

Mech
30/4/16 FN

Reg. No.

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Question Paper Code : 52684

B.E/B.Tech. DEGREE EXAMINATION, APRIL 2016

Eighth Semester

Mechanical Engineering

ME2037/ME803/10122 MEE 45 – MAINTENANCE ENGINEERING

(Common to Production Engineering and Mechanical and Automation Engineering)

(Regulations 2008/2010)

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions.

PART – A (10 × 2 = 20 Marks)

1. What is a sound maintenance system ?
2. Define MWT.
3. What is meant by Emergency Maintenance ?
4. What is complete overhaul ?
5. List down the features of RTD.
6. What is wear debris analysis ?
7. Differentiate between Fault Tree Diagrams and Reliability Block Diagrams.
8. What is sequential fault location ?
9. Define job order systems.
10. Define equipment record.

PART – B (5 × 16 = 80 Marks)

11. (a) (i) Explain the salient features of shutdown planning and execution. (8)
(ii) Explain availability, MTBF, MTTR and failure rate. (8)
- OR**
- (b) (i) Define availability and method of measuring availability. (8)
(ii) Briefly explain the maintenance economics. (8)
12. (a) (i) Write short notes on RCM with a flow diagram. (8)
(ii) Explain the annual and monthly preventive maintenance schedules. (8)
- OR**
- (b) (i) Briefly explain the different stages of repair cycle. (8)
(ii) Explain the procedure for TPM. (8)
13. (a) (i) Explain various methods and instruments for condition monitoring. (8)
(ii) Briefly explain the leakage monitoring. (8)
- OR**
- (b) (i) Write short notes on : (6)
(1) Check mode
(2) Learning mode
(3) Testing mode
(ii) Explain with a neat sketch the graphical representation of condition monitoring. (10)
14. (a) (i) Explain the logical fault location methods. (8)
(ii) Explain the repair of transmission gears. (8)
- OR**
- (b) (i) With a neat sketch explain the repair methods for beds/guide surfaces. (12)
(ii) Write short notes on failure analysis. (4)
15. (a) (i) Classify material handling equipment's. (4)
(ii) Explain the repair methods for hydraulic drive. (12)
- OR**
- (b) (i) Explain job order system. (8)
(ii) What are the technical conditions required for the assembly of hydraulic transmission ? (8)