

### **Subjective questions on MDT-04**

1. Explain the construction and working of lube oil system in Alco locomotive with diagram.
2. What are the various component of lube oil system provided in Alco locomotive?
3. What are the various tests which are being carried out for ensuring good quality of the lube oil circulating in the system?
4. What is the function of relief and regulating valve fitted in lube oil system of Alco locomotive explain the working of relief and regulating valve.
5. Explain the working of lube oil system fitted in GM locomotive.
6. What are the various components of lube oil system provided in GM locomotive?
7. How many lube oil pumps are provided in lube oil system of GM locomotive explain the role of each separately.
8. What is pre lubrication of turbo supercharger fitted in GM locomotive? Explain the flow of lube oil from sump to Turbo supercharger during lubrication period.
9. What are the reasons of lube oil system related failures in Alco locomotive?
10. What are the reasons of lube oil system related failures in GM locomotives?
11. What are the preventive steps to be taken by maintenance staff in order to avoid failure of lube oil system?
12. What are the precautions to be taken while preparing flange joint of lube oil system.
13. Explain the construction and working of water cooling system in Alco locomotive.
14. Explain the construction and working of water cooling system in GM locomotive.
15. Describe the overhauling procedure of water pump for Alco locomotive.
16. Explain the overhauling procedure of lube oil pump for Alco locomotive.
17. What is a radiator fan, where it is located? How radiator fan gets drive in Alco locomotive and in GM locomotive.
18. What are the steps to be taken to avoid failure related to radiator fan?
19. What are the steps to be taken to improve the cooling efficiency of water cooling system fitted on locomotives?
20. Draw the layout of a loco maintenance shed and explain the role of major sections in brief.
21. What are the records which are being maintained by a shed related to movement of locomotives?
22. What is outage? Calculate the outage or diesel shed having holding of 150 locomotives.
23. What is maintenance? Why it is required for locomotive. Describe the various maintenance schedules of Alco locomotives in brief.
24. What is maintenance? Why it is required for locomotive. Describe the various maintenance schedule of GM locomotive in brief.
25. What are various types of maintenance practices? What are the various standard documents which can be used for maintenance of locomotive in a shed or shop?
26. What is super checking? What are its advantages? What are the various mechanical and electrical items which are being checked during super checking of loco?
27. What is the various safety fittings provided in Bogie of locomotives.
28. Explain about different type of bogies used in locomotive of Indian Railway.

29. Explain the gear case fitment procedure in GM locomotives? What are the precautions to be taken to avoid gear case oil leakages.
30. What are the various safety devices provided in Alco locomotive.
31. What are the various safety devices provided in GM locomotive.
32. Describe the working of fuel system of Diesel electrical multiple unit.
33. Describe the working of hydraulic system fitted in diesel electrical unit.
34. What is the importance of providing a lube oil system in locomotive, what are the quality checks for lube oil used for this purpose?
35. What do you understand by spectrographic test of lube oil, what are indications which can be concluded by test results?
36. What precautions should be taken to prevent failure of joints of lube oil system in locomotives?
37. Describe the procedure of replacement of lube oil filters in GM loco.
38. Describe the procedure of replacement of lube oil filters in Alco locomotives.