

Objective question of Diesel trade theory MDT-01

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 crank shaft there is one power stroke in four stroke engine
a) Two b) three c) four d) none

4. In how many revolution of crank 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 power assemblies used in Alco locomotives are working as
a) Two stroke b) four stroke c) external ignition d) none

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

11. 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

12. 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

13. What is the value of bore in Alco Locomotives?
a) 9 inch b) 12 inch c) 9.5 inch d) 14 inches

14. What is the idle rpm of engine in Alco Locomotives?
a) 405 b) 505 c) 700 d) 400

15. What is the app. Swept volume per cylinder in Alco locomotives
a) 12 liters b) 9 liters c) 10.5 liters d) none
16. The diesel engine used in Alco locomotives is having which shape
a) W shape b) "I" shape c) "V" shape d) none
17. 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
18. The engine block is made up of which metal
a) Cast iron b) Aluminium alloy c) Low carbon steel d) Mild steel
19. Which process comes first in manufacturing of engine block?
a) Welding b) shot blasting c) milling of bores d) machining
20. 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
21. 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
22. During POH the hydraulic test of engine block is carried out at which pressure
a) 3.5 kg/cm² b) 2.5 kg/cm² c) 1.5 kg/cm² d) none
23. The singular costliest part of the diesel engine is
a) Base b) crank shaft c) Cylinder head d) cam shafts
24. 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
25. What is the nominal diameter of the crank pin?
a) 6 inch b) 9 inch c) 5 inch d) none
26. One of the processes which is used for surface hardening of crankshaft is
a) nitriding b) dynamic balancing c) stress relieving d) none
27. 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
28. 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

29. 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
30. 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
31. The value of tappet clearance for Alco locomotive is
a) 0.034 inch b) 0.044 inch c) 0.024 inch d) none
32. How many studs are provided for fitment of Cylinder heads in Alco Locomotives?
a) 7 b) 8 c) 5 d) none
33. Which part is used as replaceable wearing part in Cylinder head assembly?
a) Valve seat insert b) valve stem c) valve spring d) none
34. The cylinder head casting are made up of
a) Alloy cast iron b) Aluminum alloy c) high speed steel d) none
35. 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
36. The blow by test for cylinder head is carried out to test
a) Thermal stress b) sealing effect c) cooling effect d) none
37. During blow by test if leakage appears through TSC which assembly may be defective?
a) Cylinder head b) liner c) exhaust manifold d) none
38. During blow by test if leakage appears through sump which assembly may be defective?
a) Cylinder head b) liner c) exhaust manifold d) none
39. 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
40. 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
41. In Alco locomotives liners are made up of
a) Alloy cast iron b) Stainless steel c) aluminum alloy d) none
42. Which one of these is not a major defect of liners during service?
a) Wear in bore b) loss of interference c) cavitations erosion d) stress

43. 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
44. 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
45. 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
46. 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
47. 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
48. In Alco locomotives piston and crankshaft are connected through means of
- a) Connecting rod
 - b) lash adjuster
 - c) cross head
 - d) none
49. 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
50. 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
51. Which one of above is not checked during assembly of piston ring?
- a) Proper sequence
 - b) ring gap
 - c) side clearance
 - d) twist
52. Which one of below is not a non destructive testing?
- a) Magna flux test
 - b) zyglö test
 - c) nick break test
 - d) ultra sonic testing
53. 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

54. The portion of engine block which houses the crank shaft is called
a) Saddle b) base c) sump d) none
55. Which one is not an example of plain bearing?
a) Main bearing
b) Connecting rod bearing
c) TSC bearing
d) Governor linkage bearing
56. 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
57. 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
58. 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
59. 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
60. 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 of the above
61. How many filter assemblies are provided in the fuel oil system of Alco Locomotives?
a) one b) two c) four d) six
62. What is the pressure setting of fuel oil relief valves in Alco Locomotives?
a) 5.2 Kg/cm² b) 4 Kg/cm² c) 6.5 Kg/cm² d) none of above

63. 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
64. What is the pressure setting of fuel oil regulating valves in Alco Locomotives?
- a) 3.5 Kg/cm² b) 3 Kg/cm² c) 4.0 Kg/cm² d) none
65. What is the media used inside the filter assembly for filtration of fuel
- a) Cotton b) glass wool c) paper d) wire mesh
66. 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
67. 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
68. The full form of HP tube is
- a) High power tube
 - b) Hollow passage tube
 - c) High potential tube
 - d) High pressure tube
69. 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
70. The features of a good injector nozzle don't contains
- a) Good atomization
 - b) Correct spray pattern
 - c) No dribbling
 - d) No hunting
71. 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

72. 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
73. 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
74. The value of fuel oil pressure at full load will change as compared to an idle value
- a) Increase
 - b) decrease
 - c) remain same
 - d) any of above
75. Which one is not 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
76. 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
77. 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
78. The middle portion which supports rotor assembly is called
- a) Gas inlet casing
 - b) intermediate casing
 - c) middle casing
 - d) none
79. The portion which contains the blower assembly is known as
- a) blower casing
 - b) cool cage
 - c) diamond box
 - d) propeller
80. 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
81. 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

82. 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
83. 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
84. What is the lube oil sump capacity in Alco Locomotives?
a) 1000 liters b) 1270 liters c) 950 liters d) 1550 liters
85. What is the grade of lube oil used in Alco Locomotives?
a) RR-520 b) RR-606 c) SP-150 d) RR-460
86. 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
87. What is the pressure setting of lube oil relief valves in Alco Locomotives?
a) 8 Kg/cm² b) 7.4 Kg/cm² c) 6.0 Kg/cm² d) none of above
88. 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
89. What is the pressure setting of lube oil regulating valves in Alco Locomotives?
a) 5 Kg/cm² b) 6 Kg/cm² c) 4.0 Kg/cm² d) none
90. 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
91. 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
92. 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

93. What is a mandrel?

- a) Straight iron bar
- b) Fixture for dial gauge
- c) Elongation gauge
- d) None

94. 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

95. What is the function a wood ward 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

96. What is the wood ward governor oil sump capacity?

- a) 2.5 liter
- b) 3.5 liter
- c) 4 liter
- d) 6 liter

97. 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

98. How the compressor of locomotive gets drive power

- a) Through belt
- b) through shaft coupling
- c) through magnetic coupling
- d) None of above

99. 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

100. 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

101. Air supply to horn is provided through which location

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

102. 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

103. Steam boiler is a type of
a) Internal combustion engine
b) External combustion engine
c) Spark ignition engine
d) None of above

104. 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

105. Which one is not a part of traction equipment fitted on locomotive?
a) Alternator
b) Compressor
c) Rectifier
d) Traction motor

106. Which one is not a defect of fuel injectors?
a) Dribbling
b) Buffing
c) Excess leak off rate
d) Spray pattern

107. 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

108. 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

109. 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

110. Which one is not a component of fuel oil system
a) Fuel pump motor
b) Snubber valve
c) Banjo pipe
d) Hot oil detector

111. 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

112. Which is not a defect of fuel system?

- a) Vibrations of HP tubes
- b) Breakage of banjo cap screw
- c) Rubbing of fuel crosses over pipes
- d) Leakage from tell tale hole

113. 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

114. 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

115. What is the unit of viscosity for lube oil used in locomotive?

- a) centi stokes
- b) Pascal
- c) Radian
- d) viscus number

116. 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

117. Radiator fan of Alco loco is driven by

- a) Cardon shaft
- b) Gear drive
- c) Sleeve coupling
- d) None of above

118. 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

119. Which is not a type of maintenance?

- a) Preventive maintenance
- b) Scheduled maintenance
- c) Corrective maintenance
- d) Adaptive maintenance

120. 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

121. Which one is not a parameter related to profile of wheels

- a) Root wear
- b) Flange wear
- c) Tread wear
- d) Lateral clearance

122. What is full form of ACD?

- a) Automatic coupling device
- b) Anti corrosion device
- c) Automatic collision device
- d) Anti collision device

123. 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

124. 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

125. 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

126. 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

127. 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

128. Which type of power assemblies are used in GM locos

- a) Four stroke
- b) Two stroke
- c) Spark ignition and two strokes
- d) None

129. What is the horse power of WDG4-GM loco?

- a) 4000 HP
- b) 4500 HP
- c) 3800 HP
- d) None of above

130. How many water pumps are provided in GM loco?

- a) One
- b) Two
- c) Three
- d) None of above

131. What is the full form of EPD?

- a) Engine power device
- b) Engine propulsion device
- c) Exhaust powered drives
- d) Engine protection device

132. In which condition EPD knob will come out and make the engine shut down.

- a) Low water
- b) Low voltage
- c) Low engine rpm
- d) High coolant temperature

133. In which condition EPD knob will come out and make the engine shut down.

- a) Low crank case vacuum
- b) Low voltage
- c) Low engine rpm
- d) High coolant temperature

134. What is the full form of HOD?

- a) High operating demand
- b) High oil demand
- c) Hot oil detector
- d) None of above

135. 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

136. What is constructional feature of HOD?

- a) An electromagnetic valve
- b) A thermostatic valve
- c) A bypass valve
- d) A spring loaded device

137. How many radiator fans are fitted in GM locos?

- a) One
- b) Two
- c) Four
- d) None

138. 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

139. Which type of brake system is used in GM loco?

- a) Pneumatic brakes
- b) Computer controlled brake
- c) Mechanical brake
- d) None

140. Which is not a type of brake fitted on locomotive?

- a) Automatic brake
- b) Independent brake
- c) Emergency flap brake
- d) Regenerative brake

141. 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

142. 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

143. 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

144. 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

145. Which one is not a property of ideal transmission system?

- a) Should have high starting torque
- b) Should occupy less space
- c) Require less maintenance
- d) Should have less cost

146. Which one is not a type of transmission system used in locomotives?

- a) Hydraulic transmission
- b) Electrical transmission
- c) Pneumatic transmission
- d) None of above

147. Which type of electric transmission is not used in Alco Locomotives?

- a) DC-DC transmission
- b) AC-DC transmission
- c) AC-AC transmission
- d) DC-AC transmission

148. Which one is not a drawback of diesel engine?

- a) It cannot run below a certain rpm
- b) It needs a starting mechanism
- c) It is a constant torque engine
- d) None of above

149. Which type of transmission system is fitted in WDM3A loco?

- a) DC-DC transmission
- b) AC-DC transmission
- c) AC-AC transmission
- d) DC-AC transmission

150. Which type of transmission system is fitted in WDM3A loco?

- a) DC-DC transmission
- b) AC-DC transmission
- c) AC-AC transmission
- d) DC-AC transmission

151. Which rotating machine is not fitted on engine block?

- a) Exciter generator
- b) Auxiliary generator
- c) FTTM blower
- d) RTTM blower

152. What is the function of crank case exhaustor motor?

- a) To create sump vacuum
- b) To develop booster air pressure
- c) To charge electrical cabinet
- d) To provide air flow in cab

153. Which one is not a defect of traction motors used in locomotives?

- a) Pinion end bearing seizure
- b) Commutator short circuiting
- c) Armature IR zero
- d) Starting capacitor defective

154. Which is not an advantage of dynamic braking?

- a) Low wear of wheel profile
- b) Less consumption of brake block
- c) Effective braking at higher speed
- d) Low noise

155. During dynamic braking traction motors acts as

- a) Resistive grids
- b) Generator
- c) Motors
- d) None of above

156. During dynamic braking the power generated is dissipated in form of

- a) Heat
- b) Sound
- c) Pressure
- d) None of above

157. During dynamic braking needle of load meter comes in

- a) Motoring zone
- b) Braking zone
- c) Equalizing zone
- d) None of above

158. During dynamic braking output of main generator is connected to

- a) Field winding of traction motors
- b) Armature winding of traction motors
- c) Across grids
- d) None of above

159. What is the role of excitation system provided in Alco Loco?

- a) To control excitation of auxiliary generator
- b) To control excitation of main generator field winding
- c) To excite field winding of traction motors
- d) None of above

160. What is full form of MBCS?

- a) Microprocessor based control system
- b) Microprocessor based charging system
- c) Main battery charging system
- d) Master breaker control software

161. Which one is not a feature of MBCS system?

- a) Engine control
- b) Excitation control
- c) AG control
- d) Radiator control

162. Which is not a part of engine control module of MBCS system?

- a) Cranking engine
- b) Speed control
- c) Shut down engine
- d) Torque control

163. What is the full form of MEP in MEP-660 engine control system?

- a) Medha excitation and propulsion control system
- b) Modified Engine program
- c) Main engine power
- d) None of above

164. Which one is not correct statement about MEP-660 system?

- a) It takes digital input
- b) It takes analog inputs
- c) It takes frequency inputs
- d) It gives mechanical output

165. Which one is not correct statement about MEP-660 system?

- a) It gives digital output
- b) It gives analog output
- c) It gives frequency output
- d) It doesn't have memory

166. What is the corrective action taken by MBCS system in event of wheel slip?

- a) Dynamic brake is applied
- b) Armature current to traction motors is reduced
- c) Excitation of main alternator is reduced
- d) Throttle is limited to 4th notch

167. Which one is not a probable cause of wheel slip?

- a) Excess load
- b) Rain on track
- c) Upgradient
- d) Very light load

168. What is the action taken by crew members in case of wheel slip?

- a) Alarm is ranged
- b) Information is sent to control room
- c) Sander valve are operated
- d) Loco is made shut down

169. What is transition in reference to locomotive?

- a) Field weakening process of TMs
- b) Change of inter connection of TMs
- c) Heavy jerk observed during loco operation
- d) None of above

170. What is the role of governor in a loco?

- a) Regulate fuel pressure
- b) Control fuel supply as per load demand
- c) To control function of MBCS system
- d) None of above

171. Which one is not a type of governor used on loco?

- a) Wood ward governor
- b) EHG governor
- c) Micro controller based governor
- d) NS-16 air governor

172. Which one is not used as input for a wood ward governor?

- a) Electrical input
- b) BAP input
- c) Lube oil pressure feedback
- d) Fuel oil pressure feedback

173. What is max value of fuel rack in WDM2 locomotive?

- a) 25 mm
- b) 30 mm
- c) 35 mm
- d) 28 mm

174. 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

175. 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

176. 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

177. 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

178. 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

179. 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

180. What is full form of PCS?

- a) Pneumatic control switch
- b) Power cut off switch
- c) Power control switch
- d) None of above

181. What is full form of DMR?

- a) Direct moveable relay
- b) Dual moving relay
- c) Dead man's relay
- d) None of above

182. What is full form of SR?

- a) Single relay
- b) Synchronized relay
- c) Signal relay
- d) None of above

183. 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

184. What is the role of over speed trip assembly?

- a) To prevent TSC from over speeding
- b) To prevent engine from over speeding
- c) To prevent loco from over speeding
- d) All of above

185. OSTA unit works on which principle

- a) action-reaction pair
- b) Centrifugal force
- c) Spring mass system
- d) None of above

186. 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

187. 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

188. 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

189. What is the purpose of blow by 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

190. 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

191. In MU operation of locomotive MU stands for

- a) Multiple units
- b) Main unit
- c) Master unit
- d) Mainline unit

192. 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:-

193. The firing order of for engine on Alco locomotives is 1-4-7-6-8-5-2-3

- a) True
- b) false

194. The value of bore in Alco locomotives 12 inches

- a) True
- b) false

195. The app. Swept volume per cylinder in Alco locomotives is 12 liters.

- a) True
- b) false

196. The engine block is made up of Aluminium alloy metal.

- a) True
- b) false

197. The maximum possible misalignment permitted in main bearing housing bore between two adjacent bores is 0.002".

- a) True
- b) false

198. The maximum possible misalignment permitted in main bearing housing bore between any two bores is 0.003".

- a) True
- b) false

199. The singular costliest part of the diesel engine is crank shaft.

- a) True
- b) false

200. The crank shaft of Alco locomotives are made up of high carbon steel.

- a) True
- b) false

201. The nominal diameter of the crank pin is 6 inch

- a) True
- b) false

202. In a diesel engine the vital role of cam shaft is to rotate auxiliary assemblies.
a) True b) false
203. The value of tappet clearance for Alco locomotive is 0.034 inch.
a) True b) false
204. The number of studs provided for fitment of Cylinder heads in Alco locomotives is five.
a) True b) false
205. During yearly inspection the hydraulic test of cylinder heads is carried out a pressure of 70 psi.
a) True b) false
206. The blow by test for cylinder head is carried out to test Thermal stress.
a) True b) false
207. During blow by test if leakage appears through TSC which cylinder head may be defective.
a) True b) false
208. During blow by test if leakage appears through sump exhaust manifold may be defective.
a) True b) false
209. The liners in which liner does not come direct contact with the coolant are also known as dry liner.
a) True b) false
210. In Alco locomotives piston and crankshaft are connected through means of cross head.
a) True b) false
211. Main bearing is an example of plain bearing.
a) True b) false
212. The purpose of providing a regulating valve in fuel oil system is to remove dirt etc from suction line.
a) True b) false
213. Copper washers are used between banjo pipe and FIP in fuel oil system of Alco locomotives.
a) True b) false
214. The orifice test is carried out to check fuel oil consumption for a particular period.
a) True b) false
215. Nozzle chattering is cracking sound due to free movement of valve inside body.
a) True b) false

216. e-beam power cables is a part of fuel efficient kit for Alco locomotives.
a) True b) false
217. The value of fuel oil pressure at full load will decrease as compared to at idle value.
a) True b) false
218. The inlet casing of turbo chargers which is made up of heat resistant material is called accumulator.
a) True b) false
219. The middle portion of TSC which supports rotor assembly is called intermediate casing.
a) True b) false
220. The portion of a TSC which contains the blower assembly is known as cool cage.
a) True b) false
221. The lube oil sump capacity in Alco locomotives is 1270 ltrs.
a) True b) false
222. The grade of lube oil used in Alco locomotives sump is RR-460.
a) True b) false
223. The purpose of relief valve in lube oil system of locomotives to prevent lube oil pump from overloading.
a) True b) false
224. The purpose of providing a regulating valve in lube oil system to provide bypass passage to lube oil.
a) True b) false
225. The media used inside the vertical strainer unit for filtration of lube oil is wire mesh.
a) True b) false
226. The purpose of providing the Moatti filter at locomotives is for filtration of coolant water.
a) True b) false
227. The function a woodward governor in a locomotive is to control fuel supply as per load requirement.
a) True b) false
228. The compressor of locomotive gets drive power through magnetic coupling.
a) True b) false
229. Air dryer is fitted between MR1 and MR2 of loco.
a) True b) false
230. Steam boiler is a type of internal combustion engine.
a) True b) false
231. Combined unit of compressor and exhauster is called expressor.
a) True b) false

232. The torque value of fuel banjo cap screw 100-150 foot pound.
a) True b) false
233. Root wear is a parameter related to profile of wheels.
a) True b) false
234. Lateral clearance is a parameter related to profile of wheels.
a) True b) false
235. In GM locomotives EPD knob will comes out and make the engine shut down in case of low water.
a) True b) false
236. Hot oil detector is fitted at outlet flange of piston cooling pump in GM locomotives.
a) True b) false
237. 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
238. The range for buffer height in GM locomotive lies between 1000~1500 mm.
a) True b) false
239. The purpose of providing lube oil priming motor is to prevent seizure of TSC.
a) True b) false
240. The role of scavenging oil pump in GM loco is to moves lube oil from sump to lube oil filter.
a) True b) false
241. The function of Pee pipe in lube oil system of GM loco is to cool down piston from inside.
a) True b) false
242. Reduction of transmitted power is a property of ideal transmission system.
a) True b) false
243. AC-AC Electric transmission is used in Alco locomotives.
a) True b) false
244. RTTM is an example of rotating machine fitted on engine block.
a) True b) false
245. The function of crank case exhauster motor is to create sump vacuum in Alco loco.
a) True b) false
246. Overheating of interpole winding is a common defect of traction motors used in Locomotives.
a) True b) false
247. Less wear of wheel profile is an advantage of Dynamic braking.
a) True b) false
248. During dynamic braking traction motors acts as generator.
a) True b) false

249. During dynamic braking needle of load meter comes in braking zone.
a) True b) false
250. During dynamic braking output of main generator is connected to field winding of traction motors.
a) True b) false
251. Full form of MEP in MEP-660 engine control system is Medha excitation and propulsion control system.
a) True b) false
252. MEP-660 system receives digital input signals from interlocks of relays fitted on locomotives.
a) True b) false
253. Excess load is one of the probable cause of wheel slip.
a) True b) false
254. Rain on track may be a cause of wheel slip on locomotives.
a) True b) false
255. Up-gradient on track may be a cause of wheel slip on locomotives.
a) True b) false
256. The meaning of transition in reference to locomotive change of inter connection of TM from series to parallel connection.
a) True b) false
257. The booster air pressure of TSC is used as input for a woodward governor.
a) True b) false
258. The max value of fuel rack of FIP in WDM2 locomotive is 28 mm.
a) True b) false
259. The corrective action taken by woodward governor in case of low lube oil pressure is to make engine shut down.
a) True b) false
260. Overspeed trip assembly is a shut down safety device fitted on Alco loco.
a) True b) false
261. Hot engine alarm is an idle safety device fitted on Alco loco.
a) True b) false
262. Full form of PCS is pneumatic control switch.
a) True b) false

263. Full form of DMR is dead man's relay.
a) True b) false
264. Full form of SR signal relay.
a) True b) false
265. Function of signal relay is operate the alarm bell.
a) True b) false
266. Role of over speed trip assembly is to prevent engine from excess rpm.
a) True b) false
267. OSTA unit works on which principle of centrifugal force.
a) True b) false
268. Power ground is a ground fault in loco observed during motoring.
a) True b) false
269. Starting ground fault is a ground fault observed in loco during starting period.
a) True b) false
270. Dry run test is carried out to check free movement of fuel racks.
a) True b) false
271. Purpose of blow by test is to check air tightness of compression chamber.
a) True b) false
272. The purpose of conducting orifice test is to check efficiency of fuel oil system.
a) True b) false
273. MU operation of locomotive MU stands for Master Unit.
a) True b) false
274. MU operation of locomotives the loco are termed as master and slave unit.
a) True b) false
275. The electrical commands given by driver acts as input signals for a woodward governor.
a) True b) false
276. The full form of HOD fitted in GM loco is hot oil detector.
a) True b) false
277. The purpose of grid blower motor is to cool down grids during motoring period.
a) True b) false

