

Objective questions on MDT-02E

1. Transmission in wdm3a loco is
 - a. DC-DC
 - b. AC-AC
 - c. DC-AC
 - d. AC-DC
2. TM pinion and bull gear ratio in WDP4 D & WDP4B loco is
 - a. 17:90
 - b. 17:77
 - c. 65:18
 - d. 90:35
3. Transmission in WDP4D & WDP4B locomotive is
 - a. AC-DC
 - b. AC-AC
 - c. DC-DC
 - d. DC-AC
4. Which type of Traction Motors fitted in HHP LOCO?
 - a. 3-Phase AC Motors
 - b. DC Series Motors
 - c. Both A & B
 - d. None of these
5. Which type of Main Generator is fitted in HHP LOCO?
 - a. DC Generator
 - b. 3. Phase Alternator
 - c. Both A & B
 - d. None of these
6. Main Role of Traction Inverters in HHP LOCO?
 - a. To control 3-Phase AC Induction Motors
 - b. To control 3 phase Alternator
 - c. Both A & B
 - d. None of these
7. Traction Inverters converts in HHP Loco?
 - a. DC power into 3 phase AC power for variable frequency
 - b. AC power into 3 phase AC power
 - c. Both A & B
 - d. None of these

8. Input voltage & current of TCC is.
 - a. 620-2600 V DC, max 1200 Amp DC
 - b. 0 V AC--- 2000 V, max 1100 Amp AC
 - c. 520-2600 V DC, max 1100 Amp DC
 - d. None to these
9. Output voltage & current of TCC is.
 - a. 620 -2600 V DC, max 1200 Amp DC
 - b. 0 V AC- 2000 V, max 1100 Amp AC
 - c. 520 -2600 V DC, max 1100 Amp DC
 - d. None of these
10. Current rating of COMPUTER CONTROL, AC CONTROL, AIR DRYER, Circuit breaker in HHP loco is
 - a. 10 Amp
 - b. 15 Amp
 - c. 20 Amp
 - d. 25 Amp
11. Current rating of FUEL PUMP, TURBO LIGHT, GOV. BOOSTER PUMP, LOCAL CONTROL, TCC BLOWER, FILTER BLOWER circuit breaker in HHP loco is
 - a. 30 Amp
 - b. 15 Amp
 - c. 20 Amp
 - d. 25 Amp
12. Current rating of HeadLight circuit breaker in HHP loco is
 - a. 10 Amp
 - b. 15 Amp
 - c. 20 Amp
 - d. 35 Amp
13. Current rating of Control circuit breaker in HHP loco is
 - a. 40 Amp
 - b. 50 Amp
 - c. 90 Amp
 - d. 35 Amp
14. How much DC LINK switch gears in HHP LOCO?
 - a. 6
 - b. 5
 - c. 4
 - d. 3

15. In HHP Locos ECC-2 are located in
- Driver cabin
 - Under Truck
 - Near Radiator room
 - None of these
16. In HHP Locos STA & ST Contractors are located in
- ECC-1
 - ECC-2
 - ECC-3
 - ECC-4
17. In HHP Locos Battery charger & Aux Gen CB are located in
- ECC-1
 - ECC-2
 - ECC-3
 - ECC-4
18. How many Power Contractors are available in WDG4 Locomotive?
- 8
 - 9
 - 0
 - 6
19. In WDG4 power contactors are replaced with
- FS contactor
 - Only relays
 - BKT/REV
 - DC Link
20. Fan blade thickness in modified fan of traction alternator is
- 10mm
 - 2mm
 - 6mm
 - 20mm
21. What is the full speed RPM of the HHP locomotive engine
- 1000 RPM
 - 904 RPM
 - 900 RPM
 - 950 RPM

22. What is the IDLE speed RPM of the HHP locomotive engine
- a. 300 RPM
 - b. 200 RPM
 - c. 269 RPM
 - d. 904 RPM
23. What is the low IDLE speed RPM of the HHP
- a. 300 RPM
 - b. 200 RPM
 - c. 269 RPM
 - d. 904 RPM
24. In WDP4/WDG4 when continuous wheel slip is experienced due to locked axle
- a. Isolate the defective TM
 - b. Isolate the defective speed Sensor
 - c. Fail the loco immediately
 - d. Isolate the defective truck
25. In WDP4/WDG4 loco Loadmeter will not respond if
- a. GFB trips
 - b. AGFB trips
 - c. Both A & B
 - d. MAB trips
26. In WDP4/WDG4 loco engine should not be cranked when
- a. Low water button is tripped
 - b. Crankcase pressure button is tripped
 - c. LLOB is in tripped
 - d. OSTA is tripped
27. In WDP4/WDG4 loco defective speed sensor should be isolated if
- a. False locked axle indication
 - b. GR trips more than 3 times within experienced 10 minutes
 - c. Any one TM is defective
 - d. Crow bar fires
28. If AGFB tripped in WDP4/WDG4 locos
- a. Battery will discharge
 - b. Load meter will not respond
 - c. Both A and B
 - d. Engine will shut down

29. Model of Main Generator assembly in WDG4 Loco
- a. TA17-CA6B
 - b. 5A-8147
 - c. Both A & B
 - d. None of these
30. Model of AC AUX. Generator in WDG4 Loco
- a. TA17-CA6B
 - b. 5A-8147
 - c. Both A & B
 - d. None of these
31. Model of Traction Motor in WDG4 Loco
- a. TA 17-CA6B
 - b. 5A-8147
 - c. TB26221
 - d. None of these
32. Speed of Traction Motor in WDG4 Loco
- a. 3220 RPM
 - b. 2000 RPM
 - c. 904 RPM
 - d. None of these
33. Horsepower of Traction Motor in WDG4 Loco
- a. 500 K W
 - b. 600 K W
 - c. 1430 K W
 - d. None of these
34. Nominal AC Aux. Generator Voltage in WDG4 Loco
- a. 60VDC
 - b. 55V AC
 - c. 74VDC
 - d. None of these
35. Rectified Voltage of AC Aux. Generator in WDG4 Loco
- a. 64VDC
 - b. 55V AC
 - c. 74VDC
 - d. None of these

36. Max Power output of AC Aux. Generator in WDG4 Loco
- a.18 KW
 - b.25 KW
 - c.20 KW
 - d.None of these
37. Total nos. of Batteries in WDG4 Loco lead acid type
- a.10
 - b.02
 - c.08
 - d.None of these
38. Total Nos of cell of Batteries in WDG4 Loco (Lead acid type)
- a.32
 - b.50
 - c.64
 - d.None of these
39. Total nos of cell of Batteries in WDP4 Loco (Ni-Cadimium type)
- a.32
 - b.50
 - c.64
 - d.None of these
40. Voltage of Battery Cell in WDP4 Loco (Ni-Cadmium type)
- a.1.5V
 - b.2.1V
 - c.2.5V
 - d.None of these
41. Voltage of Battery Cell in WDG4 Loco (Lead acid type)
- a.1.5V
 - b.2.1V
 - c.2.5V
 - d.None of these
42. Total Voltage of Batteries in WDG4 Loco (Lead acid type)
- a.68 V
 - b.75 V
 - c.72 V
 - d.None of these

43. In WDG4 Locos RADAR is located
- Between Rear bogie & Fuel tank
 - Engine room
 - Between Front bogie & Fuel tank
 - None of these
44. In WDP4 Locos RADAR is Located
- Between Rear bogie & Fuel tank
 - Engine room
 - Between Front Bogie & Fuel tank
 - None of these
45. No. of Radiator fan in WDP4 & WDG4 Locos
- 02
 - 01
 - 03
 - None of these
46. No. of Grid Blower Motors in WDP4 & WDG4 Locos
- 04
 - 02
 - 03
 - None of these
47. Battery charger rectifies AC to DC of
- Aux gen output
 - Companion Alternator output
 - Main Alternator output
 - None of the above
48. Each Traction Motor provided with
- One speed sensor
 - One speed sensor & one temp sensor
 - One temp sensor
 - Two speed sensor
49. The Companion alternator runs at the same speed as
- Engine rpm
 - Aux gen rpm
 - Turbo rpm
 - Locomotive rpm

50. Radiator fan controlled by

- a. EM2000
- b. TCC
- c. EM2000 & TCC
- d. None of these

51. Maximum Tractive effort of WDG4 loco is

- a. 41 Tones
- b. 53 Tones
- c. 50 Tones
- d. 123 Tones

52. Maximum Tractive effort of WDP4B/WDP4D loco is

- a. 41 Tones
- b. 53 Tones
- c. 50 Tones
- d. 123 Tones

53. The total no. of carbon brushes in traction alternator are

- a. 10
- b. 6
- c. 4
- d. 8

54. The use of dust exhaust blower motor is:

- a. Removing sand of cyclonic filters.
- b. Priming of fuel.
- c. Cooling of car bodies.
- d. Cooling of Radiators.

55. Current rating of TCC1-TCC2 BLOWER circuit breaker in HHP loco is

- a. 10 Amp
- b. 50 Amp
- c. 30 Amp
- d. 35 Amp

56. Traction Control Cabinet (TCC) consists of

- a. Six Traction Computers, 6DCL switch gears
- b. 6 IGBT based Inverters, DC link Capacitors and Crow bar Circuit
- c. Both A & B
- d. None of these

57. TCC converts during dynamic brake. In HHP Loco?

- a. DC power into 3 phase AC power
- b. 3 phase AC power into DC power
- c. Both A & B
- d. None of these

58. In WDP4/WDP4B Locos ECC – 1 are located in

- a. Driver cabin
- b. Near Radiator room
- c. Under Truck
- d. None of these

59. In WDP4/WDP4B Locos ECC – 3 are located in

- a. Driver cabin
- b. Near Radiator room
- c. Under Truck
- d. None of these

60. In WDG4 Loco Traction Motor is

- a. Force air ventilated cooled
- b. Oil cooled
- c. Water cooled
- d. None of these

61. Total Voltage of Batteries in WDP4 Loco (Ni-Cadmium type)

- a. 68V
- b. 75V
- c. 72V
- d. None of these

62. Total no. of Batteries in WDP4 Loco (Ni-Cadmium type)

- a. 10
- b. 02
- c. 08
- d. None of these

63. In WDP4 Locos Engine starting switch is located

- a. ECP
- b. Engine room
- c. Control Stand
- d. None of these

64. In WDG4 Locomotive Engine starting switch is located
- ECP
 - Engine room
 - Control Stand
 - None of these
65. Number of main poles in auxiliary generator type 3101AY1 are
- 8
 - 2
 - 6
 - 4
66. The auxiliary machine type 3101AY1 & 3101AY are
- Not interchangeable
 - interchangeable
 - Fitted in WDM4
 - None of these
67. In ECC, clutching of inner and outer drum is through
- Mech clutch
 - Magnetic clutch
 - Electrical clutch
 - By pulley arrangement
68. Which is not a main generator field?
- Starting field
 - Main field
 - Shunt field
 - Commutating field
69. What are the advantages of alternators over generators?
- Lesser maintenance
 - Elimination of power ground due to carbon brushes
 - No commutation problems
- i, ii, iii
 - i, ii
 - ii, iii
 - i, iii
70. Power ground cannot be removed if the armature of following motors is ground
- 4, 5, 6
 - 1, 2, 3
 - Only 1
 - None

71. What are the causes of temporary wheel slip?

- (i) Wet line
 - (ii) Excessive load
 - (iii) Axle lock
 - (iv) Driver using higher notches at once
- a. i,ii
 - b. i,ii,iii
 - c. i,ii,iv
 - d. i,ii,iii,iv

72. What are the causes of permanent wheel slip ?

- (i) Axle lock
 - (ii) F.S. Contactors not picking up
 - (iii) F.S. Contactors welded
 - (iv) Excessive load
- a. ii,iii
 - b. i,ii,iii
 - c. i,ii,iii,iv
 - d. ii,iii,iv

73. Which of the following are coming under electrical control system

- (i) Fuel oil system
 - (ii) Charge air system
 - (iii) Excitation system
 - (iv) Transition system
- a. i,iii,iv
 - b. ii,iii
 - c. iii,iv
 - d. i,iv

74. Which of the following is an electrical rotating machine?

- (i) compressor
 - (ii) Auxiliary generator
 - (iii) Turbo supercharger
 - (iv) Fuel pump motor
- a. ii,iv
 - b. i,ii,iv
 - c. i,iii,iv
 - d. All of the above.

75. What should be the air gap to be maintained between the ECC drum and rotor during the yearly schedule?

- a. 0.035"and 0.040"
- b. 0.030"and 0.035"
- c. 0.045 and 0.050"
- d. 0.050"and 0.055"

76. Which of these is not an electro-magnetic contactor?

- a. Cranking Contactors
- b. Fuel Pump Contactor
- c. Generator Field Contactor
- d. Power Contactors

77. AC-AC transmission provided in GM locomotives has the following features/advantages?

- (i) High adhesion and Tractive effort
 - (ii) Maintenance-free traction motors
 - (iii) No limitation of minimum continuous speed
 - (iv) Higher rolling resistance and Lower energy efficiency
-
- a. i, ii, iii
 - b. ii, iii, iv
 - c. i, ii, iv
 - d. All of the above

78. Clearance between brush holder and slip ring of traction alternator type 10106AZ is

- a. 3 to 4 mm
- b. 1 to 2 mm
- c. 2 to 3 mm
- d. None of the above

79. What is the maximum allowed main generator deflection?

- a. $\pm .0005''$
- b. $\pm .001''$
- c. $\pm .0007''$
- d. $\pm .0008''$

80. Which class of insulation is used in TM-165M

- a. A
- b. H
- c. C
- d. B

81. The generator used in the wdm2 diesel locomotive is?

- a. Shunt generator
- b. Compound generator
- c. Series generator
- d. Separately excited generator

82. The nominal air gap of inner and outer drum of ECC is
- 0.8 to 1.02 mm
 - 0.7 to 1.02 mm
 - 0.8 to 1.01 mm
 - 0.8 to 1.22 mm
83. Electrical insulation depends on
- Cleaning of surface
 - Voltage across it
 - Quality and thickness of the insulating material
 - Voltage across it and quality of insulation
84. The higher temperature of the battery will cause the life of battery to
- Increase
 - No effect
 - Decrease
 - Must for a good life.
85. Blowing air pressure in TG/TA is recommended between
- 0.2kg/cm²
 - 8-10kg/cm²
 - 2-4kg/cm²
 - not specified
86. Use of high air pressure for blowing of electrical components may have the following effect.
- Dangers to health
 - Good for cleaning
 - Loosening of insulation bands
 - No effect
87. The function of slip ring in Traction Alternator is to
- Work as commutator
 - Work as a current collector
 - Work for balancing of Tr Alternator
 - None of the above
88. The term called arcing horn in diesel electric loco is the part of
- Relays
 - BKT-Rev
 - Horn
 - EP/EM Contactors

89. GFLOr saves AC/DC locos from
- Phase to phase shorting of Traction Alternator
 - Flash over between GF Contacts
 - Earthing of Traction Alternator
 - Overheating
90. The function of slip rings in traction alternator?
- Work as a commutator
 - Work as a current collector
 - Work for balancing
 - None of the above
91. TDR provided on AC/DC loco is for
- The excitation of the system
 - The Charging of the Battery
 - For Operation of ACP
 - For Operation of EPG
92. The difference between EM and EP contactors is due to
- Use of air
 - Due to operating voltage
 - Due to finger block used
 - Due to construction
93. Reverser Contactor is used on diesel loco
- To change the direction of field current to Traction Motors
 - To use the Dynamic braking
 - To pass the power supply to T/Motors.
 - All of the above
94. When is MCOS used on a locomotive?
- Power Ground operates
 - Wheel slip operates
 - EP Contractor fluctuates
 - Power ground or wheel slip operates
95. The bearing used in pinion side of traction motor
- NU330
 - NU320
 - NU328
 - NU326

96. Which of the following is used to convert AC into DC

- a. Transformer
- b. Rectifier
- c. Resistor
- d. Transistor

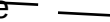
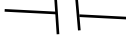
97. The Traction motor in wdm3a is

- a. D.C shunt motor
- b. D.C series motor
- c. A.C series motor
- d. Induction motor

98. Electric motor is a machine

- a. That converts Mechanical Energy into Electric Energy
- b. That converts Electrical Energy into Mechanical Energy
- c. That converts Heat Energy into Electrical Energy
- d. That converts Heat Energy into Mechanical Energy

99. Match the following

- i. Cell
- ii. Resistance 
- iii. Earth 
- iv. Fuse 

- a. i,iv,ii,iii
- b. ii,iv,i,iii
- c. iv,ii,iii,i
- d. iii,iv,ii,i

100. Test done during the overhauling of motor

- a. Run test
- b. Surge test
- c. Blow by test
- d. Load box test

101. -----test is to be conducted on a moving loco.

- a. load box test
- b. blow by test
- c. dynamic brake test
- d. all of the above

102. Which of the following is not correct about dynamic brake

- a. It is an auxiliary brake
- b. It can be used in place of air brake
- c. It is not effective at low & high speed
- d. It increases the life of wheel & brake block

103. When A train is rolling downwards, how can the driver control the speed?
- a. Emergency brake
 - b. Dynamic brake
 - c. Hand Brake
 - d. Independent brake
104. During dynamic braking, the current should not go beyond certain limit to avoid burning of grids. What is the limit
- a. 650amp
 - b. 700amp
 - c. 750amp
 - d. 800amp
105. When dynamic drake is applied, TMs
- a. Converted into generator
 - b. Gives supply to grids
 - c. Gives current to blower motor
 - d. All of the above
106. Blended brake is a mixture of
- a. vacuum +air
 - b. dynamic + logo
 - c. formation + dynamic + loco
 - d. formation + loco
107. Dynamic brake will not used if -----relays energies during dynamic brake in dc-dc loco
- a. GR
 - b. WSR
 - c. SAR
 - d. LAR
108. Dynamic braking grids are getting current through -----
- a. Traction motor
 - b. Traction alternator
 - c. Exciter
 - d. Auxiliary generator

109. Dynamic Brake should not be used if-----relay energizers during DB in AC/ DC loco
- GR1
 - WSR
 - SAR.
 - none of these
110. Dynamic Brake should not be used if-
- CC motor is not working
 - grid blower motor is not working
 - exhaust motor is not working
 - nothing can be said
111. Grid blower motor is located in
- nose compartment
 - radiator compartment
 - driver cabin
 - engine room
112. Grid blower motor is a-----type of motor.
- d.c. series motor
 - shunt motor
 - compound motor
 - any can be used
113. In governor Loco during dynamic braking-----and ----- will energise to raise the engine RPM to 4th notch RPM
- AV&BV solenoid
 - AV&CV solenoid
 - only A
 - Only B
114. Dynamic brake is also known as
- Pneumatic brake
 - Vacuum brake
 - Disc brake
 - Resistive brake
115. Which of the following is not correct about dynamic brake
- It can be used to stop the train
 - It is also known as resistive brake
 - During dynamic brake motors worked as generator
 - Grid blower motor is used for cooling grids

116. During dynamic brake its electrical power is consumed in
- Battery
 - Capacitor
 - Resistor
 - Inductor
117. One of the main advantages of Dynamic brake is
- It is very effective at very low speed also
 - It increases the life of the wheel and brake block.
 - It can stop the train effectively
 - All of the above
118. During dynamic braking which of the following is not correct
- All motor fields are connected in series
 - All series motor fields are connected across main generator
 - All motor armatures are connected across braking grids
 - Traction generator work as a motor
119. during dynamic braking engine raises to
- 4th notch rpm
 - 3rd notch rpm
 - 5th notch rpm
 - 6th notch rpm
120. Dynamic brake is safe in
- Very high speed
 - Very low speed
 - Medium speed
 - None of the above
121. Which of the following is not correct about dynamic braking
- The more motor field current the more braking current we get
 - The lower the braking resistance, the higher the braking
 - Faster the armatures turns, higher is the braking current
 - The more motor field current the less braking current we get
122. Which of the following have a 3 stage transition?
- Wdm2a
 - Wdg3a
 - wdm3a
 - wdm3d

123. The name of main component of 3 stage transition is
- Tachogenerator
 - Axle generator
 - Exciter generator
 - Auxiliary generator
124. Which of the following is having single stage transition
- Wdg3a
 - wdg3d
 - wdp4
 - all of the above
125. Two stage transition is provided in
- Wdg3a
 - wdm3a
 - wdm3d
 - wdp4
126. In Wdp4 loco the following type of transition is taking place
- single stage
 - Two stage
 - Three stage
 - No transition
127. Which is not a stage of transition?
- 2s 3p
 - 6p
 - 6p
 - 3p
128. Increase in speed of diesel locomotive is called
- Forward transition
 - Backward transition
 - Either forward or backward
 - None
129. Motors are connected in. First transition of 3 stage transition loco
- Series parallel shunt field
 - Parallel full field
 - Parallel shunted field
 - Either of three

130. In single stage transition all motors are connected in
- Series
 - Parallel
 - Series-parallel
 - None of the above
131. Motors are connected in second transition of 3 stage transition
- Series parallel shunt field
 - Parallel full field
 - All are connected in series
 - Either of three
132. Which of the following is not a microprocessor loco
- Wdm2a
 - Wdm3a
 - Wdg3a
 - wdp4
133. The horsepower of wdg3a&wdm3a loco is
- 3300hp
 - 3100hp
 - 3000hp
 - 3500hp
134. The gear ratio of wdg3a loco is
- 18:74
 - 18:65
 - 18:90
 - 17:90
135. Total weight of wdp4d Loco is
- 155.8tones
 - 119.8 tones
 - 121.8 tones
 - 123.0 tones
136. What is the maximum speed of wdg4 locomotive
- 150 kmph
 - 140 kmph
 - 120 kmph
 - 100 kmph

137. How much traction inverter in hp loco (in Medha make traction system))

- a. 6
- b. 5
- c. 4
- d. 3

138. How much traction inverter in hp loco (in EMD make traction system))

- a. 6
- b. 2
- c. 4
- d. 3

139. How much traction inverter in hp loco (in SIEMENS make traction system)

- a. 6.
- b. 2
- c. 4
- d. 3

140. In hp loco LCC, traction computer ,DCL in house of (in EMD make Traction system)

- a. ECC 1
- b. ECC 2
- c. ECC 3
- d. TCC

141. In hp loco LCC, traction computer ,DCL in house of (in Siemens make Traction system)

- a. ECC 1
- b. ECC 2
- c. ECC 3
- d. TCC

142. In hp loco LCC, traction computer ,DCL in house of (in Medha make Traction system)

- a. ECC 1
- b. ECC 2
- c. ECC 3
- d. TCC

143. The wheel slip control in microprocessor loco is based on

- a. Voltage
- b. Current
- c. rpm
- d. all of the above

144. Battery knife switch of wdp4/wdg4 loco is located in
- Driver cabin
 - nose compartment
 - Engine room
 - compressor room
145. The full form of EMD related to hp loco is
- Electro Motive division
 - Electro mechanical device
 - Electromagnetic device
 - Engine moving device
146. The field of traction alternator in GM loco is excited by
- Companion alternator
 - Auxiliary generator
 - Exciter generator
 - Tacho generator
147. The field of traction alternator in ALCO loco is excited by
- Companion alternator
 - Auxiliary generator
 - Exciter generator
 - Tacho generator
148. The number of grid blower motor in GM & ALCO loco is
- 2&1 respectively
 - 1&2 respectively
 - 3&2 respectively
 - 2&3 respectively
149. Ni-cd batteries are provided in
- Wdm3a
 - Wdp1
 - Wdm3d
 - wdp4
150. Which of the following is not present in ECC1 of wdp4
- Engine control panel
 - LCC display panel
 - DC link
 - Auxiliary generator breaker

151. In microprocessor loco wdm3a, when the engine is idle for more than 10 minutes, the engine rpm is reduced to
- 350
 - 300
 - 269
 - 200
152. Which of the following is found in microprocessor loco
- WSR relay
 - VRP
 - TRP
 - EXCP
153. MEP-660 provides built in event recorder memory to record following parameters
- Locomotive speed
 - Loco brake pipe pressure
 - Notch position
 - All of the above
154. How many temperature sensors are fitted in MEP-660 fitted loco
- 1
 - 2
 - 3
 - 4
155. Which of the following is not fitted in MEP-660 fitted loco
- Control unit
 - Display unit
 - Voltage regulating panel
 - Current sensors
156. ----- is not sensed by sensor in MEP-660 fitted loco
- Tr. alt voltage
 - Battery voltage
 - Aux. gen voltage
 - Tacho voltage
157. Temperature sensors are provided in MEP-660 fitted loco for the following
- Engine water temperature
 - lube oil temperature
 - ambient air temperature
 - all of the above

158. Which of the following is not measured by pressure sensor in microprocessor loco
- Main reservoir pressure
 - Fuel oil pressure
 - Brake pipe pressure
 - Water pump pressure
159. Full form of IGBT is
- Integrated grid bipolar transistor
 - Insulated gate bipolar transistor
 - Integrated gate bipolar thyristor
 - Insulated gate based transistor
160. Individual motor can be controlled in
- MEDHA controlled hhp loco
 - Siemens controlled hhp loco
 - EMD controlled hhp loco
 - In all of the above
161. The function of traction inverter TCC1&TCC2 is
- To produce voltage for battery charging
 - To provide voltage for fuel pump motor
 - To invert the dc link voltage into 3phase variable voltage for TMs
 - None
162. dc-dc converter in hhp loco is used for
- To convert the battery voltage from 74v to 24v
 - To convert the auxiliary voltage from 74v to 24v
 - To convert the no load voltage from 750v to 24v
 - To convert the battery voltage from 24v to 5v
163. EM 2000 is a
- 64 bit microprocessor
 - 32bit microprocessor
 - 16bit microprocessor
 - 28bit microprocessor
164. Which one of the following is called high voltage cabinet in wdg4
- ECC1
 - ECC2
 - ECC3
 - TCC

165. Self test in wdg4 can be done for
- Air brake test
 - DCL shorting test
 - Load box test
 - All of the above
166. Battery charging assembly in EMD loco is located in
- ECC1
 - ECC2
 - ECC3
 - Engine room
167. AEB can be used
- In Ghat section
 - In place of dynamic brake
 - In place of air brake
 - In any condition
168. VCD will operate in microprocessor loco if there is
- Change in throttle position
 - Application of loco brake
 - Application of dynamic brake
 - All of the above
169. Which of the following is correct about short term memory in hp loco
- Recording of data for every 1sec for the last 12hrs
 - Recording of data for every 2sec for the last 12hrs
 - Recording of data for every 4sec for the last 24hrs
 - Recording of data for every 2sec for the last 24hrs
170. Which of the following is correct about long term memory in hp loco
- Recording of data for every 20sec for the last 30days
 - Recording of data for every 20sec for the last 90days
 - Recording of data for every 10sec for the last 90days
 - Recording of data for every 10sec for the last 30 days
171. Radiator fan cooling motors in GM loco is
- d.c series motor
 - d.c shunt motor
 - Squirrel cage induction type
 - A.c series motor

172. The term TCC in GM loco refers to a device that converts
- AC into DC
 - DC into DC
 - AC to DC and inverts DC into AC
 - None
173. The companion alternator in GM loco is driven by
- Traction alternator as it couples directly within the main generator housing
 - Auxiliary generator
 - Exciter generator
 - Engine gear train
174. Which of the following is/are the advantage of ac-ac system over ac-dc system
- More adhesion and tractive effort
 - Lower maintenance
 - Finer control and is tolerant to wheel slip
 - All of the above
175. In wdg4 traction motors are
- DC
 - AC
 - 50%ac&50%dc
 - low voltage
176. In wdg4 isolation switch is having-----no. Of positions
- 1
 - 2
 - 3
 - 4
177. In AC/DC loco during cranking-----and-----are working as starting motor
- exciter & auxiliary generator
 - fuel pump & cc motor
 - main generator and dust blower motor
 - none of the above
178. Battery knife switch of wdg3a loco is located at
- engine room
 - governor room
 - nose compartment
 - compressor room

179. Weak battery causes
- Overcharging
 - Discharge
 - none
 - Load meter will not respond
180. If batteries are weak during cranking can be identified by
- battery ammeter
 - fluttering of CK1,CK2
 - starting lamp
 - smoke from batteries
181. Electrical speedometer indicates the speed of locomotive by getting current through
- auxiliary generator
 - main generator
 - axle generator
 - exciter generator
182. In wdg4 power contactor are replaced with
- FS contactor
 - Only relays
 - BKT/REV
 - DC link
183. Woodward governor pump is driven by
- Crankshaft
 - camshaft
 - electrically
 - hydraulic
184. Number of solenoids in ww governor is
- 4
 - 5
 - 3
 - 6
185. Full form of LCR is
- Load connected rheostat
 - connected Bihar state
 - load control reactor
 - load control rheostat

186. Solenoid operated on operation of low lube oil plunger in WW governor is

- a. solenoid
- b. solenoid
- c. solenoid
- d. none

187. LCR position on idle condition in WW governor is

- a. 11 hours
- b. 12 hours
- c. 17 hours 30 minute
- d. 15 hours

188. LCR position of Woodward governor on full load HP is

- a. 11 hours
- b. 12 hours
- c. 08 hours
- d. 15 hours

189. which solenoid are operate on idle condition in Woodward governor

- a. Solenoid
- b. Solenoid
- c. solenoid
- d. None

190. Which solenoid operated when LWS worked in woodward governor

- a. solenoid
- b solenoid
- c. solenoid
- d. Solenoid

191.Low lube oil shut down pressure setting in Woodward governor is

- a. 2 kg per centimetre square
- b. 1.3 kg per centimetre square
- c. 2.5 kg per centimetre square
- d. 3.0 kg per centimetre square

192. On 3rd notch solenoid operated in ww governor is

- a. solenoid
- b. solenoid
- c. solenoid
- d. solenoid

193. MCBG governor loco actuator / sensor unit is located at
- inside engine block
 - excitation panel
 - LP cab
 - existing location of governor
194. In MCBG loco when shutdown occurs due to over speed initiated by MCBG it should be acknowledged by
- resetting push button
 - OST switch
 - power switch
 - GFOLR reset button
195. In MCBG loco if sensor signal not coming or wire opens what will happen
- Engine will shut down
 - Engine will not fire
 - Engine will not respond
 - load metre will not respond
196. In MCBG governor electronic OSTA trips
- Before the mechanical OSTA
 - After the mechanical OSTA
 - At the same time
 - Nothing can be said
197. Which of the is correct statement about MCBG governor
- It has the facility of online fault diagnostics
 - It can display fault messages
 - Error log can be downloaded on LAPTOP
 - All of the above
198. Which of the following parameter is not displayed on the screen in MCBG governor
- Lube oil pressure
 - Main reservoir pressure
 - Fuel oil pressure
 - Booster air pressure
199. Which of the following is not correct about MCBG governor
- Tuning of the governor is digital setting by Laptop
 - It has dry run test facility
 - It has electronic OSTA facility
 - It can measure engine temperature

200. Stepper motor is used in
- GE governor
 - WW governor
 - MCBG governor
 - Hydraulic governor
201. Notch wise rpm can be adjusted in
- GE governor
 - MCBG governor
 - WW governor
 - Hydraulic governor
202. What will be the effect of a Tachogenerator of Woodward Governor Loco having no output
- Loco will over suit
 - RPM of the engine become rating
 - Loco will shutdown
 - load metre comes to zero
203. What will happen if Governor amphenol plug in a woodward type diesel engine is not plugged in governor
- engine will not start
 - engine start and load metre also work
 - engine RPM will not increase on throttling
 - the engine will be started and load meter also work
204. In locos provided with MCBG governor if MCBG breaker trips engine will come to
- idle
 - shutdown
 - either idle or shutdown
 - none
205. AT which notch position all the solenoid are energised in ww governor
- 2
 - 4
 - 6
 - 8
206. The LCP position in case of ww governor is in between ----- at all notches.
- 1.30-3.30
 - 2.30-5.30
 - 5.30-7.30
 - 7.30-9.30

207. ETS stands for

- a. Engine temperature switch
- b. Engine temperature sensor
- c. Emergency thermal switch
- d. none of the above

208. At what temperatures do ETS-1, 2 & 3 operate?

- a. 64°C, 69°C, 85°C
- b. 64°C, 68°C, 90°C
- c. 68°C, 72°C, 85°C
- d. 68°C, 69°C, 90°

209. LWS stands for

- a. lube oil sensor switch
- b. low water switch
- c. Loco wheel slip
- d. none of the above

210. Which of the following safety devices brings the engine to idle?

- i. OPS
 - ii. LWS
 - iii. PCS
 - iv. GFOLR
- a. i, iii, iv
 - b. ii, iii
 - c. iii, iv
 - d. d.i, iv

211. Which of the following safety devices shut down the engine?

- (i) GR
 - (ii) LWS
 - (iii) WSR
 - (iv) OSTA
- a. ii, iv
 - b. i, ii, iv
 - c. i, iii, iv
 - d. All of the above.

212. Flasher light modification in diesel locos is done for

- a. Better illumination of flasher light
- b. Modified flasher light
- c. Safety in case of train parting
- d. None of the above

213. What will happen, when a hot engine alarm is operated?
- a. Engine comes on 4th notch
 - b. Engine runs of same speed
 - c. Engine Shut down
 - d. None of above
214. Which of the following is the reason for a hot engine?
- a. ETS setting defective
 - b. Radiator fan not working
 - c. Radiator fins choked
 - d. Any of above
215. Shutting down of a diesel engine with hot engine alarms indicates
- a. engine temperature raised above 90°C.
 - b. Lube oil temperature raised above 90°C.
 - c. Water in expansion tank became less
 - d. Either a or b.
216. Which of the following is not a safety device of the diesel locomotive
- a. hot engine alarm
 - b. flasher light
 - c. ground relay
 - d. none of the above
217. Which of the following is not a safety device of the diesel locomotive
- a. governor
 - b. OST
 - c. ground relay
 - d. LWS
218. Engine gets shut down by which of the following safety device
- a. ground relay
 - b. LWS
 - c. ETS Operation
 - d. ACP
219. Diesel engine is shutting down with engine alarm what can be the possible defect
- a. WSR relay defective
 - b. ETS operated
 - c. LWS float punctured
 - d. ETS-3 stuck up

220. GR protects from

- a. nothing
- b. earth fault
- c. hot engine
- d. melting of grid

221. What should be the value of radiator fan rpm at 8th notch in alco loco

- a. 1100
- b. 1150
- c. 1120
- d. 1200

222. Which of the following safety device mechanically shutdown the engine

- a. OST
- b. OPS
- c. WSR
- d. GR

223. OST rpm in ww governor loco having 8th notch rpm 1050 is

- a. 1140-1160
- b. 1180-1220
- c. 1220-1240
- d. none of the above

224. During emergency which safety device is used for automatic brake application

- a. Flasher light
- b. PCS
- c. SA-9
- d. governor

225. If traction motor cable rubbed with loco body which relay will pick up

- a. SAR
- b. WSR
- c. GR
- d. ESR

226. If ECC fails, radiator fan will not work then -----safety device will operate

- a. LWS
- b. ETS
- c. GR
- d. OPS

227. Full form of WSR is
- Wheel slip relay
 - Wheel skid resistance
 - Wheel slip resistance
 - Wire shunt relay
228. Which safety device will automatically apply penalty brake in case driver is incapacitated
- VCD
 - Ground relay
 - ACD
 - WSP
229. GFOLR relay in AC/DC loco is provided in AC/DC loco for
- Phase to phase shorting for tr. alternator
 - Flash over between GF contacts
 - Earthing of tr. alternator
 - GF contactor
230. Which test is performed on locomotives for checked capacity and performance
- Load test
 - IR test
 - Run test
 - Blow by test
231. which circumstances are necessary to load boxes test
1. after a major schedule such as POH, IOH, M24, M12 etc.
 2. after major component replacement such as Turbo,, generator governor
 3. whenever Booking for the fuel pressure dropping power or frequent hot engine
 4. whenever the book fault by the driver cannot what be found in no load condition
- 1,2,3
 - 2,3,4
 - 1,3,4
 - 1,2,3,4
232. Blow by test is done at pressure
- 4 kg per centimetre square
 - 5 kg per centimetre square
 - 6 kg per centimetre square
 - 7 kg per centimetre square

233. In MU operation both the loco can be shutdown through

- a. stop button
- b. OST
- c. MUSD
- d. ube oil plunger

234. In ww governor Loco provided with MUSD relay if MUSD switch is kept in stop position during cranking engine will not

- a. Crank
- b. moving
- c. shutdown
- d. none of these

235. In wdp4/wdg4 MU banker loco working control stand A9 should be kept in ----- position.

- a. minimum reduction
- b. full service
- c. run
- d. braking position

236. If load box is required to be done for longer duration then which of the following is preferred

- a. grid load box
- b. water load box
- c. either a or b
- d. none of them

237. The formula used for calculation of H.P in sheds is

- a. $V \times I / 700$
- b. $V \times 700 / I$
- c. $V \times I / 750$
- d. $700 / V \times I$

238. Which of the following correction factor is not used for corrected H.P

- a. fuel oil density
- b. Lube oil density
- c. Altitude
- d. Ambient temperature

239. Correction factor for ambient temperature at 20°C is

- a. 1
- b. 3
- c. 2
- d. 4

240. Load can be changed in loaded condition in

- a. Water load box
- b. Grid load box
- c. Either water or grid
- d. None

241. Which of the following electrical parameter is taken in dead condition

- a. Lube oil pressure
- b. No load voltage
- c. Insulation resistance
- d. Booster pressure

242. Leaky valve seats can be ascertained by

- a. Blowby test
- b. Load box test
- c. Bleeding test
- d. Insulation resistance test

243. Which of the following is not a cause for fuel oil pressure drop ?

- a. Battery knife switch in on position.
- b. Fuel oil pump jam
- c. FPC not picking up.
- d. Defective carbon brush of booster motor.

244. ST/STA contactors are found in

- a. WDP3A
- b. WDG 3A
- c. WDP3A
- d. WDP4B

245. Which of the following is not an electromagnetic contactor

- a. CK1
- b. FPC
- c. GFC
- d. P21

246. Which of the following locos are having single transition

- a. WDM2
- b. WDP1
- c. WDP4
- d. WDM3D

247.Which safety device is provided for diesel engine

- a. Cattle guard
- b. Head light
- c. LWS
- d. Flasher light

248.In AC/DC loco TDR is provided for

- a. The excitation of the system
- b. The charging of the battery
- c. For operation of ACP
- d. For operation of EPG

249.FTTM drives with

- a. Electric motor
- b. Belt
- c. Gear
- d. Hydraulic pressure

250.D solenoid in the governor is also called

- a. Shutdown solenoid
- b. Cranking solenoid
- c. Tripping solenoid
- d. Safety solenoid

251.In Diesel electric locos fitted with dynamic brake the current generated is stored in

- a. battery
- b. Despatched as heat in resistor
- c. reverse current diode
- d. traction inverter

252.WDP4B loco is installed with

- a. AC AC system with Hotel load
- b. AC AC system with dual cab
- c. AC DC system with dual cab
- d. AC DC system with hotel load

253.WDP4d loco is installed with

- a. AC AC system with Hotel load
- b. AC AC system with dual cab
- c. AC DC system with dual cab
- d. AC DC system with hotel load

254. Main advantages of IGBT based technology are
- No snubber circuits are needed
 - Requires high power for control
 - Higher efficiency and less switching frequency
 - Both a and b
255. Individual bogie control feature is found in
- MEDHA control loco
 - SIEMENS loco
 - EMD loco
 - Both SIEMENS and EMD loco
256. Two traction inverter for each Bogie are found in
- MEDHA control loco
 - SIEMENS loco
 - EMD loco
 - Both SIEMENS and EMD loco
257. Full form of TCC is.
- Traction control converter
 - Traction computer control
 - Traction control cabinet
 - None of the above
258. The supply voltage for phase module is
- 72 volt
 - 24 volt
 - 54 volt
 - 12 volt
259. LCC in SIEMENS loco is found in
- TCC
 - ECC1
 - ECC2
 - ECC3
260. Which one is called as high voltage cabinet in hhp loco
- ECC3
 - ECC2
 - ECC1
 - LCC

261. Which of the following is not included in self test of ac-ac loco

- a. Air brake test
- b. DCL shorting test
- c. contactors/relay test
- d. Transition test

262. Breaking contactors are found in

- a. ECC3
- b. ECC2
- c. ECC1
- d. LCC

263. Which of the following is not found in ECC1

- a. ECP panel
- b. Dc link
- c. ST &STA contactor
- d. Display unit

264. Before starting the engine MU engine push button is in

- a. RUN position
- b. STOP position
- c. Either of a or b
- d. None of the above

265. The rating of starting fuse in wdp4b/wdg4 is

- a. 400A
- b. 800A
- c. 600A
- d. 1000 A

266. Which switch is used to avoid over stresses on bridges

- a. TE limit switch
- b. AEB Switch
- c. Flasher light switch
- d. Pressure switch

267. If engine is not cranking which contactor are to be checked

- a. FPC contactor
- b. CK1 contactor
- c. Ck2 contactor
- d. all of the above

268. For engine cranking what should be MUSD and ECS position

- a. Run, Run
- b. run ,idle
- c. stop, Run
- d. stop, Idle

269. What is the effect of automatic flasher light operation

- a. engine comes to idle
- b. automatic flasher light indication
- c. Buzzer
- d. all of the above

270. What is the effect of GR tripping

- a. load metre zero
- b. engine comes to idle
- c. GR indication with bell
- d. all of the above

271. If the engine shutdown with hot engine alarm which safety device operates

- a. ETS
- b. LWS
- c. SAR
- d. OPS

272. If the engine running with hot engine alarm which safety device operates

- a. ETS
- b. LWS
- c. SAR
- d. OPS

273. What is the effect of WSR

- a. gradually drops to zero
- b. Sanders operate
- c. Wheel slip indication with Buzzer
- d. all of the above

274. In AC/ DC loco during cranking which relay protects auxiliary and exciter generator

- a. SAR
- b. GR
- c. TDR
- d. WSR

275.What is the purpose of GFOLR in AC/ DC loco

- a. To protect main generator field
- b. To protect rectifier panel
- c. To protect auxiliary generator
- d. To protect generator field and Rectifier panel

276.Number of GRs in AC/DC loco

- a. 1
- b. 2
- c. 3
- d. 4

277.How many times resetting of GR and GFOLR will be done

- a. 3
- b. 6
- c. work on lower watches
- d. work upto destination

278.If the driver is incapacitated or not doing any activity.then which of the following device/ devices will operate

- a. Flasher light
- b. VCD
- c. AEB
- d. All of the above

279.The alerter cycle in VCD of HHP Loco is

- a. 60,8,8
- b. 60,17,17
- c. 60,17,8
- d. 60,8,17

280.To release penalty brake ,what should be done in HHP Loco

- a. Shut down the engine & then restart
- b. Brings the engine to idle & wait for 35 second
- c. Use emergency brake application & then restart
- d. Brings the engine to idle & wait for 45 second

281.TE limit switch in HHP loco is provided in

- a. Engine control panel
- b. Back panel
- c. ECC3
- d. Radiator panel

282. Before starting the engine
- OST is in normal position
 - MU push button is in run position
 - Governor low lube oil shut down plunger is in reset condition
 - All of the above
283. Before starting the engine, which one is incorrect
- Throttle handle of both control console in IDLE
 - MU push button is in stop position
 - ISOLATE switch is in ISOLATE position
 - OST is in normal position
284. During one of the following accessions hot engine alarm indication will operate
- continuous 8th notch working
 - Excess load
 - water pump not working
 - full water in expansion tank
285. Which of the following safety device provided in Lube oil system
- GFOLR
 - OSTA
 - LLOB
 - LWS
286. Hot engine alarm will come at..... degrees Centigrade in wdg3a loco
- 60 degree
 - 90 degree
 - 70 degree
 - 82 degree
287. In Twin headlight system in DC DC Converter if one unit is defective the standby unit can be brought into function by
- operating changeover switch on DC- DC Converter
 - by changing to other control stand
 - by replacing bulb
 - None
288. In MCBG Loco Actuator/ sensor unit it is located at
- Inside engine block
 - excitation panel
 - driver cabin
 - existing location of governor

289. In MCBG loco when shutdown occurs due to over speed it should be acknowledged by
- Resetting push button
 - OST test key switch
 - power switch
 - GFOLR reset button
290. In MCBG Loco if sensor signals not coming or wire opens what will happen
- engine will shut down
 - engine will not fire
 - engine will not respond
 - Load meter will not respond
291. When the GFOLR resetting button is defective.....
- Inform shed
 - Demand for engine
 - Shutdown the engine
 - reset manually
292. type speedometer is available on wdg4
- Mechanical
 - radar sensor
 - Electrical
 - Electronic
293. relay dropout on operation of LWS in governor.
- SAR
 - ERR
 - LWR
 - WSR
294. Which of the following safety device shut down the engine without indication
- LWS
 - OSTA
 - GR
 - OPS
295. Focus distance of Twin beam headlight is
- 305 meter
 - 405 meter
 - 205 meter
 - none of the above

296. Maximum dynamic braking force at rail level of wdg4d Loco is
- 41 tones
 - 54 tones
 - 50 tones
 - 27 tones
297. Which governor is in dual cab loco
- WW Governor
 - GE governor
 - both a and b
 - none of the above
298. On Run GR trips then engine
- will Shutdown
 - comes to idle
 - no effect on engine
 - no effect on loco
299. Flasher light working voltage in wdg4 is
- 72 volt
 - 12 volt
 - 24 volt
 - none of these
300. Speed feedback of GM loco is received through
- Radar
 - traction motor sensor
 - Tacho generator
 - Axle generator
301. GM Loco is provided with..... numbers of radiator fan &... numbers of BKBL
- 2& 3 respectively
 - 3& 2 respectively
 - 2&2 respectively
 - 2& 3 respectively
302. EFCO switch is used for.....the locomotive
- Starting
 - Run
 - Shutdown
 - Stop

303. Radiator fan Motors of GM locomotive is
- DC Motors
 - AC Motors
 - 50% AC and 50% DC
 - any of the above
304. Which of the following statement is correct?
- OST operates when Loco speed becomes more than 100 kmph
 - OST operates when locomotive speed is more than 80kmph
 - is a mechanical safety device
 - operates when engine runs at 1000 RPM
305. Which of the following statement is incorrect?
- In wdp4 loco engine 8th notch RPM is 904
 - In wdg4 loco if GR trips more than 3 times within 10 minutes defective truck should be disabled
 - In wdg4 loco doesn't touch any High Voltage equipment without discharging the DC link voltage
 - wdg4 Loco have 9 power contactors
306. Flasher light Working voltages is
- 72 volt
 - 24 volt
 - 12 volt
 - none of the above
307. What is the effect of auto flasher operation?
- Engine comes to idle
 - Auto flasher indication
 - Buzzer
 - all of the above
308. On Run GR trips then the engine
- will shutdown
 - Comes to idle
 - No effect on engine
 - No effect on loco
309. In wdp4/ wdg4 engine (Medha) if GR trips continuously three times within 10 minutes
- Truck isolation is to be done
 - Defective traction motor is to be isolated
 - Defective speeds sensor is to be isolated
 - Failed the loco

310. If ECC fails-----will not work and-----safety device will operate
- Radiator fan, ETS
 - Radiator fan , LWS
 - Fuel pump, ETS
 - Fuel pump, LWS
311. Hot engine alarm will come at----- degree centigrade in wdg3a loco
- 60
 - 90
 - 70
 - 80
312. GR protects from
- Nothing
 - Earth fault
 - Hot engine
 - Melting of grids
313. At----- Stage selector handle remains during dynamic braking
- Close
 - Idle
 - Braking
 - None
314. ----- is done to check whether the governor is able to open full fuel rake or not.
- dry run Test
 - load test
 - current test
 - slip test
- 315.Excitation system is given by the the following curve
- generator Load curve between voltage & current
 - generator load curve between current & torque
 - generator load curve between voltage & torque
 - none of the above
- 316.The function of Excitation is
- To regulate the exciter field current
 - To regulate auxiliary generator field current
 - To regulate battery charging current
 - All of the above

317. The purpose of excitation system is to
- ensure traction motor demand
 - ensure traction generator demand
 - ensure auxiliary generator demand
 - ensure exciter generator demand.
318. E type excitation system is found in
- wdm2a
 - wdm3a
 - wdm3g
 - wdp4
319. Which of the following is not a function of excitation system
- To impose voltage limit
 - to impose current limit
 - to ensure traction generator demand
 - to increase the speed
320. Which of the following is not a type of excitation system
- E type excitation system
 - microprocessor control excitation system
 - F type excitation system
 - A type excitation system
321. The full form of ACCR is
- Alternating current control register
 - armature current control reactor
 - alternating current circuit rectifier
 - armature current controlled rectifier
322. ACCR consists of
- Two a.c winding
 - Three a.c winding
 - One a.c winding
 - Four a.c winding
323. Which of the following is correct
- ACCR is current measuring device
 - ACCR is a voltage measuring device
 - VCR is current measuring device
 - all of the above

324. The conventional electronic type excitation system is replaced with-----
excitation system in new locos
- a. microprocessor controlled
 - b. static type
 - c. shunt type
 - d. self excitation
325. MEP-660 control system serves the following purposes
- a. Eliminates the mechanical interlocking
 - b. Digital setting of potentiometer
 - c. Control the loco through software logic
 - d. All of the above
326. Which of the following circuit is not controlled by electronic type excitation system
- a. Propulsion control
 - b. wheel slip control
 - c. dynamic braking control
 - d. air brake control
327. WDP4B loco is installed with
- a. AC system with Hotel load
 - b. AC system with dual cab
 - c. DC system with dual cab
 - d. DC system with hotel load
328. WDP4d loco is installed with
- a. AC AC system with Hotel load
 - b. AC AC system with dual cab
 - c. AC DC system with dual cab
 - d. AC DC system with hotel load
- 329..more tractive effort and adhesion is found in
- a. ac-ac transmission
 - b. ac-dc transmission
 - c. dc-dc transmission
 - d. dc-ac transmission
330. Main advantages of IGBT based technology are
- a. No snubber circuits are needed
 - b. Requires high power for control
 - c. Higher efficiency and less switching frequency
 - d. Both a and b

331. Individual bogie control feature is found in
- MEDHA control loco
 - SIEMENS loco
 - EMD loco
 - Both SIEMENS and EMD loco
332. Two traction inverter for each Bogie are found in
- MEDHA control loco
 - SIEMENS loco
 - EMD loco
 - Both SIEMENS and EMD loco
333. The rating of starting fuse in wdp4b/wdg4 is
- 400A
 - 800A
 - 600A
 - 1000 A
334. Which switch is used to avoid over stresses on bridges
- TE limit switch
 - AEB Switch
 - Flasher light switch
 - Pressure switch
335. If engine is not cranking which contactor are to be checked
- FPC contactor
 - CK1 contactor
 - Ck2 contactor
 - all of the above
336. Full form of EFCO switch in HHP loco is
- Exciter field cut off switch
 - Emergency fuel cut off switch
 - Emergency field current operation
 - Exciter field current operation
337. EFCO switch is mounted in
- Engine control panel
 - ECC2
 - ECC3
 - Low voltage cabinet

338. Number of poles in d.c series motor of alco loco is
- 8
 - 6
 - 4
 - 2
339. The horsepower of d.c series motor in alco loco is
- 400 hp
 - 600 hp
 - 800 hp
 - 750 hp
340. .The horsepower of fuel pump & cc motor in alco loco is respectively
- $\frac{3}{4}$ hp & 1 hp
 - 1 hp & $\frac{3}{4}$ hp
 - $\frac{2}{3}$ hp & $\frac{3}{4}$ hp
 - 2 hp & 1 hp
341. Number of carbon brushes in fuel pump & cc motor of alco loco is
- 4 & 2 respectively
 - 2 & 2 respectively
 - 2 & 4 respectively
 - 8 & 4 respectively
342. Number of carbon brush holder in grid blower of alco loco is
- 2
 - 4
 - 6
 - 8
343. Number of carbon brushes & H.P of dust blower in alco loco is
- 2 & 1 respectively
 - 1 & 2 respectively
 - 3 & 2 respectively
 - 2 & 3 respectively
344. From which notch dust blower motor of alco loco start to work
- 1
 - 3
 - 5
 - 7

345. Run test of d.c series motor done between
- 400-900 rpm
 - 900- 1700 rpm
 - 1700-2000 rpm
 - None of the above
346. IR of traction motor is done with the help of
- Megger
 - Transducer
 - Sensor
 - whitestone bridge
347. The ovality of commutator of traction motor in alco loco should not be more than----
- .008
 - .004
 - .002
 - .016
348. The spring pressure of brush arm of traction motor is between
- 2.5-3.5 kg/cm²
 - 3.5-4.5 kg/cm²
 - 4.5-5.5 kg/cm²
 - 5.5-6.5 kg/cm²
349. The pinion advance in traction motor is in between
- .080"-.090"
 - .070"-.080"
 - .060"-.070"
 - .050"-.060"
350. The colour coding for A and AA lead in traction motor is
- Yellow and black
 - Yellow and green
 - Red and green
 - Red and yellow
351. The colour coding for F and FF lead in traction motor is
- Yellow and black
 - Yellow and green
 - Red and green
 - Red and yellow

352. The brush holder pressure arm in fuel pump motor is
- 200-250 gram
 - 250-350 gram
 - 350-450 gram
 - 450-500 gram
353. The horsepower consumption in auxiliary and exciter generator of 3100 hp loco is
- 20 hp
 - 30 hp
 - 40 hp
 - 50 hp
354. The rpm of fuel pump motor in loco is
- 1800 rpm
 - 800 rpm
 - 1725 rpm
 - 1825 rpm
355. Which reactor is used for the measurement of voltage in excitation system
- VCR
 - ACCR
 - VRP
 - VDR
356. Which reactor is used for the measurement of current in excitation system
- VCR
 - ACCR
 - Ammeter
 - Galvanometer
357. Which traction motors are cooled by FTTM
- TM no. 1
 - TM no. 2
 - TM no. 3
 - All of the above
358. Traction motor no. 4,5,6 are cooled by
- FTTM
 - RTTM
 - Radiator fan
 - None of the above

359. ACCR & VCR in excitation system of ALCO loco are connected with the main generator in
- Parallel and series respectively
 - Series and Parallel respectively
 - Both in series
 - Both in parallel
360. In wdg4 power contactor are replaced with
- FS contactor
 - Relays
 - BKT/ reversar
 - DC link
361. Weak battery causes
- Overcharging
 - Discharge
 - None
 - load metre will not respond
362. If batteries are weak during cranking it can be identified by
- Battery Ammeter
 - Fluttering of CK1/CK2
 - starting lamp
 - smoke from batteries
363. Traction motor blower cools----- traction motors in wdg4/ wdp4 loco
- T.M no. 1,2,3
 - T.M no. 4,5,6
 - All
 - None
364. Transmission in wdg4d locomotive is
- AC DC transmission
 - AC AC transmission
 - DC DC transmission
 - DC AC transmission
365. What is the maximum voltage of companion alternator in wdp4d and wdg4d
- 250 KVA
 - 100 KVA
 - 150 KVA
 - 50 KVA

366. Battery charger converts AC to DC of
- auxiliary generator output
 - companion alternator of output
 - main alternator output
 - none of the above
367. Hipot test in traction motor is done at
- 1.5 kv
 - 2.5 kv
 - 3.5 kv
 - 500 kv
368. The higher temperature of the battery will cause the life of battery to cause
- Increase
 - No effect
 - Decrease
 - Must for good life
369. ADB in MEP660 microprocessor loco stands for
- Anti digital backup
 - Analog digital box
 - Analog distribution box
 - None of the above
370. Microprocessor loco having MEP 660 control system have Cards.
- 7
 - 17
 - 19
 - 29
371. The function of tacho generator is to
- Charge the battery
 - drive the fuel pump motor
 - give supply to Governor speed coil
 - none of the above
372. In wdg4 loco the gear ratio at traction motor is
- 90:17
 - 90 :19
 - 90:20
 - 19:21

373. Cranking of wdg4 locomotive is done by

- a. Fuel pump motor
- b. Two starting Motors
- c. one starting motor
- d. any of the above

374. In wdg4 loco HP input to traction motors is

- a. 4000
- b. 3726
- c. 3100
- d. 3900

375.type of speedometer is available on wdg4 loco .

- a. Mechanical
- b. Electrical
- c. Radar sensor
- d. Electronic

376. Power contactors flutter due to

- a. Less magnetism
- b. Load meter defective
- c. Less control air pressure
- d. Weak batteries

377. GFC not picking up in motoring due to

- a. CK1 Welded
- b. ECS run
- c. Reverser at motoring
- d. Throttle notch 1

378. When there is a current difference of..... Ampere between two traction Motors in a group of traction Motors WSR will pick up

- a. 200
- b. 125
- c. 100
- d. 120

379. GFOLR push button is provided on

- a. Front panel
- b. Back panel
- c. Nose compartment
- d. Radiator room

380. For traction motor isolationswitch is provided

- a. ECS
- b. MCOS
- c. MUSD
- d. EFCO

381.no..of series power contactor provided on ALCO loco

- a. 2
- b. 3
- c. 4
- d. 5

382. No. of parallel power contactor provided on ALCO loco

- a. 5
- b. 6
- c. 7
- d. 8

383. Totalpower contactor are provided on WDG3A loco

- a. 7
- b. 8
- c. 9
- d. 10

384. FTTM is driven by

- a. Pulley
- b. Gear
- c. Crankshaft
- d. Battery

385. Load meter will not show current if TM no.is isolated

- a. 1
- b. 2
- c. 3
- d. 4

386. Buzzer sounds whenrelay picks up .

- a. WSR
- b. GR
- c. OST
- d. SAR

387. Full form of ECC is
- Eddy current clutch
 - Electronic Computer control
 - Engine control clutch
 - Electronic clutch cabinet
388. Main advantage of traction motors of GM loco is/are
- Double traction motor life
 - No running maintenance
 - No flash over
 - All of the above
389. one of the reason of TM failure due to axle lock is
- Quality in commutator of TM
 - Damaged insulation of leads
 - Bearing seized
 - Loosening of inter pole joints
390. one of the reason of TM failure due to power ground is
- Breakage of pinion teeth
 - Damaged insulation of leads
 - Bearing seized
 - Loosening of inter pole bolts
391. one of the reason of TM failure due to wheel slip is
- Breakage of pinion teeth
 - Damaged insulation of leads
 - Bearing seized
 - Loosening of inter pole bolts
392. Full form of PWM card in excitation system is
- Pulse width modulator
 - Permanent wide magnet
 - Pulse width method
 - Permanent wide method
393. Which reactor is used to control rather than measure
- VCR
 - ACCR
 - PWM
 - None of the above

394. Which reactor is having a 1740 turn d.c winding
- ACCR
 - VCR
 - PWM
 - WSR
395. The E type excitation system controls
- Exciter generator field current
 - Exciter generator armature current
 - Auxiliary generator field current
 - Exciter generator field & armature current
396. Which of the following is the not the function of an excitation system
- Matches the capability of diesel engine with alternator demand
 - Impose electrical limits on main generator
 - Keep horse power demand constant over a wide range of variation
 - Check capability and performance of diesel engine
397. Which of the following test is related to traction motor
- Run test
 - Blow by test
 - Holding time test
 - Load box test
398. ECC is used
- To operate the traction motor within defined current limit
 - To operate the radiator fan at selected speed at set temperature
 - To operate the radiator fan at selected speed for a defined time
 - All of the above
399. High critical speed of diesel engine should be
- 112 to 115% of the rated speed
 - 100 to 105 % of the rated speed
 - 50 to 60 % of the rated speed
 - 30 to 40 % of the rated speed
400. Lower critical speed of diesel engine should be
- 112 to 115% of the rated speed
 - 100 to 105 % of the rated speed
 - 55 to 60 % of the rated speed
 - 35 to 40 % of the rated speed

401. Lower critical speed of diesel engine is the speed at which
- The engine can keep itself running without damaging itself
 - The engine can keep itself running along with its auxiliaries
 - The engine is cranked at a particular speed
 - None of the above
402. Higher critical speed of diesel engine is the speed at which
- The engine can keep itself running without damaging itself
 - The engine can keep itself running along with its auxiliaries
 - The engine is cranked at a particular speed
 - None of the above
403. Fuel pump motor of diesel loco is provided in
- Radiator room
 - Engine room
 - Expressor room
 - Under frame
404. which motor is used during dynamic braking
- Fuel pump motor
 - Grid blower motor
 - Dust blower motor
 - CCE motor
405. During the cranking isolation switch of the GM locomotive should be in... ..
- Isolate position
 - Run position
 - idle position
 - off position
406. Capacity of battery in wdg4 loco is
- 400 ampere hour
 - 500 ampere hour
 - 700 ampere hour
 - 1100 ampere hour
407. The main generator assembly in GM loco has two alternators
- Traction alternator and companion alternator
 - traction alternator and exciter
 - exciter and auxiliary generator
 - companion alternator and auxiliary generator

408. is an AC transmission type locomotive.

- a. GM locomotive
- b. HHP locomotive
- c. Either a or b
- d. ALCO locomotive

409. The auxiliary generator is driven by the diesel engine gear train at..... times of engine speed

- a. 3
- b. 4
- c. 1
- d. 2

410. Number of grid blower Motors in wdp4 & wdg4 locos

- a. 4
- b. 2
- c. 3
- d. None of the above

411. Blended brake, low water level switch, temperature gauge and colour code are provided in

- a. WDP4
- b. WDG4
- c. Both A and B
- d. None of the above

412. In wdg4 if false locked wheel indication is experienced

- a. Isolate defective sensor
- b. Isolate defective truck
- c. Isolate defective traction motor
- d. Fail the loco

413. In Wdp4 /wdg4 when continuous wheel slip is experienced due to locked axle

- a. Isolate the defective traction motor
- b. Isolate the defective speed sensor
- c. fail the Loco immediately
- d. Isolate the defective truck

414. The conventional electronic type excitation system is replaced with----- in new locos

- a. Microprocessor control
- b. Static type
- c. Shunt type
- d. Self excited

415. The vent plug of battery cells having holes is provided for
- Cooling of the battery
 - Removal of the fumes
 - Reducing weight of the plug
 - No need of the holes
416. In Diesel electric locos fitted with dynamic brake the current generated is stored in
- battery
 - Despatched as heat in resistor
 - reverse current diode
 - traction inverter
417. more tractive effort and adhesion is found in
- ac-ac transmission
 - ac-dc transmission
 - dc-dc transmission
 - dc-ac transmission
418. When does automatic flasher light system operate
- Driver emergency
 - ACP
 - guard application
 - all of the above
419. Improper control air pressure leads to
- Power contactors flapping
 - flash over
 - Power ground
 - all of the above
420. Traction motor pinion & bull gear ratio in WDG4D is
- 17:90
 - 17:77
 - 65:18
 - 90:35
421. WDG4D/WDP4D(Dual) locomotive each control console having
- 03 TFT displays
 - 02 TFT displays
 - 01TFT displays
 - None of the above

422. Fuel pump motor not working though the all circuit breaker switched on. the immediate reason could be

- a. ERR not closed
- b. R1 and R2 not picked up
- c. GFC not pickup
- d. FPC not picked up

423. In twin beam headlight.....V.. halogen lamps are used.

- a. 72
- b. 32
- c. 24
- d. 20

424. One traction motor blower is provided in clean air compartment for cooling of all traction motors in

- a. Wdg4
- b. Wdp4
- c. both a and b
- d. wdm3d

425. Main advantages of IGBT based technology are

- a. No snubber circuits are needed
- b. Requires high power for control
- c. Higher efficiency and less switching frequency
- d. Both a and b

426. Individual bogie control feature is found in

- a. MEDHA control loco
- b. SIEMENS loco
- c. EMD loco
- d. Both SIEMENS and EMD loco

427. Two traction inverter for each Bogie are found in

- a. MEDHA control loco
- b. SIEMENS loco
- c. EMD loco
- d. Both SIEMENS and EMD loco

428. Which of the following is not a cause for fuel oil pressure drop ?

- a. Battery knife switch in on position.
- b. Fuel oil pump jam
- c. FPC not picking up.
- d. Defective carbon brush of booster motor.

429. ST/STA contactors are found in

- a. WDP3A
- b. WDG 3A
- c. WDP3A
- d. WDP4B

430. Which of the following is not an electromagnetic contactor

- a. CK1
- b. FPC
- c. GFC
- d. P21

431. The vent plug of battery cells having holes is provided for

- a. Cooling of the battery
- b. Removal of the fumes
- c. Reducing weight of the plug
- d. No need of the holes

432. Which of the following is exclusively related with microprocessor controlled loco

- a. ADB
- b. FS contactor
- c. VRP
- d. TRP

433. Which of the following is found in ECC1 in hp locos

- a. Circuit breakers
- b. ST contactor
- c. STA contactor
- d. All of the above

434. Companion alternator in EMD loco is found in

- a. Governor room
- b. ECC3
- c. Radiator room
- d. Main alternator room

435. WDM3A (WDM3C) loco have

- a. AC-AC Transmission
- b. AC-DC Transmission
- c. AC-DC Transmission
- d. DC-DC Transmission

436. Excitation system in ALCO loco have.....no. cards

- a. 3
- b. 7
- c. 2
- d. 5

437. Rectifier panel in WDM3A is used

- a. To convert main generator AC voltage to DC voltage for traction motors
- b. To convert main generator DC voltage to AC voltage for traction motors
- c. To convert main generator AC low voltage to DC high voltage for traction motors
- d. Any of the above

438.BKT in locomotives is used

- a. To change braking and motoring positions
- b. To change direction
- c. To reduce the speed of diesel engine
- d. To reduce the speed of diesel loco

439.Which of the following is the example of electromagnetic contactor

- a. FS contactor
- b. Power contactor
- c. BKT
- d. REV

440.Which of the following is the example of electro pneumatic contactor

- a. FS contactor
- b. Power contactor
- c. Fuel pump contactor
- d. Radiator fan contactor

441. Which of the following is linked with radiator fan

- a. CKC
- b. FPC
- c. FSC
- d. ECC

442.Which of the following contactor is directly linked with traction motors

- a. CKC
- b. FPC
- c. Power contactors
- d. ECC

443. Power contactors are the example of
- Electromagnetic contactor
 - Electro Pneumatic contactor
 - Hydraulic contactor
 - Any of the above
444. Fuel pump motor in ALCO loco is located in
- Generator room
 - Engine room
 - Compressor room
 - Radiator room
445. Two starting motors are provided in
- WDM3A
 - WDM3D
 - WDG3A
 - WDG4
446. WDP4D locos ECC2 same as
- WDP4
 - WDG3A
 - WDM2B
 - All of the above
447. In WDP4/WDP4B locos ECC1 are located in
- Driver cabin
 - Near radiator room
 - Under truck
 - None of the above
448. In WDP4/WDP4B locos ECC3 are located in
- Driver cabin
 - Near radiator room
 - Under truck
 - None of the above
449. Engine control panel in wdg4 locos are located in
- Driver cabin end panel
 - Back panel
 - ECC3
 - None of the above

450. Which of the following is not mounted on engine control panel

- a. EFCO switch
- b. Battery charging ammeter
- c. DB cut out switch
- d. Circuit breaker

451. Radiator fan contactors are found in

- a. ECC1
- b. ECC2
- c. ECC3
- d. ECC4

452. Which of the following loco having hydraulic transmission

- a. WDS4
- b. Wdm3a
- c. Wdm2
- d. Wdg4

453. Individual motor control feature is found in

- a. MEDHA locos
- b. SIEMENS locos
- c. EMD locos
- d. All of the above

454. Six traction inverters are found in

- a. MEDHA locos
- b. SIEMENS locos
- c. EMD locos
- d. All of the above

455. Individual bogie control feature is found in

- a. MEDHA locos
- b. SIEMENS locos
- c. EMD locos
- d. Both B & C

456. Two traction inverters are found in

- a. MEDHA locos
- b. SIEMENS locos
- c. EMD locos
- d. Both B & C

457.Braking contactor are located in

- a. ECC1
- b. ECC2
- c. ECC3
- d. ECC4

458.Radiator fan motors of GM locos are

- a. D.C motors
- b. A.C motors
- c. 50% A.C & 50% D.C
- d. Any of the above

459.Auxiliary generator of HHP loco is driven through

- a. Motor
- b. Battery
- c. Crankshaft gear
- d. Exciter

460.The full form of TFT in HHP loco is

- a. Traction field transistor
- b. Thin film transistor
- c. Thin fluorescent tube
- d. Total field transistor

461.EFCO in HHP loco is used for

- a. Shut down the locomotive
- b. Slow down the locomotive
- c. Can be used in place of dynamic brake
- d. Any of the above

462.MCOS hasno. of position in ALCO loco.

- a. 2
- b. 5
- c. 7
- d. 9

463.MCOS is provided on

- a. Front panel
- b. Back panel
- c. Engine room
- d. Compressor room

464. Battery voltage of WDG4 loco is

- a. 64 v
- b. 72 v
- c. 24v
- d. 96 v

465. In WDG4/WDP4 starting motors are

- a. D.C
- b. A.C
- c. Can be D.C&A.C
- d. None of the above

466. Traction motor pinion & bull gear ratio in WDG4D is

- a. 17:90
- b. 17:77
- c. 65:18
- d. 90:35

467. Battery ammeter of WDG4D loco is provided in

- a. Cab-1 only
- b. Cab-2 only
- c. Both cabs
- d. None of the above

468. What is the maximum continuous current of traction alternator in wdp4d /wdg4d locomotives

- a. 1250A DC
- b. 1500 A DC
- c. 2150A DC
- d. 2500 A DC

469. What is the maximum voltage Of traction alternator in wdp4d / wdg4 locomotive

- a. 2600 V DC
- b. 1500 V DC
- c. 2150 V DC
- d. 1250 V DC

470. What is the maximum speed of traction alternator in wdp4d/ wdg4d locomotive

- a. 954 RPM
- b. 900 RPM.
- c. 800 RPM
- d. 850 RPM

471. Make and type of traction motor in wdg4d /wdp4d loco is

- a. Siemens 1TB 2525- 0TA02
- b. EMD A 2916- 88
- c. both a and b
- d. none of these

472. Total number of batteries in the dual cab locomotives(Ni-Cd) is

- a. 12
- b. 10
- c. 08
- d. 02

473. Battery voltage in the dual cab locomotives(Ni-Cd) is

- a. 230 volt
- b. 64 volte
- c. 72.5 Bolt
- d. 12 volt

474. Capacity of battery in the dual cab locomotive(Ni-Cd) is

- a. 150 AH
- b. 100 AH
- c. 200 AH
- d. none of these

475. Maximum tractive effort of wdp4b /wdp4d locomotive

- a. 41 tones
- b. 53 tones
- c. 50 tones
- d. 123 tones

476. In hhp loco AGAI & AGAV sensors are located in

- a. ECC1
- b. ECC2
- c. ECC3
- d. ECC4

477. Oil lubricated TM gear case is provided in

- a. WDM2
- b. WDP4
- c. WDG3A
- d. none of these

478. Load demand of traction Motor is met by
- EM 2000
 - TCC
 - EM2000 & TCC
 - None of these
479. In Wdp4/ wdg4 battery ammeter consists of two zones
- Green Zone and red zone
 - Green Zone and yellow zone
 - yellow zone and red zone
 - none of these
480. Wdp4/ wdg4 slipped pinion will be indicated clearly by
- Loco not moving
 - Train not hauling loads
 - High Motor RPM in computer feedback
 - none of these
481. Which of the following statement is correct in hhp loco.
- Radar gives the speed feedback to computer
 - Radiator fan Motors of GM Loco are DC Motors.
 - Ideal RPM of wdg4 loco is 400
 - 8th notch RPM of wdg4 loco 900
482. Choose the odd one out
- WDP4D
 - WDP4B
 - WDG4
 - WDP4
483. Cranking of WDM3A is done by
- Fuel pump motor
 - Two cranking motor
 - Two starting motor
 - One fuel pump & one starting motor
484. Microprocessor loco WDM3D havecurrent sensor.
- 10
 - 12
 - 14
 - 16

485.Which sensor is used in place of GR1 in WDM3D loco

- a. TANGI sensor
- b. Current sensor
- c. Voltage sensor
- d. GR2

486.Wheel slip is based onin microprocessor WDM3D loco.

- a. Current difference
- b. Voltage difference
- c. RPM difference
- d. Any of the above

487..In Wdp4/ wdg4 battery ammeter consists of two zones

- a. Green Zone and red zone
- b. Green Zone and yellow zone
- c. yellow zone and red zone
- d. none of these

488.Wdp4/ wdg4 slipped pinion will be indicates clearly by

- a. Loco not moving
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- b. Radiator fan Motors of GM Loco are DC Motors.
- c. Ideal RPM of wdg4 loco is 400
- d. 8th notch RPM of wdg4 loco 900

490.Which of the following is not a cause for fuel oil pressure drop ?

- a. Battery knife switch in on position.
- b. Fuel oil pump jam
- c. FPC not picking up.
- d. Defective carbon brush of booster motor.

491.ST/STA contactors are found in

- a. WDP3A
- b. WDG 3A
- c. WDP3A
- d. WDP4B

492. Which of the following is not an electromagnetic contactor

- a. CK1
- b. FPC
- c. GFC
- d. P21

493. The vent plug of battery cells having holes is provided for

- a. Cooling of the battery
- b. Removal of the fumes
- c. Reducing weight of the plug
- d. No need of the holes

494. which of the following is exclusively related with microprocessor controlled loco

- a. ADB
- b. FS contactor
- c. VRP
- d. TRP

495. which of the following is found in ECC1 in hhp locos

- a. Circuit breakers
- b. ST contactor
- c. STA contactor
- d. All of the above

496. companion alternator in EMD loco is found in

- a. Governor room
- b. ECC3
- c. Radiator room
- d. Main alternator room

497. WDM3A (WDM3C) loco have

- a. AC-AC Transmission
- b. AC-DC Transmission
- c. AC-DC Transmission
- d. DC-DC Transmission

498. Excitation system in ALCO loco have.....no. cards

- a. 3
- b. 7
- c. 2
- d. 5

499. Rectifier panel in WDM3A is used

- a. To convert main generator AC voltage to DC voltage for traction motors
- b. To convert main generator DC voltage to AC voltage for traction motors
- c. To convert main generator AC low voltage to DC high voltage for traction motors
- d. Any of the above

500. BKT in locomotives is used

- a. To change braking and motoring positions
- b. To change direction
- c. To reduce the speed of diesel engine
- d. To reduce the speed of diesel loco

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- c. BKT
- d. REV

502. Which of the following is the example of electro pneumatic contactor

- a. FS contactor
- b. Power contactor
- c. Fuel pump contactor
- d. Radiator fan contactor

503. Which of the following is linked with radiator fan

- a. CKC
- b. FPC
- c. FSC
- d. ECC

504. Which of the following contactor is directly linked with traction motors

- a. CKC
- b. FPC
- c. Power contactors
- d. ECC

505. Power contactors are the example of

- a. Electromagnetic contactor
- b. Electro Pneumatic contactor
- c. Hydraulic contactor
- d. Any of the above

506. Fuel pump motor in ALCO loco is located in
- Generator room
 - Engine room
 - Compressor room
 - Radiator room
507. Two starting motors are provided in
- WDM3A
 - WDM3D
 - WDG3A
 - WDG4
- 508.WDP4D locos ECC2 same as
- WDP4
 - WDG3A
 - WDM2B
 - All of the above
- 509.In WDP4/WDP4B locos ECC1 are located in
- Driver cabin
 - Near radiator room
 - Under truck
 - None of the above
- 510.In WDP4/WDP4B locos ECC3 are located in
- Driver cabin
 - Near radiator room
 - Under truck
 - None of the above
- 511.Engine control panel in wdg4 locos are located in
- Driver cabin end panel
 - Back panel
 - ECC3
 - None of the above
- 512.Which of the following is not mounted on engine control panel
- EFCO switch
 - Battery charging ammeter
 - DB cutout switch
 - Circuit breaker

513.Radiator fan contactors are found in

- a. ECC1
- b. ECC2
- c. ECC3
- d. ECC4

514.which of the following loco having hydraulic transmission

- a. WDS4
- b. Wdm3a
- c. Wdm2
- d. Wdg4

515.Individual motor control feature is found in

- a. MEDHA locos
- b. SIEMENS locos
- c. EMD locos
- d. All of the above

516.Six traction inverters are found in

- a. MEDHA locos
- b. SIEMENS locos
- c. EMD locos
- d. All of the above

517.Individual bogie control feature is found in

- a. MEDHA locos
- b. SIEMENS locos
- c. EMD locos
- d. Both B & C

518. Two traction inverters are found in

- a. MEDHA locos
- b. SIEMENS locos
- c. EMD locos
- d. Both B & C

519.Braking contactor are located in

- a. ECC1
- b. ECC2
- c. ECC3
- d. ECC4

520.Radiator fan motors of GM locos are

- a. D.C motors
- b. A.C motors
- c. 50% A.C & 50% D.C
- d. Any of the above

521.Auxiliary generator of HHP loco is driven through

- a. Motor
- b. Battery
- c. Crankshaft gear
- d. Exciter

522.The full form of TFT in HHP loco is

- a. Traction field transistor
- b. Thin film transistor
- c. Thin fluorescent tube
- d. Total field transistor

523.EFCO in HHP loco is used for

- a. Shut down the locomotive
- b. Slow down the locomotive
- c. Can be used in place of dynamic brake
- d. Any of the above

524.MCOS hasno. of position in ALCO loco.

- a. 2
- b. 5
- c. 7
- d. 9

525.MCOS is provided on

- a. Front panel
- b. Back panel
- c. Engine room
- d. Compressor room

526. Battery voltage of WDG4 loco is

- a. 64 v
- b. 72 v
- c. 24v
- d. 96 v

527. In WDG4/WDP4 starting motors are

- a. D.C
- b. A.C
- c. Can be D.C&A.C
- d. None of the above

528. Traction motor pinion & bull gear ratio in WDG4D is

- a. 17:90
- b. 17:77
- c. 65:18
- d. 90:35

529. Battery ammeter of WDG4D loco is provided in

- a. Cab-1 only
- b. Cab-2 only
- c. Both cabs
- d. None of the above

530. What is the maximum continuous current of traction alternator in wdp4d /wdg4d locomotives

- a. 1250A DC
- b. 1500 A DC
- c. 2150A DC
- d. 2500 A DC

531. What is the maximum voltage Of traction alternator in wdp4d / wdg4 locomotive

- a. 2600 V DC
- b. 1500 V DC
- c. 2150 V DC
- d. 1250 V DC

532. What is the maximum speed of traction alternator in wdp4d/ wdg4d locomotive

- a. 954 RPM
- b. 900 RPM.
- c. 800 RPM
- d. 850 RPM

533. Make and type of traction motor in wdg4d /wdp4d loco is

- a. Siemens 1TB 2525- 0TA02
- b. EMD A 2916- 88
- c. both a and b
- d. none of these

534.Total number of batteries in the dual cab locomotives(Ni-Cd) is

- a. 12
- b. 10
- c. 08
- d. 02

535.Battery voltage in the dual cab locomotives(Ni-Cd) is

- a. 230 volt
- b. 64 volte
- c. 72.5 Bolt
- d. 12 volt

536.Capacity of battery in the dual cab locomotive(Ni-Cd) is

- a. 150 AH
- b. 100 AH
- c. 200 AH
- d. none of these

537. Maximum tractive effort of wdp4b /wdp4d locomotive

- a. 41 tones
- b. 53 tones
- c. 50 tones
- d. 123 tones

538.In hhp loco AGAI & AGAV sensors are located in

- a. ECC1
- b. ECC2
- c. ECC3
- d. ECC4

539.Oil lubricated TM gear case is provided in

- a. WDM2
- b. WDP4
- c. WDG3A
- d. none of these

540. Load demand of traction Motor is met by

- a. EM 2000
- b. TCC
- c. EM2000 & TCC
- d. None of these

541. In Wdp4/ wdg4 battery ammeter consists of two zones

- a. Green Zone and red zone
- b. Green Zone and yellow zone
- c. yellow zone and red zone
- d. none of these

542. Wdp4/ wdg4 slipped pinion will be indicated clearly by

- a. Loco not moving
- b. Train not hauling loads
- c. High Motor RPM in computer feedback
- d. none of these

543. Which of the following statements is correct in hhp loco.

- a. Radar gives the speed feedback to computer
- b. Radiator fan Motors of GM Loco are DC Motors.
- c. Ideal RPM of wdg4 loco is 400
- d. 8th notch RPM of wdg4 loco 900

544. Choose the odd one out

- a. WDP4D
- b. WDP4B
- c. WDG4
- d. WDP4

545. Cranking of WDM3A is done by

- a. Fuel pump motor
- b. Two cranking motor
- c. Two starting motor
- d. One fuel pump & one starting motor

546. Microprocessor loco WDM3D havecurrent sensor.

- a. 10
- b. 12
- c. 14
- d. 16

547. Which sensor is used in place of GR1 in WDM3D loco

- a. TANGI sensor
- b. Current sensor
- c. Voltage sensor
- d. GR2

548. Wheel slip is based onin microprocessor WDM3D loco.
- Current difference
 - Voltage difference
 - RPM difference
 - Any of the above
- 549..Which of the following statement is not correct in relation to Dynamic brake.
- All motor fields are connected in series
 - Motor armatures are connected with grids
 - Engine speed rises to 8th notch.
 - Motor work as generator
550. The driver control the dynamic braking by using
- Selector handle
 - Throttle handle
 - Reverser handle
 - All of the above
551. Main advantage of using dynamic brake is
- Increase in the life of brake shoe
 - Increase in the life of wheel
 - Increase in the life of wheel & brake shoes both.
 - Increase in the life of locomotive
552. The main purpose of transition is
- To obtain the higher speed of locomotive
 - To obtain the higher horsepower of locomotive
 - To obtain the higher speed of diesel engine
 - To obtain the constant speed of diesel engine
553. Specific fuel consumption of loco can be determined at the time of
- Load box test
 - Blow by test
 - Run test
 - Dry run test
554. Which of the following statement is not correct about flasher light
- It is a safety device
 - It works automatically during train parting
 - It should not operate automatically during normal brake application
 - It should operate automatically during normal brake application

555. Which of the following safety device brings the engine to idle

- a. Ground relay
- b. Flasher light
- c. Both of the above
- d. Wheel slip relay

556. The effect of low water level switch operation is

- a. To brings the engine to idle
- b. To shut down the engine
- c. To reduce the power
- d. To reduce the speed

557. OST is provided in..... in WDG4 loco .

- a. Engine room
- b. Compressor room
- c. Alternator room
- d. Driver cabin

558. GR relay pick up at the time of

- a. Wheel slip
- b. Power ground
- c. Axle lock
- d. Any of the above

559. In which case diesel engine will shut down without indication.

- a. GR
- b. WSR
- c. OST
- d. LWS

560. In which case load meter shows zero.

- a. When TM no.1 is isolated
- b. When TM no.2 is isolated
- c. When TM no.3 is isolated
- d. Any of the above

561. Unit of MCBG governor fitted in engine room is called

- a. Actuator unit
- b. Sensor unit
- c. Solenoid
- d. Tacho

562. ETS1, 2, 3 pick up at
- 64 ,68,91 degree centigrade
 - 68,72,91 degree centigrade
 - 72,76,95 degree centigrade
 - None of the above
563. MCOS is used for
- Idling the locomotives
 - TM isolation
 - Starting the locomotives
 - Reduce the speed
564. EMD in reference to HHP loco refers to
- Electro motive division
 - Electro mechanical device
 - Electromagnetic device
 - None of the above
- 565 .No power contactors are fitted in
- WDG4
 - WDM4
 - WDG3A
 - WDM3D
566. Which of the following statement is correct?
- Individual motor control feature found in medha microprocessor loco
 - Individual motor control feature found in Siemens microprocessor loco
 - Individual motor control feature found in EMD loco
 - Individual bogie control feature found in medha microprocessor loco
- 567 .ECC1 is also called as
- Low voltage cabinet
 - High voltage cabinet
 - Under truck cabinet
 - Front panel cabinet
- 568.Which of the following are present in ECC2
- ST contactor
 - STA contactor
 - Battery charging assembly
 - All of the above

569. Radiator fan contactors in wdg4 loco found in
- ECC1
 - ECC2
 - ECC3
 - ECC4
570. Which part of locomotive regulates fuel input as per generator demand and engine RPM
- Turbocharger
 - Expressor
 - Governor
 - Throttle
571. Find the odd term out of the following
- ETS
 - LWS
 - OST
 - ERR
572. Traction motors used in WDM3D locos are
- AC
 - DC
 - AC&DC both
 - Squirrel cage motor
573. Specific fuel consumption of diesel loco is measured in
- Kilo litre per year
 - Tons per year
 - Litres
 - Litres per 1000 GTKM
574. Maintenance schedule of wdg4/wdp4 is done after.....days.
- 30
 - 15
 - 90
 - 60
575. Which of the following test is done to see/check the rack position.
- Dry run test
 - Run test
 - Blow by test
 - Load box test

576. One basic unit of 1600 hp DEMU consist of

- a. 1DPC+4TC
- b. 1DPC+2TC
- c. 2DPC+2TC
- d. 3 DPC+1TC

577. The seating capacity of 10 cars of 1600 hp memo is

- a. 900
- b. 1800
- c. 1200
- d. 1400

578. Full form of SPART is

- a. Self protest and research test
- b. Self propelled accident relief train
- c. Space research and testing
- d. None of of the above

579.SPART Consists of

- a. Three coach of self propelled ARMV/ART
- b. One coach of self propelled ARMV/ART
- c. four coach of self propelled ARMV/ART
- d. Not fixed

580.SPART has the facility of driven through

- a. Front end
- b. Trail end
- c. On either end
- d. Both end work simultaneously at a time

581.The no. traction motors per DPC in 1400HP DEMU is

- a. 2
- b. 4
- c. 6
- d. 3

582. The gear ratio in 1400 hp DEMU is

- a. 18:65
- b. 17:77
- c. 20:91
- d. 17:90

583. The power transmission in conventional DEMU (700, 1400 hp) is

- a. AC-DC
- b. DC-DC
- c. AC-A
- d. DC-AC

584. The power transmission in 1600 HP DEMU is

- a. AC-DC
- b. DC-DC
- c. AC-AC
- d. DC-AC

585. The composition of 700 horsepower DEMU is

- a. 1 DPC+ 2TC
- b. 1DPC+3 TC
- c. 1DPC+4TC
- d. None of the above

586. Engine rpm at idle in a 1400 hp DEMU is

- a. 600
- b. 700
- c. 800
- d. 400

587. Maximum engine rpm in a 1400 hp DEMU is

- a. 1000
- b. 1050
- c. 1800
- d. 1700

588. Which of the following is not a safety device in a DEMU

- a. Over speed trip assembly
- b. Low lube oil pressure safety device
- c. Low Booster air pressure device
- d. Low water level safety device

589. The seating capacity in a DPC of 1400 & 1600 hp demu is

- a. 29 & 52 respectively
- b. 52 & 72 respectively
- c. 72 & 29 respectively
- d. 52 & 29 respectively

590. In a 1600 hp DEMU engine speed, excitation, and load control is achieved through
- Engine control panel
 - Locomotive control console
 - Transition circuit
 - None of the above
591. In a 1600 hp DEMU traction motors are
- 3 phase ac induction motor
 - 3 phase dc series motor
 - 3phase ac compound motor
 - 3 phase dc compound motor
592. Traction motors in a 1600 hp DEMU are
- Self ventilated
 - Cooled by a single blower
 - Cooled by separate blower
 - Any of the above
593. The POH of SPART is done after an interval of
- 2year
 - 3year
 - 3.5 year
 - 2.5 year
594. Inspection of SPART by J.A grade officer is done
- Monthly
 - Quarterly
 - Half yearly
 - Yearly
595. Axle driven train lighting system working on
- 24v d.c
 - 110 v d.c
 - a & b both
 - 415 v a.c
596. The rating of alternator for BG non AC coaches is
- 4.5 kw
 - 18 kw
 - 22 kw
 - 25 kw

597. ...-----system is mostly used in Rajdhani/Shatabdi trains.

- a. Self generating system
- b. End on generating system
- c. Head on generating system
- d. Mid on generating system

598. Capacity of battery fuse in TL coaches

- a. 35A(HRC)
- b. 16A (HRC)
- c. 63A (HRC)
- d. 5A (HRC)

599. Name the acid used in in Lead acid cell

- a. sulphuric acid
- b. nitric acid
- c. hydrochloric acid
- d. phosphoric acid

600. Inverter converts

- a. DC to AC
- b. AC to DC
- c. DC to DC
- d. AC to AC

601. Which of the following locomotive comes under the category GE loco

- a. WDM2
- b. WDP3A
- c. WDG4G
- d. WDG3A

602. Which of the following loco have electronic fuel injection

- a. WDM2
- b. WDP3A
- c. WDG4G
- d. WDG3A

603. Which of the following shed is known for wdg4g

- a. AMV
- b. SSB
- c. Roza
- d. TKD

604. -----display screen per cab are present in GE loco.

- a. 2
- b. 3
- c. 4
- d. 1

605. WDG4G loco has

- a. LED type headlight & marker light
- b. Twin beam headlight & marker light
- c. Both of them
- d. None of the above

606. The Full form of APU is

- a. Auxiliary power unit
- b. Alternate power unit
- c. Anti pollution unit
- d. Auxiliary panel unit

607. APU in diesel loco is used for

- a. Fuel saving
- b. Pollution control
- c. Both a and b
- d. Speed reduction

608. REMMLLOT is based on

- a. GPS
- b. SENSOR
- c. WIFI
- d. Any of the above

609. A small unit of APU consists of

- a. Auxiliary generator with alternator
- b. Small engine baby compressor alternator
- c. Small engine alternator
- d. Auxiliary generator small engine

610. The advantages of APU is

- a. Reduction in Lube oil consumption
- b. Reduction in Fuel oil consumption
- c. Extended engine life
- d. All of the above

611. LRMS refers to

- a. Locomotive rolling stock management system
- b. Locomotive remote management system
- c. Locomotive remote monitoring system
- d. Locomotive rail management system

612. LTMS refers to

- a. Locomotive & train management system
- b. Locomotive traction motor system
- c. Locomotive rolling stock management system
- d. Locomotive track & management system

613. The horse power of wdg4g loco is

- a. 4000 hp
- b. 4500 hp
- c. 5000 hp
- d. 5500 hp

614. Which of the following loco comes under the category of GE loco?

- a. WDG3A
- b. WDG4G
- c. WDG6G
- d. Both b & c

615. APU in GE LOCO is provided in

- a. Operator cab
- b. Engine cab
- c. Radiator cab
- d. Alternator cab