

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

**B.Tech. (CSE) / (ME) (Sem-7,8)**  
**MAINTENANCE AND REALIABILITY**

Subject Code : BTME617-18

M.Code : 90485

Date of Examination : 22-06-2023

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

**SECTION-A**

**1. Write briefly :**

- a) Write advantages of total productive maintenance.
- b) Define maintenance engineering.
- c) What do you mean by Chemical control of corrosion?
- d) What is the need of maintenance record keeping?
- e) What is the application of work measurement in maintenance?
- f) What do you mean by reliability of parallel elements?
- g) Differentiate between Reliability and Maintainability.
- h) What do you mean by Breakdown time distribution?
- i) Discuss Stand by redundancy optimization.
- j) Discuss cut set method in fault tree analysis.

## SECTION-B

2. Discuss in detail various costs associated with manpower planning and training in maintenance.
3. What are maintenance requirements of mechanical, electrical, process and service equipments?
4. Discuss the use of reliability concept in design and maintenance of different systems.
5. What do you mean by concept of accuracy and confidence of reliability estimation?
6. Explain the concept of reliability simulation.

## SECTION-C

7. Explain in brief, different types of maintenance organizations.
8. Discuss the importance of reliability improvement in an organization. Also explain the concept of redundant and standby systems.
9. Explain the steps of fault tree construction with the help of a suitable example.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**