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Question Paper Code : X 20822

B.E./B.Tech. DEGREE EXAMINATIONS, NOV/DEC. 2020

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. Briefly write about what are the basic Types of Maintenances.
2. How to ensure the Reliability of a Machine Tool which is used for a long time ?
3. Write about preventive maintenance.
4. Why presence of lubrication is a must in certain applications ?
5. How condition monitoring is useful to predict premature failures ?
6. How Pistol Thermometers are useful ?
7. Write about the machine tools bed repair and conditioning.
8. With suitable example write about a particular case of sequential fault location method.
9. How Equipment Records are Vital in the case of Seismic Vibrations ?
10. How computers can simplify in a large industry for coordinating overall Maintenance Activities ?

PART – B

(5×13=65 Marks)

11. a) What are the objectives and principles of maintenance and how to use them to pre plan for maintenance activities ?

(OR)

- b) Based on reliability and machine availability Compare Maintenance Economics with different types of maintenance principles.

12. a) What are the different types of lubrication methods and how they are associated with Maintenance engineering ?

(OR)

- b) Write all about the Preventive maintenance schedules and repair cycle.

13. a) How condition monitoring is related with overall expenditure for maintenance in an industry ?

(OR)

- b) What are on load and offload testing methods ?

14. a) Explain repair and reconditioning methods for spindles and gears.

(OR)

- b) How logical fault location methods can be useful in both types of maintenance ?

15. a) For material handling equipments which method of maintenance method is suitable.

(OR)

- b) In job order industries how usage of computers for maintenance can make it more effective ?

PART – C

(1×15=15 Marks)

16. a) How preventive maintenance and periodic maintenance are related with wear and total loss without lubrication in Machine Bearings ?

(OR)

- b) Write about overall Coordination using computers and Management of various maintenance activities in an automobile industry to improve Productivity and Machine availability using Robots.
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