



B.E DEGREE EXAMINATIONS APRIL/ MAY 2024

(Regulation 2018)

Sixth Semester

MECHATRONICS ENGINEERING

U18MCE0017: Maintenance Engineering

COURSE OUTCOMES

- CO1:** Extend the concept and function of maintenance department and costs associated.
- CO2:** Plan for preventive maintenance.
- CO3:** Schedule and evaluate the maintenance.
- CO4:** Test the reliability in maintenance.
- CO5:** Analyze manpower requirement.
- CO6:** Explain the maintenance of mechanical and electrical systems.

Time: Three Hours

Maximum Marks: 100

**Answer all the Questions:-
PART A (10 x 2 = 20 Marks)
(Answer not more than 40 words)**

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| 1. What are the types of maintenance? | CO1 [K ₂] |
| 2. State the components of maintenance cost | CO1 [K ₂] |
| 3. Differentiate brake down and preventive maintenance. | CO2 [K ₂] |
| 4. List the objectives of corrective maintenance. | CO2 [K ₂] |
| 5. Name the various stakeholders of maintenance scheduling | CO3 [K ₂] |
| 6. Define Maintenance Scheduling. | CO3 [K ₂] |
| 7. Define Root cause analysis. | CO4 [K ₂] |
| 8. State the benefits of reliability analysis in industries. | CO4 [K ₂] |
| 9. Give the importance of manpower planning. | CO5 [K ₂] |
| 10. List the basic electrical maintenances. | CO6 [K ₂] |

Answer any FIVE Questions:-
PART B (5 x 16 = 80 Marks)
(Answer not more than 400 words)

11.	a)	Explain the importance factors considering maintenance planning.	8	CO1	[K ₂]
	b)	Discuss the various cost associated with maintenance.	8	CO1	[K ₂]
12.		Explain the steps involved in preventive maintenance and list their benefits of implementing.	16	CO2	[K ₂]
13.		Illustrate the importance of maintenance planning and scheduling in detail, also explain three levels of maintenance schedules.	16	CO3	[K ₂]
14.		Explain the three types of failure models with suitable examples.	16	CO4	[K ₂]
15.		Explain the Manpower planning for maintenance jobs in process industries.	16	CO5	[K ₂]
16.		Discuss the Maintenance process for conveyor system.	16	CO6	[K ₂]
