19. (a) What do you understand by fixed time maintenance? Explain its advantages and disadvantages.

Or

(b) What is design out maintenance? What are its problems? Explain.

20. (a) What is Reliability Centered Maintenance? Explain its process.

Or

(b) How does Computerised Maintenance Management System help in maintenance management? Explain.

SECTION C — (3 × 10 = 30)

Answer any THREE questions.

21. Exhibit the various functions of maintenance management and organization for maintenance.

22. Analyse the concepts of failure time distributions and design for maintainability with examples.

23. Describe the maintenance, overhaul and repair policies with suitable illustrations.

24. Give a detailed note on condition-based maintenance and opportunity maintenance with examples.

25. Discuss the TPM philosophy and reengineering maintenance process.

S.No. 9029 **P 22 MBA 3 E 05**

(For candidates admitted from 2022–2023 onwards)

M.B.A. DEGREE EXAMINATION, NOVEMBER 2023.

Business Administration – Elective

MAINTENANCE MANAGEMENT

Time : Three hours Maximum : 75 marks

SECTION A — (20 marks)

Answer ALL the questions.

I. (A) Multiple choice questions : (5 × 1 = 5)

1. Scheduled maintenance is ———— between breakdown maintenance and the preventive maintenance.

(a) Joint (b) Compromise

(c) Bridge (d) In

2. A systematic approach for maintenance is

(a) Problem – Cause – Diagnosis – Rectification

(b) Problem – Diagnosis – Cause – Rectification

(c) Problem – Measure – Diagnosis – Rectification

(d) Problem – Diagnosis – Measure – Rectification

3. Which of the following is not a loss that TPM focuses on reducing?
   (a) Equipment breakdown
   (b) Defects and rework
   (c) Idling and minor stoppages
   (d) Optimized equipment cycle time

4. Measure of reliability is given by ————.
   (a) Mean Time between success
   (b) Mean reliable
   (c) Mean Time between failure
   (d) MTTR

5. What is the failure cost of a product possessing reliability R = 1?
   (a) Zero (b) Unity
   (c) Infinity (d) None of the above

(B) Fill in the blanks : (5 × 1 = 5)

6. ———— maintenance policy is not used in the old age stage of a machine.
7. When the probability of failure reduces gradually, the failure mode is said to be ————.
8. Number of breakdowns/Available machine hours = ————.
9. In replacement analysis the maintenance cost is a function of ————.
10. Reliability and failure intensity related to each other as ———— relationship.

II. Answer ALL questions : (5 × 2 = 10)

11. Define maintenance and its objectives.
12. What is MTTR?
13. What is optimum overhaul?
14. What is operate to failure? Explain.
15. Mention the meaning use of signature analysis.

SECTION B — (5 × 5 = 25)

Answer ALL questions, choosing either (a) or (b).

16. (a) Discuss the maintenance strategies with examples.

Or

(b) What is five zero concept. Explain with example

17. (a) What are the survival curves? How are they useful in failure data analysis?

Or

(b) Enumerate the process of maintainability prediction and availability for maintenance.

18. (a) Elucidate the problems and prospects of spare parts management.

Or

(b) What are the types of replacement? Give their advantages and disadvantages.