

Reg. No. :

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Question Paper Code : 53289

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2019.

Seventh/Eighth Semester

Mechanical Engineering

ME 6012 — MAINTENANCE ENGINEERING

(Common to Mechanical and Automation Engineering/Production Engineering)

(Regulation 2013)

(Also common to PTME 6012 — Maintenance Engineering for B.E. (Part-Time)
Seventh Semester — Mechanical Engineering — Regulation 2014)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are the objectives of maintenance?
2. What is meant by maintenance economics?
3. Give the merits of condition based maintenance.
4. What is TPM? Give the benefits.
5. List the advantages of condition monitoring.
6. How to analyze the vibration?
7. Define failure analysis.
8. State the purpose of bearing in a machine.
9. State the benefits of proper maintenance of material handling equipments.
10. What is work permit?

PART B — (5 × 13 = 65 marks)

11. (a) (i) What are the important factors to be considered in maintenance planning? (7)
- (ii) Explain about the reliability in maintenance in detail. (6)
- Or
- (b) Explain the terms MTBS, MTBF, MTTF, MTTR and FIT. (13)

12. (a) What do you understand by maintenance categories? Explain common types and explain. (13)

Or

- (b) Discuss clearly the process steps and features of working of TPM in Indian industries. (13)
13. (a) What is condition monitoring? Explain. What types of condition monitoring are normally used in industry and mention its advantages and disadvantages. (13)

Or

- (b) What is thermal monitoring and how thermal monitoring are used in industries? Explain about thermography in detail. (13)
14. (a) Explain about the repair method for spindles. (13)

Or

- (b) Name the various techniques for failure and explain the different failure analysis. (13)
15. (a) Discuss briefly about the maintenance methods for conveyors. (13)

Or

- (b) Explain about the job cards and job card procedures in detail. (13)

PART C — (1 × 15 = 15 marks)

16. (a) Explain about the tasks, functions, types of maintenance followed in an industry.

Or

- (b) Discuss in detail about the maintenance process for a equipment used for moving loads.