

Subjective questions on MDT-04E

- Q1. What is dynamic braking? Explain with the help of diagrams.
- Q2. Describe the principle of working of dynamic braking?
- Q3. How is dynamic braking achieved in diesel locomotives?
- Q4. What are the auxiliary systems involved in the dynamic brake system?
- Q5. What are the changes taking place during dynamic brake? Explain with the help of a circuit diagram?
- Q6. Explain briefly the need for transition
- Q7. How does the process of field weakening help in achieving higher loco speed?
- Q8. Why is a load box test required for a diesel loco?
- Q9. How is the load box test carried out? Explain with a circuit diagram.
- Q10. What checks are to be carried out before load box test.?
- Q11. What are various parameters checked during the load box test? Describe in brief.
- Q12. How engine H.P calculated during the load box in diesel shed/shop?
- Q13. What are the types of load boxes used in indian railways? Discuss their relative merits.
- Q14. What is a self load box test? How is it done?
- Q15. What is a blow-by test? Why and how it is done?
- Q16. What is a dry run test? Why and how it is done?
- Q17. What are the safety devices provided on diesel locomotives. Explain in brief.
- Q18. What are the various safety devices that shut down diesel locomotives? Discuss
- Q19. Explain the various safety devices used for idle the locomotives

- Q20. Explain About the various bell/bugger/button fitted in diesel locomotives
- Q21. What will happen if the Lube oil pressure of diesel engines has fallen below the present value?
- Q22. Which device senses the cooling water level in expansion tank and what does it do in such an occurrence
- Q23. What are the various types of electrical control systems in diesel loco? Discuss briefly.
- Q24. Write down the demerits of the existing control system?
- Q25. Explain the microprocessor based control system? What are its advantages?
- Q26. Describe MEP block diagram? What are its various components?
- Q27. What are the salient features of microprocessor locos?
- Q28. What are the additional items provided in a microprocessor loco? Discuss
- Q29. Briefly explain the vigilance control device provided in a diesel loco?
- Q30. What is an event recorder? How does it work in a microprocessor loco?
- Q31. Discuss the various types of memories provided in microprocessor loco?
- Q32. Write the advantages of HHP loco in detail.
- Q33. What is the function of governor in diesel locomotives?
- Q34. Describe various types of governor in brief?
- Q35. Explain the difference between MCBG and Woodward governor?
- Q36. What is the MCBG governor? Explain its main subassemblies in brief?
- Q37. Describe the salient features of MCBG governor?
- Q38. Explain in brief governor with mentioning its various LCP positions?

Note: The driver has booked the repairs in a particular locomotive, what action would you take to rectify the following problem.(Q39-Q47)

Q39. Engine Shutdown Automatically without indication and could not restart.

Q40. Hauling power poor.

Q41. Power ground on every notch

Q42.Wheel slips on every notch.

Q43.loco giving jerk on 1st notch and load meter showing excess current.

Q44. Engine Shutdown due to low lube oil indication.

Q45. Battery showing discharge/overcharge.

Q46.Fuel oil pressure dropping

Q47. Hot engine

Q48. Write about auto flasher light in detail.

Q49. What action should be taken when the radiator fan is not working.

Q50. Describe wheel slip and its type.

Q51. Explain the advantages of dynamic brake.

Q52. Write a short note on multiple unit operation of diesel locomotives.

Q53. Explain the salient features of microprocessor loco.

Q54. Explain the procedure of blowby test of diesel locomotives done in diesel sheds.

Q55. In summer there are repeated problems of hot engines. What maintenance steps would you take to overcome the problems?

Q56.what are the instructions to the driver if they experience hot engine enroute.

Q57.what are the various checks done in radiator fan and ECC to avoid hot engine cases

Q58.How the radiator fan efficiency checked to avoid hot engine cases

Q59.What are the various Electrical checks done in dead condition before the load box test?

Q60.What are the various mechanical checks done in dead condition before the load box?

Q61.What is APU .explain its working

Q62. Write a short note on REMMLOT.

Q63.Explain distributed power control system(DPCS) provided in indian railways.

Q64.Write the various advantages of REMMLOT in detail.

Q65. Write the full form of following abbreviations

a. REMMLOT-----

b. MCBG-----

c. APU-----

d. EMD-----

e.TCD -----

Q66. What is the role of automatic flasher light in diesel locomotives?

Q67.What are the various types of lights provided in a diesel locomotive?

Q68.Write the various features of wdg4g loco.

Q69.Write the name of various cabins provided in wdg4g loco.

Q70.Write the name of various switches and alerter provided in the operator cabin.

Q71.What are the various steps required for engine cranking in GE loco?

Q72.What are the various steps required for loco movement in GE Loco?

Q73. Write the complete procedure of shutting down GE loco.

Q74.What are the various Do's and DON'Ts during the operation of wdg4g loco.

Q75. Write the salient features of WDG6G.

Q76 Write the full form of the following in context with GE loco.

ECU, BCCB, FPM, MTB, LCCB, ABCB, APU, RM&D, DCP, GEVO

Q77. What are the various electrical equipment fitted in various cabins of GE locomotives.

Q78. Write a short note on VCD of WDG4G loco.

Q79. Write the full form of the following in context with GE loco.

EPA, SS, PB, GFB, PLP, CIO, AESS, ABM, EAB, AXB, EPCU

Q80. Write the name of various electrical rotating machines provided in GE loco.