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**Question Paper Code : X 60832**

B.E./B.Tech. DEGREE EXAMINATIONS, NOV./DEC. 2020  
Eighth Semester  
Mechanical Engineering  
ME 2037/10122 MEE 45/ME 803 – MAINTENANCE ENGINEERING  
[Common to Mechanical and Automation Engineering and  
Production Engineering]  
(Regulations 2008/2010)

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions.

PART – A

(10×2=20 Marks)

1. What are the objectives of Maintenance ?
2. Define Reliability.
3. What is meant by Breakdown maintenance approach ?
4. Define Corrective maintenance approach.
5. Explain the role of condition Monitoring ?
6. Describe briefly pistol thermometer.
7. Define FCFA.
8. Discuss briefly the role of corrective maintenance.
9. Differentiate between fault tree diagrams and reliability block diagrams.
10. State the various phases present in a good maintenance management system.

**PART – B****(5×16= 80 Marks)**

11. a) What is equipment availability and what are the three basic approaches to define and quantify availability. **(16)**
- (OR)
- b) Explain briefly different types and classes of maintenance cost. **(16)**
12. a) Explain the principles and methods of lubrication in detail. **(16)**
- (OR)
- b) i) Explain the repair cycle. **(6)**
- ii) What are all the steps involved in preventive maintenance. **(10)**
13. a) i) Explain the principle and working of Pistol thermometer. **(8)**
- ii) Discuss the Maintenance Scheduling in detail. **(8)**
- (OR)
- b) Describe the various types of Non-destructive testing techniques for condition monitoring. **(16)**
14. a) i) Discuss the repair methods for bearing. **(8)**
- ii) List a few causes of failures in an electromechanical system like compressor, pumps and elevators. **(8)**
- (OR)
- b) i) Explain the repair methods for Spindles. **(8)**
- ii) Discuss the merits of Criticality matrix. **(8)**
15. a) Explain the repair method for any three material handling equipments. **(16)**
- (OR)
- b) Discuss the following : **(8)**
- i) Job order system. **(8)**
- ii) Use of computers in maintenance. **(8)**
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