Valve timing diagram b) power diagram c) diesel cycle d) none

9. The diagram which shows the movement of valves relative to movement of crank shaft is called
   a) Valve timing diagram b) power diagram c) diesel cycle d) none

10. The power assemblies used in Alco locomotives are working as
    a) two stroke b) four stroke c) external ignition d) none

11. The power assemblies used in EMD locomotives are working as
    a) two stroke b) four stroke c) external ignition d) none

12. The entry of fresh air inside the compression chamber for a slight duration when both the valves are open is called
    a) scavenging action b) clean up c) cooling cycle d) thermal off load

13. What is the firing order of for engine on Alco locomotives
    a) 1-4-7-6-8-5-2-3 b) 1-4-8-5-2-3-7-6 c) 1-4-2-3-7-6-8-5 d)1-2-3-4-5-6-7-8

14. What is the value of bore in Alco locomotives
    a) 9 inch b) 12 inch c) 9.5 inch d) 14 inch

15. What is the idle rpm of engine in Alco locomotives
    a) 405 b)505 c)700 d)400

16. What is the app. Swept volume per cylinder in Alco locomotives
    a) 12 ltrs b) 9 ltrs c) 10.5 ltrs d) none

17. The diesel engine used in Alco locomotives is having which shape
    a) W shape b) "I" shape c) "V" shape d) none

18. The engine base of Alco locomotive don't serve which purpose
    a) support engine block b) serves as oil pump c) accommodate lube oil header
    d) holds the generator

19. The engine block is made up of which metal
    a) cast iron b) Aluminium alloy c) Low carbon steel d) Mild steel

20. Which process comes first in manufacturing of engine block
    a) welding b) shot blasting c)milling of bores d) machining

21. The maximum possible misalignment permitted in main bearing housing bore between two adjacent bores is
    a) 0.002" b) 0.003" c) 0.004" d) none

22. The maximum possible misalignment permitted in main bearing housing bore between any two bores is
    a) 0.002" b) 0.003" c) 0.004" d) none

23. During POH the hydraulic test of engine block is carried out at which pressure
    a) 3.5 kg/cm^2 b)2.5 kg/cm^2 c)1.5 kg/cm^2 d) none

24. The singular costliest part of the diesel engine is
    a) base b) crank shaft c) Cylinder head d) cam shafts

25. The crank shaft of Alco locomotives are made up of which metal
    a) chrome-molybdenum steel b) high carbon steel c) nickel steel
    d) none

26. What is the nominal diameter of the crank pin
    a) 6 inch b) 9 inch c) 5 inch d) none

27. One of the process which is used for surface hardening of crankshaft is
    a) nitriding b) dynamic balancing c)stress releving d) none

28. During POH inspection of crank shaft the eccentricity is checked between how many numbers of main journals
    a) three b) four c) two d) none

29. During crank shaft web deflection check the maximum limit of total indicator reading is
    a) 0.0016 inch b) 0.0008 inch c) 0.0010 inch d)0.0020 inch

30. In a diesel engine the vital role of cam shaft is
    a) opening and closing of valves b) rotate auxiliary assemblies
    c) drive the OSTA d) none

31. The lubrication of the cam shaft is provided by means of
    a) rifle hole in the centre b)external jumper pipe c) felt wick d) none

32. The value of tappet clearance for Alco locomotive is
    a) 0.034 inch b) 0.044 inch c) 0.024 inch d) none

33. How many studs are provided for fitment of Cylinder heads in Alco locomotives
    a) 7 b) 8 c)5 d) none

34. Which part is used as replaceable wearing part in Cylinder head assembly
    a) valve seat insert b) valve stem c) valve spring d) none

35. The cylinder head casting are made up of
    a) alloy cast iron b) Aluminum alloy c) high speed steel d) none

36. During yearly inspection the hydraulic test of cylinder heads is carried out a pressure of
    a) 70 psi b) 60 psi c) 90 psi d) none

37. The blow by test for cylinder head is carried out to test
    a) Thermal stress b) sealing effect c) cooling effect d) none

38. During blow by test if leakage appears through TSC which assembly may be defective
    a) cylinder head b) liner c) exhaust manifold d) none

39. During blow by test if leakage appears through sump which assembly may be defective
    a) cylinder head b) liner c) exhaust manifold d) none

40. The liners in which liner does not come direct contact with the coolant are also known as
    a) dry liner b) wet liner c) distant liner d) none

41. The liners in which liner remains in direct contact with the coolant are also known as
    a) dry liner b) wet liner c) distant liner d) none

42. In Alco locomotives liners are made up of
    a) alloy cast iron b) Stainless steel c) aluminum alloy d) none

43. Which one of these is not a major defect of liners during service
    a) wear in bore b) loss of interference c) cavitation erosion d) stress

44. Which one is a reason for not using cast iron as piston material
    a) better heat conductivity than aluminum
    b) More compressive strength than aluminum
    c) Heavier in weight
    d) coefficient of expansion nearly equal to that of liner

45. The joint between ring carrier and piston is welded at the crown by which method
    a) arc welding b) TIG welding c) Inert gas welding d) none

46. Which one of these is not a function of piston ring
    a) sealing of combustion chamber
    b) scraping down of excess lube oil
    c) prevention of lube oil entry into combustion chamber
    d) polishing of liner inner surface

47. Which one of these is not a part of conventional piston rings set used in Alco locomotives
    a) Barrel shaped b) taper ring c) square shaped d) oil scraper

48. Which one of these is not an advantage of fuel efficient rings set
    a) reduction of piston ring wear
    b) reduction of lube oil consumption
    c) reduction of fuel oil consumption
    d) reduction of flash point

49. In Alco locomotives piston and crankshaft are connected through means of
    a) Connecting rod b) lash adjuster c) cross head d) none

50. The reciprocating motion of piston is converted into rotating motion of crank shaft by which part of the engine
    a) connecting rod b) cam shaft c) lifter assembly d) none

51. Which one of the below is not a part of connecting rod assembly
    a) connecting rod b)piston pin bushing c) bearing shell d) piston

52. Which one of above is not checked during assembly of piston ring
    a) proper sequence b) ring gap c)side clearance d)twist

53. Which one of below is not a non destructive testing
    a) magna flux test b) zyglo test c) nick break test d) ultra sonic testing

54. Which test is done for examination of segregation and oxidation of non ferrous materials
    a) RDP test b) UTS test c) Nick break test d) izod charpy test

55. The portion of engine block which houses the crank shaft is called
    a) saddle b) base c) sump d) none

56. What is a mandrel
    a) straight iron bar
    b) fixture for dial gauge
    c) enlongation gauge
    d) none

57. Which one is not an example of plain bearing
    a) main bearing
    b) connecting rod bearing
    c) TSC bearing
    d) governor linkage bearing

58. Which one is the correct order of layers in trimetal bearing
    a) steel back-intermediate-nickel dam-overlay
    b) steel back-nickel dam -intermediate-overlay
    c) steel back-overlay-intermediate-nickel dam
    d) nickel dam-steel back-intermediate- overlay

59. Which one of the above is not correct for prevention of bearing failure
    a) Maintain clean working environment
    b) Not rubbing the polished surface
    c) clean and free oil passage
    d) annealing before fitment

60. Which one of above is not a type of bearing failure/defect
    a) split line fretting
    b) creep/back fretting
    c) static fretting
    d) electromagnetic fretting

61. Which one of above is not a purpose of providing fuel oil system in Alco locomotive
    a) to ensure correct amount of fuel delivery
    b) to ensure correct form of fuel delivery
    c) to ensure correct time of fuel delivery
    d) to maintain ratio of fuel to lube oil

62. What is purpose of providing a relief valve at outlet of fuel oil pump
    a) to prevent fuel pump motor from overloading
    b) to maintain fuel oil pressure in the system
    c) to boost up the outlet fuel pressure
    d) none

63. What is the pressure setting of fuel oil relief valves in Alco locomotives
    a) 5.2 Kg/cm^2 b) 4 Kg/cm^2 c) 6.5 Kg/cm^2 d) none of above

64. What is the purpose of providing a regulating valve in fuel oil system
    a) to maintain pressure in the system
    b) to provide bypass passage to fuel
    c) to remove dirt etc
    d) none of the above

65. What is the pressure setting of fuel oil regulating valves in Alco locomotives
    a) 3.5 Kg/cm^2 b) 3 Kg/cm^2 c) 4.0 Kg/cm^2 d) none

66. What is the media used inside the filter assembly for filteration of fuel
    a) cotton b) glass wool c) paper d) wire mesh

67. At which location copper washers are used in fuel oil system of Alco locomotives
    a) between FIP and injector
    b) between banjo pipe and FIP
    c) between Injector and HP tube
    d) none of above

68. A snubber valve is provided at outlet of fuel injection pump to prevent
    a) back flow of fuel oil
    b) reduce outlet oil pressure
    c) to reduce vibrations
    d) none of the above

69. The full form of HP tube is
    a) High power tube
    b) Hollow passage tube
    c) High potential tube
    d) high pressure tube

70. The orifice test is carried out for which purpose
    a) to ascertain the efficiency of fuel feed system
    b) to check fuel oil consumption for a particular period
    c) to check fuel pressure drop at load
    d) none of the above

71. The features of a good injector nozzle don't contains
    a) good atomization
    b) correct spray pattern
    c) no dribbling
    d) no hunting

72. Which one is not a probable cause of nozzle dribbling
    a) improper pressure setting
    b) dirt stuck between valve and valve seat
    c) valve sticking inside the body
    d) excess fuel pressure

73. What is nozzle chattering
    a) cracking sound due to free movement of valve inside body
    b) abnormal sound due to improper sprat pattern
    c) sound due to turbulent flow of fuel inside nozzle
    d) none of the above

74. Which one of the above is not a part of fuel efficient kit for Alco locomotives
    a) 17 mm FIP
    b) modified cam shaft
    c) large after cooler
    d) e-beam power cables

75. The value of fuel oil pressure at full load will change as compared to at idle value
    a) increase b) decrease c) remain same d) any of above

76. Which one in nor an advantage of supercharged engine
    a) more power with same engine dimension
    b) carbon free components
    c) better cooling of components
    d) better adhesion ratio

77. Which is not a method of supercharging
    a) by means of roots blower
    b) by using reciprocating compressor
    c) by blower driven by exhaust gases
    d) by inertial filters

78. The inlet casing of turbo chargers which is made up of heat resistant material is called
    a) gas inlet casing b) suction strainer c) accumulator d) none

79. The middle portion which supports rotor assembly is called
    a) gas inlet casing b) intermediate casing c) middle casing d) none

80. The portion which contains the blower assembly is known as
    a) blower casing b) cool cage c) diamond box d) propeller

81. What is not a purpose of air cushioning
    a) prevent mixing of hot air with lube oil
    b) prevent leakage of lube oil through oil seals
    c) cooling of hot turbine disc
    d) to ensure free movement of rotor assembly

82. What is the purpose of after cooler in a locomotive
a) increase air density b) cooling of water c) cooling of lube oil d) none

83. Which test is carried out to ensure free running of rotor assembly of a TSC.
a) run down test b) soap test c) dynamic balancing d) back lash

84. Which one is not a purpose of providing a lube oil system in Alco locomotive
a) cooling of components
b) protection of metal surfaces
c) keep the components clean
d) proper burning of fuel oil

85. What is the lube oil sump capacity in Alco locomotives
a)1000 ltrs b) 1270 ltrs c) 950 ltrs d) 1550 ltrs

86. How the compressor of locomotive gets drive power
a) through belt b) through shaft coupling c) through magnetic coupling
d) none of above

87. At what locations compressed air of compressor is not being used in locomotives
a) Horn blowing b) Movement of power contactors c) operation of brake system d) booster air pressure for TSC

88. Air dryer is fitted at which location
a) between MR1 and MR2
b) between compressor and MR1
c) between HP and LP cylinder of compressors
d)none of the above

89. Air supply to horn is provided through which location
a) MR1 b) MR2 c) auxiliary reservoir d) none

90. What is an expressor
a) Combined unit of compressor and exhauster
b) Modified exhauster
c) New type of compressor
d) Device used to display parameter

91. Cylinder head's lower face is subjected to high shock stress and combustion temperature.
a) True b) False

92. Cylinder head's lower face forms a part of combustion chamber.
    a) True b) False

93. Cylinder head is made by casting method.
    a) True b) False

94. There are provisions for cooling passages in Cylinder head.
    a) True b) False

95. The Cylinder has passages for inlet air and exhaust gases.
    a) True b) False

96. There is space provided for holding fuel injection nozzle in Cylinder head.
    a) True b) False

97. Valve seat insert is fitted at lower face of cylinder head.
    a) True b) False

98. The valve springs are fitted using spring lock at cylinder head.
    a) True b) False

99. Valve seat insert with lock rings are replaceable wearing parts of a cylinder head.
    a) True b) False

100. The valve seat insert are made up of satellite or welite.
    a) True b) False

101. The valve seat are fitted using interference fit method.
    a) True b) False

102. The inlet valves are ground at an angle of 30^0.
    a) True b) False

103. After assembly cylinder head is hydraulically tested at 70 psi.
    a) True b) False

104. The fitment of cylinder head is made a metal to metal joint with cylinder liner.
    a) True b) False

105. The torque value of cylinder head stud is 550 foot pound.
    a) True b) False

106. In 251 plus cylinder head the thickness of fire deck has been reduced for better heat transmission of heat.
a) True b) False

107. In 251 plus cylinder head the middle deck is modified by increasing number of ribs to increase mechanical strength.
a) True b) False

108. In 251 plus cylinder head water holding paucity is increased by increasing number of cores.
a) True b) False

109. In 251 plus cylinder head frost core plug is done instead of threaded plug, to arrest leakage.
a) True b) False

110. The 251 plus cylinder head is made lighter in weight.
a) True b) False

111. There is no provision of retaining rings for valve seat inserts in 251 plus cylinder head.
a) True b) False

112. During maintenance and inspection face seat thickness of cylinder head is checked.
a) True b) False

113. During maintenance and inspection straightness of valve stem is checked.
a) True b) False

114. During maintenance and inspection to ensure leak proof joint with liner lapping of face is done.
a) True b) False

115. Tell tale hole in cylinder head tells about the condition of cylinder head in running condition.
a) True b) False

116. Liners forms the wall of combustion chamber in engine of locomotive.
a) True b) False

117. Liners guides the movement of piston inside it.
a) True b) False

118. Liners are mainly of two types dry liner and wet liner.
    a) True b) False

119. Dry liner are those in which liner does not come in direct contact with coolant.
    a) True b) False

120. Dry liners fits in as a sleeve inside an already complete cylinder.
    a) True b) False

121. Dry liners are used only in very small engine.
    a) True b) False

122. Wet liner are those which not only forms the cylinder wall, but also form a part of water jacket.
    a) True b) False

123. Liners are having slight interference fit on upper and lower decks of the engine.
    a) True b) False

124. Lack of interference fit or defect in gasket of liner may result water contamination.
    a) True b) False

125. The liner bores have chrome plated inner surface and it is honey combed by electrolytic process.
    a) True b) False

126. In Alco loco liners are made of high strength close grained alloy cast iron.
    a) True b) False

127. Connecting rod is a member connecting piston and crankshaft and is a medium for converting the reciprocating motion to rotary motion.
    a) True b) False

128. In four stroke engine during compression and power stroke the connecting rod is subjected to high compressive load.
    a) True b) False

129. In four stroke engine during suction stroke the connecting rod is subjected to high tensile stress.
    a) True b) False

130. Connecting rod are having fine drilled hole from big end to small end for transporting lubricating oil.
a) True b) False

131. The connecting rod assembly consists of connecting rod, connecting rod cap, piston pin bushing, bearing shells.
a) True b) False

132. During assembly the connecting rod bolts are enlongated to value of 0.015”to 0.018”.
a) True b) False

133. Connecting rods are mostly made up of carbon steel or alloy steel forging.
a) True b) False

134. During maintenance and inspection big end bore dia of connecting rod is checked for which max. allowed ovality is 0.003”.
a) True b) False

135. The max. allowed value of twist and bend for connecting rod of Alco locomotive is 0.002” & 0.001” respectively.
a) True b) False

136. Supercharging is done is increase the power out put of engine.
a) True b) False

137. The engines which don’t have provision of supercharging are called normally aspirated engine.
a) True b) False

138. The engines which have provision of supercharging are called super charged engine.
a) True b) False

139. The air pressure created by turbo supercharger is called booster air pressure.
a) True b) False

140. Cooling of turbo supercharger is done by flow of lube oil in Alco loco at present.
a) True b) False

141. The abnormal sound created by a turbo supercharger due to sudden turbulent flow of air is called surging.
a) True b) False

142. In Alco locomotive TSC is driven by exhaust gases.
a) True b) False

143. In GM locomotives TSC is driven by gear upto 6^{th} notch and after that it is driven by exhaust gases.
a) True b) False

144. There is provision of pre priming of TSC in GM loco, which is controlled by micro processor.
a) True b) False

145. During the pre priming period of TSC in GM loco, cranking of engine is not possible.
a) True b) False

146. For pre priming a separate electrical pump is provided in GM locomotive.
a) True b) False

147. The pump provided for pre priming of TSC in GM loco is called soak back pump.
a) True b) False

148. There is a non return valve provided in the passage of soak pump to TSC of GM loco.
a) True b) False

149. Turbo run down test is carried out check efficiency of a TSC.
a) True b) False

150. For conducting turbo run down test in Alco locomotive, engine rpm is maintained at 4^{th} notch and then engine is made shut down using any shut down safety device.
a) True b) False

151. For measurement of turbo run down time it considered duration at which crank shaft stopped to stopping rotation of TSC rotor assembly.
a) True b) False

152. The combined unit of compressor and exhauster is called expressor.
a) True b) False

153. The compressed air of air compressor is used for operation of brake system in locomotives.
a) True b) False

154. There is air dryer fitted between main reservoir tank one and two.
a) True b) False

155. The purpose of air dryer is make the compressed air moisture free.
a) True b) False

156. The compressor works in range of air pressure known as loading-unloading range.
a) True b) False

157. The loading unloading range of compressor for Alco locomotive is 8~10 Kg/cm^2.
a) True b) False

158. There are provisions for suction and discharge valves at cylinder heads of compressor.
a) True b) False

159. There function of intercooler is to cool down compressed air before entering to high pressure cylinder.
a) True b) False

160. The purpose of providing a fuel oil system in locomotive is to ensure delivery of fuel in correct form, correct time and in correct amount.
a) True b) False

161. The full form of HSD is high speed diesel.
a) True b) False

162. The purpose of relief valve in fuel oil system is to protect fuel pump motor from overloading.
a) True b) False

163. The purpose of regulating valve is to maintain pressure in fuel oil system.
a) True b) False

164. The pressure of fuel is raised considerably in fuel injection pump.
a) True b) False

165. The pressurized fuel from fuel injection pump goes to injector through high pressure tube.
a) True b) False

166. Fuel from fuel header is supplied to fuel injection pump through banjo pipe in Alco locomotive.
a) True b) False

167. Copper washers are used between Fuel banjo pipe and fuel injection pump for sealing purpose.
a) True b) False

168. Dribbling is defect related to fuel injector of Alco locomotives.
a) True b) False

169. What is the grade of lube oil used in Alco locomotives
a) RR-520 b) RR-606 c) SP-150 d) RR-460

170. What is the purpose of relief valve in lube oil system of locomotives
a) to prevent lube oil pump from overloading
b) to maintain lube oil pressure in the system
c) to boost up the outlet lube oil pressure
d) none of the above

171.What is the pressure setting of lube oil relief valves in Alco locomotives
a) 8 Kg/cm^2 b) 7.4 Kg/cm^2 c) 6.0 Kg/cm^2 d) none of above

172. What is the purpose of providing a regulating valve in lube oil system
a) to maintain pressure in the system
b) to provide bypass passage to lube oil
c) to remove dirt etc
d) none of the above

173. What is the pressure setting of lube oil regulating valves in Alco locomotives
a) 5 Kg/cm^2 b) 6 Kg/cm^2 c) 4.0 Kg/cm^2 d) none

174. What is the media used inside the vertical strainer unit for filtration of lube oil
a) cotton b) glass wool c) paper d) wire mesh

175. What is the purpose of providing the Moatti filter at locomotives
a) filtration of lube oil b) filtration of fuel oil c) filtration of coolant water
d) air filtration

176. What is the role of Centrifugal filter fitted on locomotive
a) separate dirt particles from lube oil
b) separate metal particles mixed in lube oil
c) segregation of water mixed in lube oil
d) segregation of fuel oil mixed in lube oil

177. What is a mandrel
a) straight iron bar
b) fixture for dial gauge
c) enlongation gauge
d) none

178. Which one of the above test is not carried out for lube oil during maintenance
a) viscosity check b) chattering test c) water contamination d) flash point

179. What is the function a woodward governor in a locomotive
a) control fuel supply as per load requirement
b) control excitation of main generator
c) control tractive effort of locomotive
d) none of the above

180. What is the woodward governor oil sump capacity
a) 2.5 ltr b) 3.5 ltr c) 4 ltr d) 6 ltr

181. Which of these assemblies is not fitted at free end side of engine block in a locomotive
a) water pump b) lube oil pump c) governor d) RTTM blower

182. How the compressor of locomotive gets drive power
a) through belt b) through shaft coupling
c) through magnetic coupling d) none of above

183. At what locations compressed air of compressor is not being used in locomotives
a) Horn blowing b) Movement of power contactors
c) operation of brake system d) booster air pressure for TSC

184. Air dryer is fitted at which location
a) between MR1 and MR2
b) between compressor and MR1
c) between HP and LP cylinder of compressors
d) none of the above

185. Air supply to horn is provided through which location

a) MR1 b) MR2 c) auxiliary reservoir d) none

186. What is an expressor

a) Combined unit of compressor and exhauster
b) Modified exhauster
c) New type of compressor
d) Device used to display parameters

187. Steam boiler is a type of

a) internal combustion engine
b) external combustion engine
c) spark ignition engine
d) none of above

188. co-efficient of adhesion is a parameter which describes

a) hauling power of loco
b) maximum speed of loco
c) torque generated by wheel
d) axle load

189. Which one is not a part of traction equipment fitted on locomotive

a) Alternator
b) compressor
c) rectifier
d) traction motor

190. Which one is not a defect of fuel injectors

a) Dribbling
b) Buffing
c) excess leak off rate
d) spray pattern

191. Which test is carried out to check efficiency of fuel oil system

a) blow by test
b) holding time test
c) bleed test
d) orifice test

192. Which one is not a reason of low fuel oil pressure
a) MB-1 breaker defective
b) MFPB breaker defective
c) FPC not picking up
d) none of above

193. Which one is not a cause of low fuel oil pressure
a) improper setting of fuel relief valve
b) improper setting of fuel regulating valve
c) Chocking of fuel oil filters
d) none of above
194. Which one is not a component of fuel oil system
a) fuel pump motor
b) snubber valve
c) banjo pipe
d) hot oil detector

195. What is the role of vent pipe fitted on fuel tank
a) to prevent air lock
b) to reduce back pressure
c) to provide passage to fume/vapours
d) all of above

196. Which is not a defect of fuel system?
a) vibrations of HP tubes
b) breakage of banjo cap screw
c) rubbing of fuel cross over pipes
d) leakage from tell tale hole

197. Which is cause of failure of water pump?
a) failure of drive gear
b) failure of oil seal
c) shearing of key
d) All of above

198. What is the torque value of fuel banjo cap screw?
a) 100-150 foot pound
b) 30-35 foot pound
c) 7-15 foot pound
d) none of the above

199. What is the unit of viscosity for lube oil used in locomotive.
a) centi stokes
b) pascal
c) radian
d) viscus number

200. Which one is not an item attended during summer drive attention.
a) TSP treatment
b) replacement of water tank pressure cap
c) ETS setting
d) MR drain cock replacement

201. Radiator fan of Alco loco is driven by
a) cardon shaft
b) gear drive
c) sleeve coupling
d) none of above
202. Which one is not an item for consideration layout of diesel shed.
a) uni-directional movement of loco
b) future extension provision
c) proper lighting
d) inside the city area

203. Which is not a type of maintenance?
a) Preventive maintenance
b) Scheduled maintenance
c) Corrective maintenance
d) Adaptive maintenance

204. For maintenance of locomotive which type of system is being adapted
a) Preventive maintenance
b) Shut down maintenance
c) corrective maintenance
d) none of above

205. Which one is not a parameter related to profile of wheels
a) Root wear
b) flange wear
c) tread wear
d) lateral clearance

206. What is full form of ACD
a) Automatic coupling device
b) Anti corrosion device
c) Automatic collision device
d) Anti collision device

207. At which location of Alco loco plain bearings are used
a) main bearing
b) traction motor drive end bearing
c) governor linkage bearing
d) none of the above

208. At which location of Alco loco roller bearings are used
a) main bearing
b) traction motor drive end bearing
c) governor linkage bearing
d) none of the above

209. At which location of Alco loco needle bearings are used
a) main bearing
b) traction motor drive end bearing
c) governor linkage bearing
d) none of the above
210. The suspension system fitted on Alco loco is an example of
a) single stage suspension system
b) two stage suspension system
c) three stage suspension system
d) none of above

211. Which one is not a part of suspension system of Alco locomotive
a) equalizing beam
b) dash pot assembly
c) rubber pads
d) brake shoe

212. Which type of power assemblies are used in GM locos
a) four stroke
b) two stroke
c) spark ignition and two stroke
d) none

213. What is the horse power of WDG4-GM loco.
a) 4000 HP
b) 4500 HP
c) 3800 HP
d) none of above

214. How many water pumps are provided in GM loco.
a) one
b) two
c) three
d) none of above

215. what is the full form of EPD
a) engine power device
b) engine propulsion device
c) exhaust powered drives
d) engine protection device

216. In which condition EPD knob will come out and make the engine shut down.
a) low water
b) low volatage
c) low engine rpm
d) high coolant temperature

217. In which condition EPD knob will come out and make the engine shut down.
a) low crank case vacuum
b) low volatage
c) low engine rpm
d) high coolant temperature
218. What is the full form of HOD
a) high operating demand
b) high oil demand
c) hot oil detector
d) none of above

219. At which location HOD is fitted in GM loco.
a) piston cooling manifold
b) outlet flange of main lube oil pump
c) outlet flange of piston cooling pump
d) none of above

220. What is constructional feature of HOD.
a) an electromagnetic valve
b) a thermostatic valve
c) a bypass valve
d) a spring loaded device

221. How many radiator fans are fitted in GM locos.
a) One
b) two
c) four
d) none

222. which type of radiator fans are fitted in GM loco.
a) DC series fans
b) AC three phase fans
c) AC single phase fans
d) hydraulically driven fans

223. Which type of brake system are used in GM loco.
a) pneumatic brakes
b) computer controlled brake
c) mechanical brake
d) none

224. Which is not a type of brake fitted on locomotive
a) automatic brake
b) independent brake
c) emergency flap brake
d) regenerative brake

225. What is range for buffer height in GM locomotive
a) 1000~1500 mm
b) 1030~1105 mm
c) 950~1105 mm
d) none of above

226. What is the purpose of providing lube oil priming motor
a) to prevent seizure of TSC
b) to prevent seizure of Main bearing
c) for cooling of pistons
d) none of above

227. What is the role of scavenging oil pump in GM loco.
a) it moves lube oil from sump to lube oil filter
b) moves oil from coarse strainer of lube oil strainer to lube oil filter
c) moves oil from fine strainer of lube oil strainer to main header
d) moves oil from sump to lube oil cooler

228. What is the function of Pee pipe in lube oil system of GM loco.
a) to pass lube oil to lash adjusters
b) to provide continuous stream of lube oil
c) to supply lube oil to main header
d) none of above

229. Which one is not a type of governor used on loco.
a) woodward governor
b) EHG governor
c) micro controller based governor
d) NS-16 air governor

230. Which one is not used as input for a woodward governor
a) Electrical input
b) BAP input
c) lube oil pressure feedback
d) fuel oil pressure feedback

231. What is max value of fuel rack in WDM2 locomotive.
a) 25 mm
b) 30 mm
c) 35 mm
d) 28 mm

232. What is the action taken by woodward governor in case of low lube oil pressure.
a) makes the engine idle
b) makes the engine shut down
c) restrict the rpm at forth notch
d) none of above

233. Which is shut down safety device fitted on Alco loco
a) Low lube oil pressure plunger
b) GR relay
c) Hot engine
d) none of above

234. Which is shut down safety device fitted on Alco loco
a) Over speed trip assembly
b) GR relay
c) Hot engine
d) none of above

235. Which is an idle safety device fitted on Alco loco
a) Low lube oil pressure plunger
b) OSTA
c) Hot engine
d) none of above

236. What is a shut down safety device fitted in locomotives.
a) it makes engine idle when operated
b) it makes engine shut down when operated
c) it produces audio visual output when operated
d) none of above

237. What is an idle safety device fitted in locomotives.
a) it makes engine idle when operated
b) it makes engine shut down when operated
c) it produces audio visual output when operated
d) none of above

238.What is full form of PCS
a) pneumatic control switch
b) power cut off switch
c) power control switch
d) none of above

239. What is full form of DMR
a) direct moveable relay
b) dual moving relay
c) dead man’s relay
d) none of above

240. What is full form of SR
a) single relay
b) synchronized relay
c) signal relay
d) none of above

241. What is the function of signal relay.
a) to ring the alarm bell
b) to operate flasher light
c) to display message on screen
d) none of above

242. What is the role of overspeed trip assembly
a) to prevent TSC from overspeeding
b) to prevent engine from overspeeding
c) to prevent loco from overspeeding
d) all of above

243. OSTA unit works on which principle
a) action-reaction pair
b) centrifugal force
c) spring mass system
d) none of above

244. What is power ground fault in loco
a) ground fault observed during starting
b) ground fault observed in motoring
c) ground fault observed in motoring
d) none of above

245. What is starting ground fault in loco
a) ground fault observed during starting
b) ground fault observed in motoring
c) ground fault observed in motoring
d) none of above

246. Dry run test is carried out to check
a) free movement of fuel rack
b) max voltage output
c) max current output
d) none of above

247. What is the purpose of blow bye test
a) to check free movement of fuel rack
b) to check air tightness of cylinder head
c) to check loading unloading pressure
d) none of above

248. What is the purpose of conducting orifice test
a) to check efficiency of lube oil system
b) to check efficiency of fuel oil system
c) to check cooling efficiency of radiators
d) none of above

249. In MU operation of locomotive MU stands for
a) multiple unit
b) main unit
c) master unit
d) mainline unit

250. In MU operation of locomotives the loco are termed as
a) primary loco + secondary loco
b) main loco + auxiliary loco
c) Leading loco + trailing loco
d) none of above

Mark whether statements are True or False:-

251. The firing order of for engine on Alco locomotives is 1-4-7-6-8-5-2-3
a) True b) False

252. The value of bore in Alco locomotives 12 inch
a) True b) False

253. The app. Swept volume per cylinder in Alco locomotives is 12 ltrs.
a) True b) False

254. The engine block is made up of Aluminium alloy metal.
a) True b) False

255. The maximum possible misalignment permitted in main bearing housing bore between two adjacent bores is 0.002".
a) True b) False

256. The maximum possible misalignment permitted in main bearing housing bore between any two bores is 0.003".
a) True b) False

257. The singular costliest part of the diesel engine is crank shaft.
a) True b) False

258. The crank shaft of Alco locomotives are made up of high carbon steel.
a) True b) False

259. The nominal diameter of the crank pin is 6 inch
a) True b) False

260. In a diesel engine the vital role of cam shaft is to rotate auxiliary assemblies.
a) True b) False

261. The value of tappet clearance for Alco locomotive is 0.034 inch.
a) True b) False

262. The number of studs provided for fitment of Cylinder heads in Alco locomotives is five.
a) True b) False

263. During yearly inspection the hydraulic test of cylinder heads is carried out a pressure of 70 psi.
a) True b) False

264. The blow by test for cylinder head is carried out to test Thermal stress.
a) True b) False

265. During blow by test if leakage appears through TSC which cylinder head may be defective.
a) True b) False

266. During blow by test if leakage appears through sump exhaust manifold may be defective.
a) True b) False

267. The liners in which liner does not come direct contact with the coolant are also known as dry liner.
a) True b) False

268. In Alco locomotives piston and crankshaft are connected through means of cross head.
a) True b) False

269. Main bearing is an example of plain bearing.
a) True b) False

270. The purpose of providing a regulating valve in fuel oil system is to remove dirt etc
from suction line.
a) True b) False

271. Copper washers are used between banjo pipe and FIP in fuel oil system of Alco locomotives.
a) True b) False

272. The orifice test is carried out to check fuel oil consumption for a particular period.
a) True b) False

273. Nozzle chattering is cracking sound due to free movement of valve inside body.
a) True b) False

274. e-beam power cables is a part of fuel efficient kit for Alco locomotives.
a) True b) False

275. The value of fuel oil pressure at full load will decrease as compared to at idle value.
a) True b) False

276. The inlet casing of turbo chargers which is made up of heat resistant material is called accumulator.
a) True b) False

277. The middle portion of TSC which supports rotor assembly is called intermediate casing.
a) True b) False

278. The portion of a TSC which contains the blower assembly is known as cool cage.
a) True b) False

279. The lube oil sump capacity in Alco locomotives is 1270 ltrs.
a) True b) False

280. The grade of lube oil used in Alco locomotives sump is RR-460.
a) True b) False

281. The purpose of relief valve in lube oil system of locomotives to prevent lube oil pump from overloading.

a) True b) False

282. The purpose of providing a regulating valve in lube oil system to provide bypass passage to lube oil.

a) True b) False

283. The media used inside the vertical strainer unit for filtration of lube oil is wire mesh.

a) True b) False

284. The purpose of providing the Moatti filter at locomotives is for filtration of coolant water.

a) True b) False

285. The function a woodward governor in a locomotive is to control fuel supply as per load requirement.

a) True b) False

286. The compressor of locomotive gets drive power through magnetic coupling.

a) True b) False

287. Air dryer is fitted between MR1 and MR2 of loco.

a) True b) False

288. Steam boiler is a type of internal combustion engine.

a) True b) False

289. Combined unit of compressor and exhauster is called expressor.

a) True b) False

290. The torque value of fuel banjo cap screw 100-150 foot pound.

a) True b) False

300. Root wear is a parameter related to profile of wheels.

a) True b) False

301. Lateral clearance is a parameter related to profile of wheels.

a) True b) False

302. In GM locomotives EPD knob will comes out and make the engine shut down in case of low water.

a) True b) False

303. Hot oil detector is fitted at outlet flange of piston cooling pump in GM locomotives.

a) True b) False

304. In GM locomotives EPD knob will comes out and make the engine shut down in case of low crank case vacuum.

a) True b) False

305. The range for buffer height in GM locomotive lies between 1000~1500 mm.

a) True b) False

306. The purpose of providing lube oil priming motor is to prevent seizure of TSC.

a) True b) False

307. The role of scavenging oil pump in GM loco is to moves lube oil from sump to lube oil filter.

a) True b) False

308. The function of Pee pipe in lube oil system of GM loco is to cool down piston from inside.

a) True b) False

309. Reduction of transmitted power is a property of ideal transmission system.

a) True b) False

310. AC-AC Electric transmission is used in Alco locomotives.

a) True b) False

311. RTTM is an example of rotating machine fitted on engine block.

a) True b) False

312. The function of crank case exhauster motor is to create sump vacuum in Alco loco.

a) True b) False

313. Overheating of interpole winding is a common defect of traction motors used in Locomotives.

a) True b) False

314. Less wear of wheel profile is an advantage of Dynamic braking.

a) True b) False

315. During dynamic braking traction motors acts as generator.

a) True b) False

316. During dynamic braking needle of load meter comes in braking zone.

a) True b) False

317. During dynamic braking output of main generator is connected to field winding of traction motors.

a) True b) False

318. Full form of MEP in MEP-660 engine control system is Medha excitation and propulsion control system.

a) True b) False

319. MEP-660 system receives digital input signals from interlocks of relays fitted on locomotives.

a) True b) False

320. Excess load is one of the probable cause of wheel slip.

a) True b) False

321. Rain on track may be a cause of wheel slip on locomotives.

a) True b) False

322. Up-gradient on track may be a cause of wheel slip on locomotives.

a) True b) False

323. The meaning of transition in reference to locomotive change of inter connection of TM from series to parallel connection.

a) True b) False

324. The booster air pressure of TSC is used as input for a woodward governor.

a) True b) False

325. The max value of fuel rack of FIP in WDM2 locomotive is 28 mm.

a) True b) False

326. The corrective action taken by woodward governor in case of low lube oil pressure is to make engine shut down.

a) True b) False

327. Over speed trip assembly is a shut down safety device fitted on Alco loco.

a) True b) False

328. Hot engine alarm is an idle safety device fitted on Alco loco.

a) True b) False

329. Full form of PCS is pneumatic control switch.

a) True b) False

330. Full form of DMR is dead man's relay.

a) True b) False

331. Full form of SR signal relay.

a) True b) False

332. Function of signal relay is operate the alarm bell.

a) True b) False

333. Role of over speed trip assembly is to prevent engine from excess rpm.

a) True b) False

334. OSTA unit works on which principle of centrifugal force.

a) True b) False

335. Power ground is a ground fault in loco observed during motoring.

a) True b) False

336. Starting ground fault is a ground fault observed in loco during starting period.

a) True b) False

337. Dry run test is carried out to check free movement of fuel racks.

a) True b) False

338. Purpose of blow bye test is to check air tightness of compression chamber.

a) True b) False

339. The purpose of conducting orifice test is to check efficiency of fuel oil system.

a) True b) False

340. MU operation of locomotive MU stands for Master unit.

a) True b) False

341. MU operation of locomotives the loco are termed as master and slave unit.

a) True b) False

342. The electrical commands given by driver acts as input signals for a woodward governor.

a) True b) False

343. The full form of HOD fitted in GM loco is hot oil detector.

a) True b) False

344. The purpose of grid blower motor is to cool down grids during motoring period.

a) True b) False

345. The output of Auxiliary remains in certain specified limit irrespective of rpm of engine.

a) True b) False

346. The output of exciter is fed to field winding of main generator.

a) True b) False