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**Question Paper Code : 20792**

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2018.

Seventh/Eighth Semester

Mechanical Engineering

ME 6012 — MAINTENANCE ENGINEERING

(Common to Mechanical and Automation Engineering, Production Engineering)

(Regulations 2013)

(Also Common to PTME 6012 – Maintenance Engineering for B.E. Part Time –  
Seventh Semester – Mechanical Engineering – Regulations 2014 )

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. List any two benefits of Sound maintenance system.
2. Differentiate between inherent reliability and achievable reliability.
3. State the limitations of breakdown maintenance.
4. Define maintenance scheduling.
5. State the advantages and disadvantages of condition monitoring.
6. List any three typical tests conducted on lubricating oil.
7. Mention the common two factors contributing to gear tooth breakage.
8. Define Root cause analysis.
9. What is job card?
10. State the major phases in preventive maintenance of material handling equipments.

PART B — (5 × 13 = 65 marks)

11. (a) Explain the principle of planned maintenance. (13)

Or

- (b) Discuss about any two types of maintenance organization model with neat sketch. (13)

12. (a) Describe with neat sketch about various types of maintenance approach. (13)

Or

- (b) Explain the various roles of stakeholders in maintenance scheduling. (13)

13. (a) In detail discuss the process involved in condition monitoring. (13)

Or

- (b) With neat flow chart, Explain on-load and off-load testing used in condition monitoring. (13)

14. (a) Explain with neat sketch about fault tree analysis. (13)

Or

- (b) Describe about various steps involved in Failure Mode and Effect Analysis (FMEA). (13)

15. (a) Explain about a typical work order flow diagram. (13)

Or

- (b) Explain the general structure of computerized maintenance management system. (13)

PART C — (1 × 15 = 15 marks)

16. (a) Explain in detail about Logical fault location method and Sequential fault location method. (15)

Or

- (b) Explain the maintenance procedure for overhead crane, hydraulic lift and conveyor. (15)