(For official use only)

(Govt. of India)
(Ministry of Railways)

Revision in Question Bank on HHP Locos (WDP4/WDG4/WDP4D)

IRCAMTECH/M/GWL/HHP/QB/1.1

May - 2018

अअमा सं RDSO
रेल अग्रदूत Transforming Railways

An ISO 9001-2008 Certified Organisation
उच्च अनुरक्षण प्रौद्योगिकी केन्द्र
EXCELLENCE IN MAINTENANCE

Indian Railways
Centre for Advanced Maintenance Technology

MAHARAJPUR, GWALIOR – 474005

महाराजपुर, ग्वालियर – 474005

Question Bank on HHP Locos

(WDP4/WDG4/WDP4D)

FOREWORD

HHP locomotive was introduced in Indian Railways services in the year 1999-2000. Due to new version of locomotive, there are various differences from conventional locomotives hence proper knowledge of this technologically upgraded locomotive is necessary to Loco staff involved in operation and maintenance of these locomotives. This Question bank on WDP4/WDG4/WDP4D/WDG4D locomotives has been prepared by CAMTECH with the objectives that loco running staff involved in operation and maintenance of diesel electric locomotives get sufficient knowledge of HHP locomotives.

This Questions bank describes Objectives Questions, true/false & Fill in the blanks questions of WDP4/WDG4/WDP4D/WDG4D locomotives. I am sure that the Question bank be highly useful to the concerned staff, to ensure trouble free service of the WDP4/WDG4/WDP4D locomotives.

MAY, 2018
CAMTECH, GWALIOR **Executive Director**

PREFACE

WDG4/WDP4/WDP4D/WDG4D class of locomotives are high speed, high adhesion, computer controlled and Loco Pilot friendly Locomotives using state-of-the-art technology.

Proper knowledge of WDP4/WDG4/WDP4D/WDG4D locomotives is necessary to ensure reliability and availability of locomotives. This Questions bank on WDP4/WDG4/WDP4D/WDG4D locomotives has been prepared by CAMTECH with the objectives that those, maintenance staff involved in operation and maintenance of Diesel electric locomotives, must be aware of sufficient knowledge of HHP locomotive

Technological Up gradation and learning is a continuous process. Hence feel free to write to us for any addition / modifications or in case you have any suggestion to improve the Questions bank. Your contribution in this direction shall be highly appreciated.

May, 2018 **(Manoj Kumar)**
CAMTECH GWALIOR **Jt Director/Mech**

CORRECTION SLIPS

The correction slips to be issued in future for this handbook will be numbered as follows:

IRCAMTECH/M/GWL/HHP/QB/1.1 LOCO/C.S. # XX date ----------

Where “XX” is the serial number of the concerned correction slip (starting from 01 onwards).

CORRECTION SLIPS ISSUED

Sr. No. of C.Slip	Date of issue	Page No. and Item no. modified	Remarks

CONTENTS

HHP LOCOMOTIVES

1. Maximum speed of WDG4D locomotive is.
   A. 130 Kmph.
   B. 160 Kmph.
   C. 105 Kmph.
   D. 180 Kmph.

2. Transmission in WDG4D locomotive is.
   A. AC-DC.
   B. AC-AC.
   C. DC-DC.
   D. DC-AC.

3. WDG4D locomotive is fitted with.
   A. 16 cylinder 710G3B Diesel engine.
   B. 08 cylinder 710G3B Diesel engine.
   C. 12 cylinder 710G3B Diesel engine.
   D. 14 cylinder 710G3B Diesel engine.

4. The maximum axle Load of WDG4D locomotive is.
   A. 21.7t.
   B. 20.7t.
   C. 19.3t.
   D. 18.7t.

5. Parking Brakes of WDG4D locomotive have been provided in.
   A. Rear bogie.
   B. Front bogie.
   C. Both bogies.
   D. None of these.

6. Battery Ammeter of WDG4D locomotive have been provided in.
   A. Cab-1 only.
   B. Cab-2 only.
   C. Both Cabs.
   D. None of these.

7. Alerter Reset is possible in Dual Cab (WDG4D/WDP4D). locomotive from.
   A. Active Cab only.
   B. Inactive Cab only.
   C. Both Cab.
   D. None of these.

8. Maximum Tractive effort of WDG4D loco is.
   A. 41.0 Tones
   B. 54.0 Tones
   C. 50.0 Tones
   D. 123.0 Tones

9. Maximum Dynamic braking force at rail level of WDG4D loco is.
   A. 41.0 Tones.
   B. 54.0 Tones.
   C. 50.0 Tones.
   D. 27.0 Tones.

10. Weight of WDG4D loco is.
   A. 115.8 Tones.
   B. 119.8 Tones.
   C. 121.8 Tones.
   D. 130.2 Tones.

11. TM pinion and bull gear ratio in WDG4D loco is.
   A. 17:90.
   B. 17:77.
   C. 65:18.
   D. 90:35.

12. Wheel arrangement in WDG4D/WDP4D locomotive is.
   A. CO-CO.
   B. BO-BO.
   C. BO1- BO1.
   D. None of these.

13. WDG4D/WDP4D (Dual) locomotive each control console having.
    A. 03 TFT Displays.
    B. 02 TFT Displays.
    C. 01 TFT Displays.
    D. None of these.

14. Total nos ECC in WDG4D/WDP4D(Dual) locomotive.
    A. 03.
    B. 02.
    C. 01.
    D. 04.

15. Total nos ECC in WDG4/WDP4 locomotive.
    A. 03.
    B. 02.
    C. 01.
    D. 04.

16. ST & STA Contactor of WDG4/WDP4 locomotive have provided in which ECC.
    A. ECC1.
    B. ECC2.
    C. ECC3.
    D. ECC4.

17. Length of WDG4D loco over buffer is.
    A. 19964 mm.
    B. Same as WDP4D Loco.
    C. 20000mm.
    D. 21000mm.

18. CAB-1 & CAB-2 Length in Dual Cab locomotive is.
    A. 2377mm (CAB-1), 2232mm (CAB-2).
    B. 2377mm (CAB-1), 2377mm (CAB-2).
    C. 2232mm (CAB-1), 2232mm (CAB-2).
    D. None of these.

19. Name of Variants of Traction Alternator in WDP4D/WDG4D is.
    A. M/s EMD, M/s BHEL, M/s Yongji.
    B. M/s Siemens, M/s MEDHA, M/s Yongji.
    C. M/s Crompton Greaves , M/s BHEL, M/s Yongji.
    D. None of these.

20. What is max continuous current of Traction Alternator in WDP4D & WDG4D Locomotives.
    A. 1250A DC.
    B. 1500A DC.
    C. 2150A DC.
    D. 2500A DC.

21. What is max voltage of Traction Alternator in WDP4D & WDG4D Locomotives.
    A. 2600V DC.
    B. 1500V DC.
    C. 2150V DC.
    D. 1250V DC.

22. What is max speed of Traction Alternator in WDP4D & WDG4D Locomotives.
    A. 954 rpm.
    B. 900 rpm.
    C. 800 rpm.
    D. 850 rpm.

23. Make & Type of Main Traction Alternator in WDG4D/WDP4D Loco is.
    A. EMD TA-17.
    B. BHEL TA-9001.
    C. Both A & B.
    D. None of these.

24. Make & Type of Companion Alternator in WDG4D/WDP4D Loco is.
    A. EMD CA-6B.

B. BHEL AA9201.
C. Both A & B.
D. None of these.

25. What is max voltage of Companion Alternator in WDP4D & WDG4D Locomotives.
A. 250KVA.
B. 100KVA.
C. 150KVA.
D None of these.

26. Make & Type of Traction Motor in WDG4D/WDP4D Loco is.

A. Siemens 1TB2525-0TA02.
B. EMD A2916-8.
C. Both A & B.
D. None of these.

27. What is max power of Traction Motor (Siemens & EMD) in WDP4D & WDG4D locomotives is.
A. 630KW.
B. 500KW.
C. 550KW.
D. None of these.

28. What is continuous voltage of Traction Motor (Siemens) in WDP4D & WDG4D locomotives is.
A.1520V.
B.1550V.
C.1500V.
D None of these.

29. What is continuous current of Traction Motor (Siemens) in WDP4D & WDG4D locomotives is.
A. 202A.
B. 265A.
C. 150A.

D. None of these.

30. What is nominal rating of Traction Motor (Siemens) in WDP4D & WDG4D locomotives is.
    A. 435KW.
    B. 485KW.
    C. 500KW.
    D. None of these.

31. What is continuous current of Traction Motor (EMD) in WDP4D & WDG4D locomotives is
    A. 202A.
    B. 265A.
    C. 150A.
    D. None of these.

32. What is nominal rating of Traction Motor (EMD) in WDP4D & WDG4D locomotives is
    A. 435KW.
    B. 485KW.
    C. 500KW.
    D. None of these.

33. What is continuous voltage of Traction Motor (EMD) in WDP4D & WDG4D locomotives is
    A. 1520V.
    B. 1550V.
    C. 1500V.
    D. None of these.

34. Weight of Traction Motor (EMD) in WDP4D & WDG4D locomotives is.
    A. 2061.58Kg.
    B. 2120 Kg.
    C. 2000Kg.
    D. None of these.

35. Weight of Traction Motor (Siemens) in WDP4D & WDG4D locomotives is.
    A. 2061.58Kg.
    B. 2120 Kg.
    C. 2000Kg.
    D. None of these.

36. Weight of Traction Alternator (EMD) in WDP4D & WDG4D locomotives is.
    A. 8709Kg.
    B. 2120 Kg.
    C. 7400Kg.
    D. None of these.

37. Maximum speed of Traction Motor (EMD) in WDP4D & WDG4D locomotives is.
    A. 3320RPM.
    B. 3200RPM.
    C. 3000RPM.
    D. None of these.

38. Maximum speed of Traction Motor (Siemens) in WDP4D & WDG4D locomotives is.
    A. 3320RPM.
    B. 3200RPM.
    C. 3000RPM.
    D. None of these.

39. Which governor is in the Dual cab loco.
    A. W.W.Governor
    B. G.E. Governor
    C. Both A & B
    D. None of these

40. Weight of Engine in Dual cab locomotives is.
    A. 17963Kg
    B. 20000 Kg
    C. 19000Kg

D. None of these

41. What is the full speed RPM of the Dual cab locomotive engine.
    A. 1000 RPM.
    B. 904 RPM.
    C. 900 RPM.
    D. 954 RPM.

42. Type of Water pump in the Dual cab locomotive is.
    A. Centrifugal Water Pump.
    B. Positive Displacement Water Pump.
    C. Both A & B.
    D. None of these.

43. Capacity of Water pump in the Dual cab locomotive is.
    A. 3411 Liter/minute at 900 rpm.
    B. 3000 Liter/minute at 900 rpm.
    C. Both A & B.
    D. None of these.

44. How much Radiator fans in the Dual cab locomotive?
    A. 1
    B. 2
    C. 3
    D. 4

45. Power of Radiator fans in the Dual cab locomotive is
    A. 113.4HP.
    B. 100 HP.
    C. 150 HP.
    D. 200 HP.

46. Total nos of Batteries in the Dual cab locomotive is (Ni-Cadmium type)
    A. 12.
    B. 10.
    C. 08.
    D. 02.

47. Battery voltage in the Dual cab locomotive is (Ni-Cadmium type)
    A. 230V.
    B. 64V.
    C. 72.5V.
    D. 12V.

48. Capacity of battery in the Dual cab locomotive is (Ni-Cadmium type).
    A. 150AH.
    B. 100AH.
    C. 200AH.
    D. none of these.

49. Head light rating in WDP4D/WDG4D loco is.
    A. 100W 32V.
    B. 200W 30V.
    C. 250W 32V.
    D. 250W 34V.

50. Make of Compressor in the Dual cab locomotive is.
    A. Gardener Denver (GD).
    B. Elgi.
    C. Both A&B.
    D. none of these.

51. Compressor lube oil Capacity in the Dual cab locomotive is
    A. GD Max-11.63lit, ELGI Max-12lit.
    B. GD Max-16lit, ELGI Max-14lit.
    C. GD Max-18lit, ELGI Max-18lit.
    D. none of these.

52. Fuel oil tank capacity of WDG4D loco is.
    A. 5000 Lts.
    B. 6000 Lts.
    C. 4500 Lts.

D. none of these.

53. Fuel oil tank capacity of WDP4D loco is.
    A. 5000 Lts.
    B. 6000 Lts.
    C. 4500 Lts.
    D. none of these.

54. Number of sand boxes of Dual cab loco is
    A. 06 nos.
    B. 08 nos.
    C. 10 nos.
    D. none of these.

55. Sand box Capacity in the Dual cab locomotive is.
    A. 1.0 cubic ft/box.
    B. 1.5 cubic ft/box.
    C. 2.0 cubic ft/box.
    D. none of these.

56. What is the Horse power of WDP_4 D & WDP_4 B locomotives.
    A. 3000 HP.
    B. 3500 HP.
    C. 4000 HP.
    D. 4500 HP.

57. What is the compression ratio of WDP_4 D & WDP_4 B locomotives.
    A. 16:1.
    B. 14:1.
    C. 13:1.
    D. 15:1.

58. Which type of diesel engine is fitted in HHP locomotive.
    A. Four stroke.
    B. Three stroke.
    C. One stroke.

D. Two stroke.

59. TM pinion and bull gear ratio in WDP_4 D & WDP_4 B loco is.
    A. 17:90.
    B. 17:77.
    C. 65:18.
    D. 90:35.

60. Maximum speed of WDP_4 D locomotive is.
    A. 140 Kmph.
    B. 160 Kmph.
    C. 150 Kmph.
    D. 180 Kmph.

61. What is the fuel tank capacity in WDP_4 B locomotive.
    A. 5000 Litter.
    B. 6000 Litter.
    C. 4000 Litter.
    D. None of these.

62. Transmission in WDP_4 D & WDP_4 B locomotive is.
    A. AC-DC.
    B. AC-AC.
    C. DC-DC.
    D. DC-AC.

63. Total weight of WDP_4 D loco is.
    A. 115.8 Tones.
    B. 119.8 Tones.
    C. 121.8 Tones.
    D. 123.0 Tones.

64. Total weight of WDP_4 B loco is.
    A. 115.8 Tones.
    B. 119.8 Tones.
    C. 121.2 Tones.
    D. 123.0 Tones.

65. What is the maximum speed of the WDG4 locomotive.
    A. 150 Kmph.
    B. 140 Kmph.
    C. 120 Kmph.
    D. 100 Kmph.

66. What is the fuel tank capacity of WDG4 Locomotive.
    A. 5000 Liters.
    B. 6000 Liters.
    C. 4000 Liters.
    D. 7000 Liters.

67. Length of WDG4/WDP4B loco over buffer is.
    A. 19964 mm.
    B. 23002mm.
    C. 20000mm.
    D. 21000mm.

68. Length of WDP4D loco over buffer is.
    A. 19964mm.
    B. 23000mm.
    C. 20000mm.
    D. 21000mm.

69. Maximum Tractive effort of WDG4 loco is.
    A. 41 Tones.
    B. 53Tones.
    C. 50 Tones.
    D. 123 Tones.

70. Maximum Tractive effort of WDP4B/WDP4D loco is.
    A. 41 Tones.
    B. 53 Tones.
    C. 50 Tones.
    D. 123Tones.

71. Which type of diesel engine model is fitted in HHP locomotive.

A. ALCO-251.
B. GT46.
C. 710 G3B.
D. GT 46MAC.

72. How many cylinders are used in HHP Loco Engine.
A. 16 Nos.
B. 08 Nos.
C. 12 Nos.
D. 14 Nos.

73. Which type of Traction Motors fitted in HHP LOCO.
A. 3-Phase AC Motors.
B. DC Séries Motors.
C. Both A & B.
D. None of these.

74. Which type of Main Generator fitted in HHP LOCO.
A. DC Generator.
B. 3 phase Alternator.
C. Both A & B.
D. None of these.

75. 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 thèse.

76. 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 thèse.

77. How much Traction Inverters in HHP LOCO (**In Medha make Traction System**).
    A. 6.
    B. 5.
    C. 4.
    D. 3.

78. How much Traction Inverters in HHP LOCO (**In EMD make Traction System**).
    A. 6.
    B. 2.
    C. 4.
    D. 3.

79. How much Traction Inverters in HHP LOCO (**In SIEMENS make Traction System**).
    A. 6.
    B. 2.
    C. 4.
    D. 3.

80. In HHP Loco LCC, Traction Computer, DCL in house of (**In EMD make Traction System**:).
    A. ECC1.
    B. ECC2.
    C. TCC.
    D. ECC3.

81. In HHP Loco LCC, Traction Computer, DCL in house of (**In SIEMENS make Traction System**:).
    A. ECC1.
    B. ECC2.
    C. TCC.
    D. ECC3.

82. In HHP Loco , Traction Computer, DCL in house of (**In Medha make Traction System:**).

A. ECC1.
B. ECC2.
C. TCC.
D. ECC3.

83. In HHP Loco, LCC in house of (**In Medha make Traction System :**) .
A.ECC1.
B. ECC2.
C. TCC.
D. ECC3.

84. How much phase module in HHP Loco (**In Medha make Traction System**).
A. 18.
B. 6.
C.12.
D. None of these .

85. How much phase module in HHP Loco (**In EMD make Traction System**).
A. 18.
B. 6.
C. 12.
D. None of these .

86. How much phase module in HHP Loco (**In Siemens make Traction System**)
A. 18.
B. 6.
C. 12.
D. None of these.

87. Which type of **IGBT Device** used in HHP loco (**In Medha make Traction System**).
A. ABB make,V =6.5 KV, I=600Amps. 2 devices/phase module .

B. Siemens make, V =6.5 KV, I=600Amps. 6 devices /phase module.
C. Mitsubishi make, V =4.5 KV, I=1200Amps, 4 devices /phase module.
D. None of these.

88. Which type of **IGBT Device** used in HHP loco (**In SIEMENS make Traction System**).
A. ABB make,V =4.5 KV, I=1200Amps. 6 devices/phase module .
B. Siemens make, V =6.5 KV, I=600Amps. 6 devices /phase module.
C. Mitsubishi make, V =4.5 KV, I=1200Amps, 4 devices /phase module.
D. None of these.

89. Which type of **IGBT Device** used in HHP loco (**In EMD make Traction System).**
A. ABB make,V =6.5 KV, I=600Amps. 2 devices/phase module.
B. Siemens make, V =6.5 KV, I=600Amps. 6 devices /phase module.
C. Mitsubishi make, V =4.5 KV, I=1200Amps, 4 devices /phase module.
D. None of these.

90. Input voltage & current of TCC is.
A. 620 -2600 V DC, max 1200 A DC.
B. 0 V AC--- 2000 V, max 1100 A AC.
C. 520 -2600 V DC, max 1100 A DC.
D. None of these.

91. Output voltage & current of TCC is.

A. 620 -2600 V DC, max 1200 A DC.
B. 0 V AC- 2000 V, max 1100 A AC.
C. 520 -2600 V DC, max 1100 A DC.
D. None of these .

92. Weight of TCC is.

A. 2400Kg.
B. 2000Kg.
C. 1500Kg.
D. None of these.

93. Outer Dimension (lxbxh) of TCC is.

A. 1833x2140x1450mm.
B. 1530x2140x1450mm.
C. 2133x2140x1450mm.
D. None of these.

94. 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.

95. 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.

96. Current rating of **Head Light** circuit breaker in HHP loco is.

A. 10 Amp.
B. 15 Amp.
C. 20 Amp.
D. 35 Amp.

97. Current rating of **CONTROL** circuit breaker in HHP loco is.

A. 40 Amp.
B. 50 Amp.
C. 90 Amp.

D. 35 Amp.

98. Current rating of **GEN FIELD** circuit breaker in HHP loco is.
A. 40 Amp.
B. 50 Amp.
C. 90 Amp.
D. 35 Amp.

99. Current rating of **TCC1 Computer, TCC2 Computer, AUX.GEN FEEDBACK, AUX.GEN FIELD** circuit breaker in HHP loco is.
A. 10 Amp.
B. 20 Amp.
C. 30 Amp.
D. 35 Amp.

100. Current rating of **TCC1-TCC2 BLOWER** circuit breaker in HHP loco is.
A. 10 Amp.
B. 50 Amp.
C. 30 Amp.
D. 35 Amp.

101. Current rating of **DCL Control, EVENT RECORDER** circuit breaker in HHP loco is.
A. 03 Amp.
B. 5 Amp.
C. 10 Amp.
D. 15 Amp.

102. How much DC LINK switch gears in HHP LOCO?
A. 6.
B. 5.
C. 4.
D. 3 .

103. Traction Control Cabinet (TCC) consists of.
A. Six Traction Computers, 6 DCL switch gears.
B. 6 IGBT based Inverters, DC link Capacitors and

Crow bar circuit.
C. Both A & B.
D. None of thèse .

104. 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 thèse.

105. In HHP Locos ECC-2 are located in.
A. Driver cabin .
B. Under Truck.
C. Near Radiator room.
D. None of thèse .

106. In HHP Locos STA & ST Contactors are located in.
A. ECC-1.
B. ECC-2.
C. ECC-3.
D. ECC-4.

107. In HHP Locos AGAI &AGAV Sensors are located in.
A. ECC-1.
B. ECC-2.
C. ECC-3.
D. ECC-4.

108. In HHP Locos Battery charger & Aux Gen CB are located in.
A. ECC-1.
B. ECC-2.
C. ECC-3.
D. ECC-4.

109. WDP4D Locos, ECC2 same as.
A. WDP4.
B. WDG4.

C. WDP4B.
D. All of above.

110. In WDP4/WDP4B Locos ECC-1 are located in.
A. Driver cabin.
B. Near Radiator room.
C. Under Truck.
D. None of thèse.

111. In WDP4/WDP4B Locos ECC-3 are located in.
A. Driver cabin.
B. Near Radiator room.
C. Under Truck.
D. None of thèse.

112. What is the full speed RPM of WDP4D/WDG4D locomotive engine.
A.1000 RPM.
B. 904 RPM.
C. 954 RPM.
D. 900 RPM.

113. How many Power Contactors are available in WDG4 Locomotive?
A.8.
B.9.
C.0.
D.6.

114. In WDG4 loco compressor is cooled by.
A. Nature .
B. Air .
C. Oil .
D. Water.

115. In WDG4 turbo is cooled by.
A. Nature .
B. Air .
C. Oil .

D. Water.

116. In WDG4 power contactors are replaced with.
A. FS contactor.
B. only relays .
C. BKT/REV .
D. DC Link .

117. In WDG4 when driver fails to acknowledge the alerter it gives audio warning for ….sec.
A. 10.
B. 17.
C. 25.
D. 8.

118. For quick charging of BP in WDG4 ……..is used.
A. Foot pedal.
B. A9 release.
C. SP1/SP2 .
D .None of these.

119. In WDG4 hot oil detector is set at….degrees centigrade.
A. 124.
B. 100.
C. 150.
D. 200.

120. Blended brake is mixture of .
A. Vacuum +Air .
B. Dynamic +Loco .
C. Formation +Dynamic+ loco.
D. Formation +Loco .

121. In WDP4 when the loco is moving in opposite direction to the reverser position…….will happen soon the speed increases to 5 kmph .
A. Dynamic brake come into action.

B. alerter will come into function .
C. power ground will take place .
D. Loco will shutdown .

122. In Dual Cab Locomotive Fuel Prime & Engine Start switch is provided in both the Cabs.
A. In series.
B. In Parallel.
C. Series & Parallel
D. None of thèse.

123. WDG4 engine cylinders are cooled by.
A. Water .
B. oil and water.
C. super charged air and water.
D. air conditioning .

124. What is the lube oil SUMP capacity of WDG4D/WDP4D loco.
A. 1073 Liters.
B. 1100 Liters.
C. 950 Liters.
D. 910 Liters.

125. What is the full speed RPM of WDP4/WDG4 locomotive engine.
A.1000 RPM.
B. 904 RPM.
C. 900 RPM.
D. 950 RPM.

126. What is the IDLE speed RPM of the HHP locomotive engine.
A. 300 RPM.
B. 200 RPM.
C. 269 RPM.
D. 904 RPM.

127. What is the low IDLE speed RPM of the HHP locomotive engine.

A. 300 RPM.
B. 200 RPM.
C. 269 RPM.
D. 904 RPM.

128. What is the lube oil SUMP capacity of WDG4 loco.
A. 1000 Liters.
B. 1100 Liters.
C. 1457 Liters.
D. 910 Liters.

129. What is the coolent water capacity in the HHP loco motive?
A. 1200 Liters.
B. 1100 Liters.
C. 1045 Liters.
D. 1145 Liters.

130. Capacity of sand box in the WDG $_4$ locomotive .
A. 1cubic ft./box.
B. 2 cubic ft./box.
C. 1.5 cubic ft./box.
D. 3 cubic ft./box.

131. Capacity of sand box in the WDP $_4$ locomotive .
A. 1.5 cubic ft./box.
B. 2 cubic ft./box.
C. 1 cubic ft./box.
D. 3 cubic ft./box.

132. What is the minimum continues speed of the WDG4 locomotive.
A. 21.5 Kmph.
B. 22.5 Kmph.
C. 20.5 Kmph.
D. 23.5 Kmph.

133. Which type of bogie fitted in the HHP locomotive.
A. Single suspension.
B. Double suspension.
C. Triple suspension.
D. None of these.

134. In the fuel oil system which type of injectors provided in HHP locomotive .
A. Unit injectors .
B. Injectors with HP line.
C. Injector with cam .
D. None of these.

135. In the two stroke engine the cylinder head of the engine equipped with.
A. Inlet & Exhaust valves.
B. Only Inlet valves.
C. Only Exhaust valves.
D. None of these.

136. In the HHP locomotive the Turbo charger is driven by.
A. Exhaust Gas.
B. Gear Train.
C. Gear Train & Exhaust gas.
D. None of these.

137. In the WDP 4 & WDG4 locomotive engine how many lube oil pumps used.
A. One.
B. Two.
C. Three.
D. Four.

138. In the HHP locomotive, the air compressor is..... .
A. Air cooled.
B. Water cooled.
C. Oil cooled.

D. None of these.

139. In the WDP $_4$ & WDG $_4$ locomotive the coolant used in compressor is .
A. Engine coolant.
B. Compressor coolant.
C. Raw water .
D. None of these.

140. Air compressor lube oil sump capacity is.
A. 9.98 Liters.
B. 12 Liters .
C. 15 Liters.
D. 23 Liters.

141. Air compressor in the HHP locomotive is.
A. Single stage.
B. Two stage .
C. Three stage.
D. Four stage.

142. How many brake cylinders are used per bogie.
A. 06 Nos.
B. 04 Nos.
C. 02 Nos.
D. 05 Nos.

143. Which type of bogie is used in HHP locomotive.
A. Fabricated bogie.
B. Cast steel.
C. High tensile cast steel.
D. None of these.

144. In HHP locomotive Air brake is controlled by.
A. Mechanically.
B. Electrically.
C. Computer.

D. None of these.

145. Brake system in WDP_4 &WDG_4 loco is .
A. 28LAV-1.
B. 28LV-1.
C. CCB-KNORR.
D. None of these.

146. In HHP locomotive the first schedule carried out after .
A. One month.
B. Three month.
C. Four month.
D. 15 Days.

147. 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.

148. In WDP4/WDG4 loco if water pressure is less.
A. LLOB trips .
B. Low water pressure button will trip.
C. Crank case pressure button will trip .
D. Both A and B.

149. In WDP4/WDG4 loco while conducting air brake self test on working control stand.
A. A9 handle should be kept in run position.
B. SA9 handle should be kept in release position.
C. LT switch in trail position.
D. Both A and B.

150. In WDP4/WDG4 loco while conducting air brake self test in working control stand.
A. A9 handle should be kept in FS .
B. SA9 should be kept in release.

C. Both a and b .
D. LT switch in Trail.

151. In WDP4/WDG4 loco while conducting BP leakage test L/T switch should be kept in.
A. Lead position .
B. Trail position.
C. TEST position.
D. Helper.

152. In WDP4/WDG4 loco Loadmeter will not respond if.
A. GFB trips.
B. AGFB trips.
C. Both A & B.
D. MAB trips.

153. In WDP4/WDG4 loco when PCS is knocked out.
A. MAB breaker should be recycled.
B. TCC breaker should be recycled.
C. Air drier breaker .
D. Both A and B.

154. In WDP4/WDG4 loco while conducting BP leakage test. L/T switch should be kept in.
A. Lead.
B. Trail.
C. Helper.
D. Test.

155. In WDP4/WDG4 loco speed sensor should be isolated when.

A. False locked axle indication .
B.Traction motor is burnt experienced.
C. Axle locked condition .
D. Both A and B.

156. In WDP4/WDG4 loco if LLOB is in tripped position during cranking engine will.

A. Crank .
B. Not Fire.
C. Not hold.
D. Not crank.

157. In WDP4 /WDG4 loco before conducting air brake self test.
A. Recycle MAB.
B. Recycle TCC1 and TCC2.
C. Recycle Air drier breaker.
D. Both A & B.

158. Location of EST in WDG4 loco is in.
A. Control stand.
B. Control panel.
C. Generator room.
D. Accessories room.

159. In WDG4 loco LLOB is located in.
A. Accessories room.
B. Compressor room.
C. Engine power take off end.
D. ECC3.

160. In WDP4/WDG4 loco during false locked axle indication.
A. Isolate the defective truck .
B. Isolate the defective speed sensor.
C. Isolate the defective TM .
D. Fail the loco

161. In WDP4/WDG4 dead loco for quick release of loco brakes open one side.
A. MR equalising cock.
B. BC equalising cock.
C. BP equalising pipe .
D. Both A & B.

162. Location of BS in WDG4 Loco is.

A. On foot plate .
B. In Accessories room.
C. In LP's cab.
D. In ECC 3.

163. In WDP4/WDG4 Loco when lube oil temperature exceeds 124 degree centigrade.
A. Hot oil detector operates.
B. LLOB operates.
C. OSTA trips .
D. Both A and B.

164. In WDP4/WDG4 banker loco working control stand A9 should be kept in.
A. FS position.
B. Run position.
C. Release position.
D. Emergency position.

165. In WDP4/WDG4 loco engine should not be cranked when.
A. Low water button is tripped.
B. crank case pressure button is tripped.
C. LLOB is in tripped .
D. OSTA is tripped.

166. In WDP4/WDG4 banker loco working CS, L/T switch should be kept in.
A. Lead.
B. Trail.
C. HLPR.
D. Test.

167. 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.

168. Oil visibilty in bye pass sight glass indicates that.
    A. Primary filter is choked.
    B. Spin on filter choked.
    C. Lube oil filter choked.
    D. Lube oil strainer choked.

169. In WDP4/WDG4 loco choking of fuel oil primary filter is indicated by.
    A. Filter condition guage.
    B. Oil visibility in bye pass sight glass.
    C. Both A & B .
    D. Oil visibility in sight glass near to engine block.

170. WDP4/WDG4 MU trailing loco L/T switches in both control stand should be kept in.
    A. Lead .
    B. Trail.
    C. test .
    D. Helper.

171. Oil lubricated TM gear case is provided in.
    A. WDM 2.
    B. WDP4
    C. WDG 3A.
    D.None of these.

172. 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.

173. Firing order of HHP Loco.
    A.1,8,9,16,3,6,11,14,4,5,12,13,2,7,10,15.
    B. 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16.
    C. 1,3,5,7,9,11,13,15,16,2,4,6,8,10,12,14 .
    D. None of these.

174. Model of Main Generator assembly in WDG4 Loco .
    A.TA17-CA6B.

B. 5A-8147 .
C. Both A & B.
D. None of these.

175. Model of AC AUX. Generator in WDG4 Loco .
A.TA17-CA6B.
B. 5A-8147 .
C. Both A & B.
D. None of these.

176. Model of Traction Motor in WDG4 Loco.
A.TA17-CA6B.
B. 5A-8147 .
C. TB26221.
D. None of these.

177. Speed of Traction Motor in WDG4 Loco .
A. 3220 RPM.
B. 2000 RPM .
C. 904 RPM.
D. None of these.

178. Horse Power of Traction Motor in WDG4 Loco .
A. 500KW.
B. 600KW .
C. 1430KW.
D. None of these.

179. In WDG4 Loco Traction Motor is…… .
A. Force air ventilated cooled.
B. Oil cooled.
C. Water cooled.
D. None of these.

180. Nominal AC Aux. Generator Voltage in WDG4 Loco.
A. 64VDC.
B. 55V AC.
C. 74VDC.
D. None of these.

181. Rectified Voltage of AC Aux. Generator in WDG4 Loco .

A. 64VDC.
B. 55V AC.
C. 74VDC.
D. None of these.

182. Max Power output of AC Aux. Generator in WDG4 Loco.
A. 18KW.
B. 25KW.
C. 20KW.
D. None of these.

183. Total nos. of Batteries in WDG4 Loco Lead acid type .
A. 10.
B. 02.
C. 08.
D. None of these.

184. Total nos of cell of Batteries in WDG4 Loco (Lead acid type).
A. 32.
B. 50.
C. 64.
D. None of these.

185. Total nos of cell of Batteries in WDP4 Loco (Ni-Cadmium type) .
A. 32.
B. 50.
C. 64.
D. None of these.

186. Voltage of Battery Cell in WDP4 Loco (Ni-Cadmium type) .
A. 1.5V.
B. 2.1V.
C. 2.5V.
D. None of these.

187. Voltage of Battery Cell in WDG4 Loco (Lead acid type) .
A. 1.5V.
B. 2.1V.

C. 2.5V.
D. None of these.

188. Total Voltage of Batteries in WDG4 Loco (Lead acid type).
A. 68V.
B. 75V.
C. 72V.
D. None of these.

189. Total Voltage of Batteries in WDP4 Loco (Ni-Cadmium type).
A. 68V.
B. 75V.
C. 72V.
D. None of these.

190. Total nos of Batteries in WDP4 Loco (Ni-Cadmium type) .
A. 10.
B. 02.
C. 08.
D. None of these.

191. Total nos of Cylinder of Air Compressor in WDG4 Loco.
A. 06.
B. 03.
C. 04.
D. None of these.

192. Capacity of lube oil of Air Compressor in WDG4 Loco.
A. 9.98Litter.
B.12 Litter.
C.06 Litter.
D. None of these.

193. Model of WDG4. Loco.
A.GT46MAC.
B.GT46PAC.
C.Both A & B.
D. None of these.

194. Model of WDP4. Loco.
A.GT46MAC.
B.GT46PAC.
C. Both A & B.
D. None of these.

195. Nos of Axles in WDP4 &WDG4 Locos .
A.06.
B.04.
C.08.
D. None of these.

196. How many Traction Motors in WDP4 Locos.
A.06.
B.04.
C.08.
D. None of these.

197. In WDP4 Locos Traction Motor fitted on .
A. Axles no.1, 2 & 5, 6.
B. All Axles.
C. Axles no.1, 2 & 3, 4.
D. None of these.

198. In WDP4 Locos Engine starting switch is located .
A. ECP.
B. Engine room.
C. Control stand.
D. None of these.

199. In WDG4 Locos Engine starting switch is located.
A. ECP.
B. Engine room.
C. Control stand.
D. None of these.

200. In WDG4 Locos RADAR is located .

A. Between Rear bogie & Fuel tank.
B. Engine room.
C. Between Front bogie & Fuel tank.
D. None of these.

201. In WDP4 Locos RADAR is located .
A. Between Rear bogie & Fuel tank.
B. Engine room.
C. Between Front bogie & Fuel tank.
D. None of these.

202. Blended brake, Low water level switch, Temperature gauge & color code are provided in.
A. WDP4.
B. WDG4.
C. Both A & B.
D. None of these.

203. Starting Tractive effort of WDG4 Loco is .
A. 540KN.
B. 270KN.
C. 400KN.
D. 200KN.

204. Starting Tractive effort of WDP4 Loco is.
A. 540KN.
B. 270KN.
C. 400KN.
D. 200KN.

205. Max. Continuous Tractive effort of WDP4 Loco is.
A. 540KN.
B. 270KN.
C. 400KN.
D. 200KN.

206. Max. Continuous Tractive effort of WDG4 Loco is.

A. 540KN.
B. 270KN.
C. 400KN.
D. 200KN.

207. Max. Dynamic Tractive effort (Speed 40 KMPH to 0) of WDG4 Loco is .
A. 540KN.
B. 270KN.
C. 400KN.
D. 200KN.

208. Max. Dynamic Tractive effort (Speed 68 KMPH to 1) of WDP4 Loco is .
A. 540KN.
B. 270KN.
C. 160KN.
D. 200KN.

209. Dead engine cut-off cock & C3W Distributor valve in WDP4/WDG4 Locos are located in.
A. Nose compartment.
B. Driver Cabin.
C. Engine compartment.
D. Radiator compartment.

210. Lead/Trail Air Brake Set-up Switch mounts on.
A. the lower right corner of the air brake controller unit .
B. Nose compartment.
C. Engine compartment.
D. Radiator compartment.

211. How many braking position of A-9 valve have.
A. 05 breaking position.
B. 04 breaking position.
C. 03 breaking position.
D. 01 breaking position.

212. How many braking position of SA-9 valve have.
A. 03 position.
B. 02 position.
C. 05 position.
D. 01 position.

213. In minimum reduction position of A-9 brake valve BP should drop up to (PSI)...
A. 0 to3 PSI.
B. 4 to 7 PSI.
C. 8 to 11 PSI.
D. 12 to 15 PSI.

214. In WDG 4 if false locked wheel indication is experienced.
A. Isolate defective sensor.
B. Isolate defective truck.
C. Isolate defective TM .
D. Fail the loco.

215. In WDP4/WDG4 (Medha) if GR (power) trips continuously three times within 10 minutes.
A. Truck isolation is to be done .
B. Defective TM is to be isolated.
C. Defective speed sensor is to be isolated.
D. Fail the Loco.

216. In WDP4/WDG4 engine cranking but not starting due to .
A. EPD Tripped.
B. Governor not advancing fuel racks.
C. No fuel reaching in the cylinders .
D. Any one of above.

217. In WDP4/WDG4 thick black smoke and poor hauling due to.
A. Low fuel oil pressure & Low booster air pressure **.**
B. Faulty turbo .
C. Faulty injectors.

D. Any one of above.

218. Temperatures of Engine exhaust gas reach up to.
A. 538°C .
B. 438°C .
C. 338°C .
D. None of these.

219. Main parts of KNORR/NYAB CCB 1.5 Brake system are.
A. VCU & CRU .
B. PCU & KE Valve.
C. BVC .
D. All of above.

220. Total no. of Keys on EM2000 EMD/S-1 Display Panel are.
A. 8.
B. 16.
C.10.
D.12.

221. No. of Radiator fan in WDP4 &WDG4 Locos.
A.02.
B.01.
C.03.
D.None of these.

222. No. of Grid Blower Motors in WDP4 &WDG4 Locos.
A.04.
B.02.
C.03.
D.None of these.

223. No. of Brake blocks in HHP Locos.
A.24.
B.12.
C.08.
D.None of these.

224. When Computer controlled Breaker is recycled the disabled speed sensor.
    A. Remain Disabled.
    B. Gets enabled but not to be disabled again.
    C. Remain disabled but to be enabled.
    D. Get enabled automatically & has to be disabled.

225. Brake warning Indication .
    A. Excessive Main Alternator.
    B. Excessive Breaking current in DB.
    C. Excessive Air Breaking .
    D. Excessive Main Generator Current.

226. When Reversor is thrown in forward direction, Sanders of .
    A. No (3) & (6) only work.
    B. All sanders work.
    C. sanders works irrespective of Reversor.
    D. No (1) & (4) wheels only work.

227. Battery charger rectifies AC to DC of .
    A. Aux gen output .
    B. Companion Alternator output.
    C. Main Alternator output.
    D. None of the above.

228. B.P continuity not getting to train from a working WDG4 Loco due to.
    A. Additional BP COC closed in train end.
    B. BP angle cock defective.
    C. In train end no BP pressure in loco.
    D. All of the above.

229. On run GR Trip then the engine.
    A. Will shut – down.
    B. Comes to idle.
    C. No effect on engine.

D. No effect on loco.

230. What is the type of lubrication system being used in diesel loco .
A. Gravity lubrication.
B. Force Feed lubrication.
C. Force Feed & splash lubrication.
D. Capillary lubrication.

231. To check engine sump level, engine should be in condition.
A. Shout – down.
B. 4th Notch.
C. Idle.
D. 2nd Notch.

232. Each Traction Motor provided with.
A. One speed sensor .
B. One speed sensor & one temp sensor.
C. One temp sensor.
D. Two speed sensor.

233. Diameter of new wheels in WDP4 locos is.
A. 1090mm.
B. 1092mm.
C. 1100mm.
D. 1080mm.

234. When there is communication link failure and micro air breaker is active, the loco will work.
A. As lead in.
B. Only in trail mode.
C. In both modes .
D. In helper mode.

235. To recover PCS, it is compulsory to keep .
A. Both throttle handle in idle.
B. Any one throttle handles in idle.
C. Leading control stand throttle handle in idle.

D. Leading throttle handle in idle & reversor in neutral .

236. The companion alternator runs at the same speed as.
A. Engine rpm.
B. Aux gen rpm.
C. Turbo rpm .
D. Locomotive rpm.

237. MR Pressure dropping on run due to.
A. Air dryer defective.
B. Auto drain valve malfunctioning.
C. Break cylinder pipe damaged .
D. All of above.

238. WDP4/WDG4 Hand break applies on wheels.
A. R4, R5.
B. R4, L4.
C. R4, R6.
D. L4, L5.

239. Break cylinder pressure in WDP4/WDG4.
A. 5.2 kg /sq.cm.
B. 4.8 kg /sq.cm.
C. 3.8 kg /sq.cm.
D. 3.5 kg /sq.cm.

240. MR pressure not building up due to.

A. MR EQ COC in open condition.
B. Pipe link chocked in MRPT system.
C. Defective MVCC.
D. All of above.

241. What is the effect of auto flasher operation.
A. Engine comes to idle.
B. auto flasher indication.
C. Buzzer .
D. All of above.

242. ER/BP not creating.
    A. LT switch defective .
    B. Air break failure .
    C. Penalty not reset.
    D. All of above.

243. Lube oil pumps provided In HHP.
    A. Scavenging pump.
    B. Piston cooling pump & main lube oil pump.
    C. Turbo lube pump.
    D. All of above.

244. Radiator fan controlled by.
    A. EM2000.
    B. TCC.
    C. EM2000 & TCC.
    D. None of these.

245. Load demand of the traction motor is met by.
    A. EM2000.
    B. TCC.
    C. EM2000 & TCC.
    D. None of these.

246. Total No. of After coolers inWDP4/WDG4.
    A.4.
    B.3.
    C.2.
    D.5.

247. Total no. of Water expansion tanks inWDP4/WDG4 .
    A.1.
    B.2 .
    C.3.
    D.4.

248. In WDP4/WDG4 BA consists of two zones .
    A. Green zone & red zone .

B. Green zone & yellow zone.
C. yellow zone & red zone.
D. None of these.

249. In WDP4/WDG4 slipped pinion will be indicates clearly by .
A. Loco not moving.
B. Train not hauling loads.
C. High motor rpm in computer feedback.
D. None of these.

250. Head light rating in WDP4/WDG4 loco is .
A. 100W 32V.
B. 200W 30V.
C. 250W 32V .
D.250W 34V.

251. Governor is used in HHP Loco.
A. GE Governor.
B. WW Governor.
C. Both (A) & (B).
D. None of these.

252. Type of cooling water pump used in WDP4/WDG4 Locomotives.
A. Centrifugal.
B. Reciprocating.
C. Positive displacement.
D. None of these.

253. OSTA in WDP4/WDG4 trip at minimum.
A.960RPM.
B. 1000RPM.
C. 1020 .
D. None of these.

254. Flasher light working voltage.
A. 72V.
B. 12V.

C. 24V.
D. None of these.

255. Nos of Main bearings available in WDP4 Locomotives.
A. 12
B. 14
C. 10
D. None of these

HHP LOCO True/False Questions

1. In WDP4/WDG4 loco if LLOB is in tripped position during cranking, engine will crank but not fire.
Answer: False

2. In WDP4/WDG4 loco if low water button trips engine should not be cranked.
Answer: False

3. InWDP4/WDG4 loco if hot oil detector operates LLOB will trip and engine will shut down
Answer: True

4. In WDP4/WDG4 loco if power ground is experienced during dynamic brake disable the truck and work
Answer: False

5. In WDP4/WDG4 locos during locked axle isolate the defective traction motor and work further
Answer: False

6. In WDP4/WDG4 loco during cranking if low water pressure button is tripped engine should not be cranked
Answer: False

7. In WDP4/WDG4 loco inter cooler is cooled by water.
Answer: True

8. In WDP4/WDG4 loco if engine is shutting down due to hot oil detector operated fail the loco immediately.
Answer: True

9. In WDP4/WDG4 banker loco working control stand L/T switch should be kept in LEAD position.
Answer: False

10. In WDP4/WDG4 loco MAB breaker should be recycled when MR pressure is not creating.
Answer: False

11. In WDP4/WDG4 loco if fuel oil pressure across primary filter exceeds 30 psi bye pass valve will open to bypass primary filter.
Answer: TRUE

12. In WDP4/WDG4 during air brake self test, working control stand - A9 handle should be kept in emergency position
Answer: False

13. In WDP4/WDG4 loco during cranking if OSTA is in tripped position engine will not crank.
Answer: False

14. In WDP4/WDG4 if loco shut down due to low crank case button operation loco should be failed immediately.
Answer: True

15. In WDP4/WDG4 loco while conducting BP leakage test L/T switch should be kept in lead position.
Answer: False

16. In WDP4/WDG4 loco if low crank case button is in tripped position engine should not be cranked.
Answer: True

17. In WDP4/WDG4 loco if GR trips more than 3 times within 10 minutes defective truck should be disabled
Answer: True

18. In WDP4/WDG4 loco don't touch any high voltage equipment and Danger marked components without discharging the D.C. link voltage
Answer: True

19. The turbo charger is primarily used to increase engine horse power and provide better fuel economy through the utilization of exhaust gases.
Answer: True

20. In WDP4/WDG4 the starting of the engine is established through two starting motors.
Answer: True

21. In HHP Locos Engine should be Pre-Lubricated, If it has been shut down more than 48 hrs.
Answer: True

22. The Companion Alternator is coupled directly to the Turbo Super Charger
Answer: False

23. The Auxiliary Generator is driven by the Diesel Engine gear train at three times of engine speed
Answer: True

24. MAS 696 system designed and developed by SIEMENS.
Answer: False

25. In WDP4/WDG4BAP from idle to 8^{th} notch
Answer: True
26. Units injector are consisting of fuel injector and Nozzle with the same body
Answer: True

27. Turbo provided in free end in HHP locos
Answer: False

28. IN WDP4/WDG4 Locos EM2000 indicates MR-1 Pressure
Answer: True

29. IN WDP4/WDG4 Locos the gauge indicates MR-2 Pressure

Answer: True

30. IN WDP4/WDG4 Locos for any reasons if the PCS opens auto flasher light starts flashing
Answer: True

31. OST operates when locomotive speed becomes more than 100 kmph.
Answer: False

32. Dead engine COC of GM loco should be closed for dead attached Locomotive.
Answer: False

33. Recycling for Circuit breaker is done when any circuit breaker does not response.
Answer: True

34. Fuel oil tank capacity of WDG-4 loco is 5000 Lts.
Answer: False

35. L/oil cooler of WDP-4 loco is fitted in engine accessories compartment.
Answer: True

36. Air flow Indicator indicates the leakages of MR pressure.
Answer: True

37. Loading-unloading of compressor is controlled by MVCC in GM Locomotive.
Answer: True

38. Idle rpm of WDG-4 loco is 400.
Answer: False

39. Governor circuit breaker is provided in white labeled circuit breaker row.
Answer: True

40. Traction Rod is a component of under truck.
Answer: True

41. Radar gives the speed feedback to computer.
Answer: True

42. Radiator fan motors of GM Loco are DC motors
Answer: False

43. When locked wheel detection message displays on computer, engine shuts down
Answer: False

44. In HHP loco there is one turbo after cooler.
Answer: False

45. Never switch off computer CB while locomotive is moving.
Answer: True

46. Engine temperature sensing probe (ETP) provided in water pump outlet always act as per computer request
Answer: True

47. GM loco compressor is motor driven.
Answer: False

48. Auxiliary Generator of HHP Loco is driven through a motor.
Answer: False

49. Dead engine cut-out cock of HHP loco is in nose compartment.
Answer: True

50. In HHP loco has a V-type 16 Cylinder engine.
Answer: True

51. Maximum Loco brake cylinder pressure of HHP loco is 5.2 Kg/Cm^2
Answer: True

52. WDP-4 locomotive has 4 nos. of traction motors.
Answer: True

53. In the compressor of HHP Loco, there are 02 nos. of air intake filter.
Answer: True

54. Over charging feature is in GM loco works when auto brake handle is kept in Release position.
Answer: True

55. HHP loco is an AC-AC transmission type locomotive.
Answer: True

56. Blended brake cut off switch is provided in WDP-4 locomotive.
Answer: True

57. Rectifier converts AC current to DC current.
Answer: True

58. In HHP Locomotive L/T switch has 03 positions
Answer: False

59. Water expansion Tank Capacity of WDP4 Loco is 510 lts
Answer: False

60. Dead engine cut-out cock should be closed in dead attach Locomotive.
Answer: False

61. Air intake filter of HHP loco is fitted in Compressor Compartment.
Answer: False

62. WDG4 is a AC/AC transmission locomotive
Answer: True

63. TLPR is a black label circuit breaker.
Answer: False

HHP Loco Fill in the blank Questions

1. In WDP4/WDG4 MU trailing loco both control stand A9 should be kept in .. . . . . position.
Answer : Full Service

2. In WDP4/WDG4 loco non-working control stand L/T switch should be kept in . . . . . position.
Answer: Trail

3. Battery knife switch of WDP4 loco is located at . . . . . .
Answer : Foot plate Loco left

4.Capacity of lube oil system in high horse power WDG4 locos is . . . .Ltrs.
Answer : 1457

5. In WDP4/WDG4 locos to create vacuum in engine crank case instead of CCEM. . . . . .is provided.
Answer : Eductor tube

6. In WDP4/WDG4 if OSTA is in tripped condition during cranking engine will not. . . . . .
Answer: Fire

7. In WDG4 banker loco working control stand L/T switch should be kept in. .. . . . . Position
Answer: Helper

8. In WDP4/WDG4 dead loco dead engine coc should be kept in . . . . Position
Answer: open

9.In WDP4/WDG4 loco if LLOB is in tripped condition during cranking engine will not . . . . . .
Answer: Crank

10. In WDP4/WDG4 loco if PCS knocks out and BP not creating, before conducting Air brake self test . . . . . has to be recycled.

Answer: MAB

11. In WDP4/WDG4 loco if AGFB breaker trips . . . . . will not respond
Answer: Loadmeter

12. What is the full form of IGBT……
Answer: Insulated gate bipolar transistor.

13. What is the full form of BL Key……
Answer: Button Lever Key

14. What is the full form of TFT Display…….
Answer: Thin Film Transistor Display

15. LCC Means……..

Answer: Locomotive Control Computer

16. GRNTCO Means……..
Answer: Ground Relay Not Cut Out.

17. GFD Means……..
Answer: Generator Field Decay Contactor

18. EFCO Means……..
Answer: Emergency Fuel Cut Off/Engine Stop Switch

19. MRPT Means……..
Answer: Main Reservoir Pressure Transducer

20. MVCC Means……..
Answer: Compressor Control Magnet valve

21. ST Means……..
Answer: Starting Contactor

22. STA Means……..
Answer: Starting Auxiliary Contactor

23. RAPB Means……..
Answer: Restricted Air penalty Break switch

24. In starting Turbo Super Charger is driven by ……..
Answer: Gear Train

25. After 6th Notch Turbo Super Charger is driven by ……..
Answer: Exhaust Gas

26. The main Generator assembly is directly coupled with the ……..of Diesel Engine
Answer: Main Crank Shaft

27. The main Generator assembly has two Alternators ……..
Answer: Traction Alternator and Companion Alternator

28. Crow Bar is a ……..Which provide safety to TCC1, TCC2
Answer: Safety Device

29…… is provided for lubricating the turbo bearing before cranking and after shut down.
Answer: Turbo lube pump

30. Trace air bubble in fuel by…….
Answer: Return sight glass

31. Capacity of Battery in WDG_4 Locomotive is ----------Amp. Hour.
Answer: 500(8Hour)

32. The brake system in WDG_4 locomotive is ----------
Answer: CCB

33. In release position of Auto brake handle (GM Loco), brake pipe pressure is --------

Answer: 5.7 kg/cm²

34. In GM loco gear case ……is used for lubrication.
Answer: Oil RR460

35. To recover penalty, auto brake handle is placed in emergency position for ---- sec.
Answer: 60 sec

36. Nos. of connecting rod in WDP4 loco engine are ----------
Answer: 8

37. Turbo L/oil pump of GM loco is provided in ---------- compartment
Answer: Engine

38. Hand brake is fitted near ----------compartment
Answer: Engine Accessories

39. Auto brake valve has ----------positions
Answer: 5

40. The oil used in compressor is----------
Answer: SP100RR (M/S-IOC)

41. AC/AC type transmission provided in ---------- locomotive
Answer: HHP

42. Blended braking is provided in ----------Locomotive.
Answer: WDG4/WDP4

43. TLP circuit breaker is fitted on ----------panel.
Answer: Circuit Breaker Panel

44. ----------Oil used in engine sump of WDG4 loco.

Answer: RR520 or MR RR517M

45. EPD is fitted in ----------compartment.
Answer: Accessory compt.

46. Ground relay is a ----------device.
Answer: Safety

47. Gear ratio of WDG4 loco is ----------
Answer: 90:17

48. EFCO is used for ----------the Locomotive.
Answer: Shuts down

49. EPD is provided in --------compartment. It is a ---------- device.
Answer: Accessory compt, Safety Device

50. To recovery the alerter penalty Auto brake handle is kept in ----------position.
Answer: Emergency or FS

51. The 8th notch RPM of WDG 4 locomotive is----------
Answer: 904

52. In GM loco ----------and ---------- circuit breakers are in yellow label
Answer: Turbo, CCB

53. In GM Locomotive Compressor air intake is fitted in ---------- compartment.
Answer: Radiator

54. GM loco is provided with ----------nos of radiator fan. ----------nos. of BKBL
Answer: 2, 2

55. Isolation switch has ----------position

Answer: 2

56. Speed feedback of GM loco is received through ----------
Answer: RADAR

57. The brake system of GM loco is ----------
Answer: CCB

58. During cranking isolation switch of GM loco should be in ----------position
Answer: Isolate

59. ---------- Oil is used as lubricant in T.M gear case of GM loco.
Answer: RR460

60. In GM Loco turbo is cooled by ----------& initially driven by----------
Answer: Oil, Gear Train

61. Yaw dumper is provided ----------nos. in each truck
Answer: 2

62. The type of truck used inWDP_4 locomotive ----------.
Answer: HTSC

63. L/oil cooler of WDP-4 locomotive is in ---------- compartment
Answer: Engine Accessories

64. Cranking of WDG_4 locomotive is done by ----------.
Answer: Two starting motor

HHP Loco Match the following

(i)

SN.	Column A	Column B
1	4000HP	Air brake train
2	Twin After cooler	Engine Cranking
3	TLPR	GM Locomotive
4	Duel starter motor	GM turbo
5	GM Compressor	Water cooled
6	LLOP	Turbo bearing cooling
7	MRPT	Loading Unloading of compressor
8	Auto brake Testing	High crankcase pressure
9	EPD	L/oil system
10	OST	Engine maximum speed control

(ii)

SN.	Column A	Column B
1	TCC-1	Air brake train
2	EM- 2000	Temperature switches
3	CCB	WDG4/WDP4
4	BCI	Battery charging circuit
5	Feed pipe	Vigilance control
6	ETP-1 & ETP-2	GM turbo
7	Baggi type filter	GM Locomotive
8	Dynamic brake grid	TCC-1
9	Alerter system	EFCO
10	Nose compartment	VFD

(iii)

SN.	Column A	Column B
1	ECC 3	Braking force
2	LT switch	Radiator fan circuit breaker
3	Baggie type filter	Crew message
4	Tractive effort meter	5.2 kg/cm2
5	EM- 2000	Engine stop
6	Equalizing reservoir pressure	TM output
7	HOD	Charged air system
8	ECC-2	4-position
9	Radar	Auxiliary circuit breaker
10	BP reduction	Loco speed

(iv)

SN.	Column A	Column B
1	Bail off	Engine Starting
2	Yellow label circuit breaker	EEC 1
3	MVCC	Direct brake
4	Dual motor	Auto brake +Dynamic brake
5	Blended Brake	Air bake fault code
6	VFD	Compressor loading / unloading
7	Companion Alternator	Engine Governor trouble
8	Inter cooler safety valves blowing	MR pressure drops
9	Loco hunting	Three phase AC motor
10	TCC blower	Main alternator excitation

(v)

SN.	Column A	Column B
1	Truck 1	Enable / Disable
2	Breather valve	Battery knife switch
3	PCS	Fuel flow seen in relief valve glass bowl
4	Fuse 800 Amp	Compressor crankcase Pressure
5	Bail-off	T/ Motor
6	AC motor	Through EM-2000
7	Auto brake Testing	Indication light
8	Auto flasher ON	Centralized air filter Compartment
9	Dust exhauster blower motor	PCS open
10	Low hauling	Direct Brake

(vi)

SN.	Column A	Column B
1	CPZ	Radiator Fan drive
2	Vertical dampers	Nose compartment
3	IPR	TCC protection
4	24 D valve	Feed pipe
5	Throttle limit 6th notch	12 Nos.
6	Less MR pressure	Hot Engine
7	Auxiliary Generator	Defect in fuel pump
8	No fuel in regulating glass bowl	White colored humidity indicator
9	A.C motor	TCC recycle
10	Torque difference	Low voltage circuit power supply

HHP Loco - What happens when

1. Brake pipe pressure drops on run.
2. Bell-off button is applied during emergency braking.
3. Trouble in axle rotation when loco is running.
4. Amphenol plug is loose during run.
5. Engine water temperature rises at 97°C
6. High crankcase pressure button of EPD trips.
7. L/oil pressure come down below 2.2 kg/cm2 at 8th notch.
8. MRPT cut out cock is closed.
9. Turbo air intake filter is too dirty.
10. Brake pipe pressure dropped on run.
11. Fuel flows through relief valve.
12. Low L/oil trip plunger comes out during engine run.
13. Engine crankshaft rotation reaches to 1045 r.p.m.
14. BP and FP interchanged.
15. What will be the main indication noticed in Loco in case of ACP?
16. Air box cover loose during run.
17. No fuel in regulating valve glass bowl.

18. Low water pressure in engine cooling system

19. Power ground experienced

20. Crow bar firing message in EM-2000.

21. Fuel primary filter is chocked.

22. Fuel Secondary filter is dirty

23. MRPT is malfunctioning.

24. Brake pipe pressure is dropping below 2.5 kg/cm^2.

25. No Companion alternator output message

26. Number- 2 truck is in disable condition

27. Defect in MVCC.

28. No Auxiliary generator output

29. Dead engine cutout cock is in open position in lead Loco

30. LT switches are in lead position in both control stands.

31. In Duel cab loco isolation switch is in isolate position in Non-working cab.

32. TM speed sensor is loose.

33. Leakage of oil from TM gear case.

34. TM temperature sensor turned out.

35. LR percentage is less than 100%.

36. Power ground during dynamic brake application

37. Power ground during Auto brake application

38. Radiator fan circuit breaker tripped

39. Auxiliary circuit breaker in ECC -2 is tripped.

40. Crankcase Lube oil level is too low.

HHP Loco :- Choose Odd one out

1. Traction motor, Dust bin blower motor, Radiator fan motor, Braking contact blower motor.

2. HOD, EPD, LLOP, IPR

3. WDP4-D, WDP4-B, WDG4, WDP4

4. Oil used in GM Loco- RR- 520, SHC- 634, SP- 100, NELCO- 210

5. FCF, FCS, EPD, RFCB,

6. CCB, VFD, CPZ, DVR

7. MVCC, Compressor, T/ Motor, MRPT

8. CBC, Dead engine cut-out cock, Additional transition rod, Toggle.

9. Locked wheel, T/ Sensor, T/ Motor, TLPM

10. Cylinder liner, Piston, T/M Gear-case, Rocker arm

11. Fuel oil pressure, Penalty, BP Pressure, , PCS

12. Primary fuel filter, Baggi filter, Spin-on filter, Lube oil strainer

13. Power ground, No power, Engine shutdown, Engine Idle
14. Engine Idle, AGFB, Gov. Amphenol plug, Penalty

15. Starting contactor, ECC-2, AGFB, MRPT

KEY ANSWER SHEET

Q. No.	ANSWER	Q. No.	ANSWER	Q. No.	ANSWER
1.	C	26.	C	51.	A
2.	B	27.	A	52.	B
3.	A	28.	A	53.	A
4.	A	29.	A	54.	B
5.	A	30.	B	55.	A
6.	A	31.	B	56.	D
7.	A	32.	A	57.	A
8.	B	33.	B	58.	D
9.	D	34.	A	59.	B
10.	D	35.	B	60.	A
11.	A	36.	A	61.	A
12.	A	37.	B	62.	B
13.	A	38.	A	63.	D
14.	D	39.	A	64.	C
15.	A	40.	A	65.	C
16.	B	41.	D	66.	B
17.	B	42.	A	67.	A
18.	A	43.	A	68.	B
19.	A	44.	B	69.	B
20.	A	45.	A	70.	A
21.	A	46.	B	71.	C
22.	A	47.	C	72.	A
23.	C	48.	A	73	A
24.	C	49.	B	74.	B
25.	A	50.	C	75.	A

KEY ANSWER SHEET

Q. No.	ANSWER	Q. No.	ANSWER	Q. No.	ANSWER
76.	A	101.	A	126.	C
77.	A	102.	A	127.	B
78.	B	103.	C	128.	C
79.	B	104.	B	129.	C
80.	A	105.	B	130.	C
81.	C	106.	B	131.	C
82.	C	107.	B	132.	B
83.	A	108.	B	133.	B
84.	A	109.	D	134.	A
85.	C	110.	A	135.	C
86.	C	111.	B	136.	C
87.	A	112.	C	137.	D
88.	A	113.	C	138.	B
89.	C	114.	D	139.	A
90.	A	115.	C	140.	A
91.	B	116.	D	141.	B
92.	A	117.	D	142.	B
93.	A	118.	B	143.	C
94.	B	119.	A	144.	C
95.	A	120.	C	145.	C
96.	D	121.	A	146.	B
97.	A	122.	B	147.	C
98.	C	123.	C	148.	D
99.	A	124.	A	149.	D
100.	C	125.	B	150	B

Q. No.	ANSWER	Q. No.	ANSWER	Q. No.	ANSWER
151.	C	176.	C	201.	A
152.	C	177.	A	202.	A
153.	A	178.	A	203.	A
154.	D	179.	A	204.	B
155.	A	180.	B	205.	D
156.	D	181.	C	206.	C
157.	A	182.	A	207.	B
158.	D	183.	C	208.	C
159.	A	184.	A	209.	A
160.	B	185.	B	210.	A
161.	D	186.	A	211.	A
162.	A	187.	B	212.	B
163.	D	188.	A	213.	B
164.	A	189.	B	214.	A
165.	B	190.	A	215.	B
166.	C	191.	B	216.	D
167.	A	192.	A	217.	D
168.	B	193.	A	218.	A
169.	A	194.	B	219.	D
170.	B	195.	A	220.	B
171.	B	196.	B	221.	A
172.	C	197.	A	222.	B
173.	A	198.	A	223.	B
174.	A	199.	A	224.	D
175.	B	200.	C	225.	B

Q. No.	ANSWER	Q. No.	ANSWER	Q. No.	ANSWER
226.	D	249	C		
227.	A	250	C		
228.	D	251	B		
229.	B	252	A		
230.	D	253	A		
231.	C	254	B		
232.	B	255	C		
233.	B				
234.	B				
235.	D				
236.	A				
237.	D				
238.	A				
239.	A				
240.	D				
241.	D				
242.	D				
243.	D				
244.	A				
245.	B				
246.	C				
247.	A				
248.	A				

Disclaimer

The information given in this Question Bank does not supersede any existing provisions laid down in RDSO and Rly. Board's instructions. This document is not statutory and instructions given in it are for the purpose of guidance only. If at any point contradiction is observed, Rly. Board/RDSO's guidelines or Zonal Rly.'s instructions may be followed.

OUR OBJECTIVE

To upgrade maintenance technologies and methodologies and achieve improvement in productivity and performance of all Railway assets and man power which inter-alia would cover reliability, availability, utilization and efficiency.

If you have any suggestions and any specific comments, Please write to us.

Contact person : Jt Director (Mech.)

Postal address : Indian Railways,
Centre for Advanced
Maintenance Technology,
Maharajpur, Gwalior.
Pin code - 474 005

Phone : 0751- 2470890, 0751-2470803
Fax : 0751- 2470841