Reg. No. : | | | | | | | | | | |

Question Paper Code: 32912

M.E. DEGREE EXAMINATION, NOVEMBER 2015

Elective

CAD / CAM

01PCD517 – MAINTENANCE ENGINEERING AND MANAGEMENT

(Regulation 2013)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. Define Tero technology.
2. Write down the responsibilities of a maintenance department in a well established organization.
3. Write down the key features of maintenance policies.
4. What is preventive maintenance and how does it differs from breakdown maintenance?
5. What are the guidelines used in maintenance staffing?
6. What are the responsibilities of maintenance planning and scheduling?
7. Define maintainability.
8. What is reliability centered maintenance?
9. What are the main features of total productive maintenance?
10. List out the six big losses that affect OEE.

PART - B (5 x 14 = 70 Marks)

11. (a) Explain the functions of maintenance department in an organization. (14)

Or

(b) Table below gives the operation cost, maintenance cost and salvages value at the end of every year of a machine whose purchase value is Rs 12,000. Find the economic life of the machine assuming the interest rate as 0%. (14)

End of year (n)	Operation cost at end of year (Rs.)	Maintenance cost at end of year (Rs.)	Salvage value at end of year (Rs.)
1	1800	1200	8000
2	2500	2000	7000
3	3300	3000	6000
4	3900	3600	5000
5	4600	4100	4000
6	5700	5200	3000
7	7000	6100	2000
8	8000	6500	1000

12. (a) Discuss the various features of breakdown maintenance. (14)

Or

(b) Explain the various principles of optimal preventive maintenance scheduling. (14)

13. (a) Discuss about the methods that can be employed to determine the optimum maintenance crew size. (14)

Or

(b) Explain the various principles of maintenance planning. (14)

14. (a) Explain the FMECA analysis procedure in detail. (14)

Or

(b) Describe in detail the factors that would affect optimum maintainability. (14)

15. (a) Explain the different stage of implementing total productive maintenance programme. (14)

Or

(b) Explain the salient features of TPM Pillars. (14)

PART - C (1 x 10 = 10 Marks)

16. (a) Write a case study of total productive maintenance in a toy manufacturing industry. (10)

Or

(b) Explain the application of reliability centered maintenance in nuclear power plants. (10)