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Total No. of Pages : 02

Total No. of Questions : 09

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

Subject Code : BTME617/18

M.Code : 90485

Date of Examination : 20-05-2024

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. Answer briefly :

- (a) What are the objectives of maintenance?
- (b) What do you mean by maintenance schedule?
- (c) Discuss the importance of machine failure pattern.
- (d) Discuss applications of computerized maintenance information system.
- (e) Discuss various safety aspects in maintenance.
- (f) What do you mean by Cost of machine breakdown?
- (g) Discuss the concept of reliability.
- (h) What do you mean by reliability of series elements?
- (i) What is the importance of reliability in design.
- (j) Discuss tie set method in fault tree analysis.

SECTION-B

2. Discuss in detail various costs associated with incentive payments for maintenance.
3. Explain the development of preventive maintenance schedule.
4. Explain in detail various terms used in failure data analysis in mathematical forms.
5. Discuss about statistical estimation of reliability indices in detail.
6. Discuss the concept of reliability calculations from fault tree.

SECTION-C

7. Write a brief note on various conditions monitoring techniques in maintenance planning. Discuss any one in detail.
8. Discuss the importance of reliability engineering. Also, explain the concept of reliability-cost trade off.
9. **Write short notes on :**
 - (a) Computerized maintenance information systems.
 - (b) Fault tree construction

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.