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Question Paper Code	12210
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B.E. / B.Tech. - DEGREE EXAMINATIONS, NOV / DEC 2023

Seventh Semester

Mechanical Engineering

20PROE908 - MAINTENANCE ENGINEERING

(Regulations 2020)

Duration: 3 Hours

Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

- | | <i>Marks,
K-Level, CO</i> |
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| 1. What are the objectives of maintenance? | <i>2,K1,CO1</i> |
| 2. What is meant by MTBF? | <i>2,K1,CO1</i> |
| 3. State the purpose of corrosion monitoring. | <i>2,K1,CO2</i> |
| 4. Explain repair cycle. | <i>2,K2,CO2</i> |
| 5. State the limitation of breakdown maintenance. | <i>2,K1,CO3</i> |
| 6. Why temperature monitoring is necessary? | <i>2,K1,CO3</i> |
| 7. What are slide ways? | <i>2,K1,CO4</i> |
| 8. State the purpose of bearings in a machine structure. | <i>2,K1,CO4</i> |
| 9. Name any four material handling equipments. | <i>2,K1,CO5</i> |
| 10. What is job card? | <i>2,K1,CO5</i> |

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

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| 11. a) What do you mean by maintenance job planning? Discuss various steps of maintenance job planning. | <i>13,K2,CO1</i> |
| OR | |
| b) What are the functions of lubrication and explain its types. | <i>13,K2,CO1</i> |
| 12. a) What are all the steps involved in preventive maintenance why preventive maintenance is better than reactive maintenance. | <i>13,K2,CO2</i> |
| OR | |
| b) Explain various stages involved in TPM implementation. | <i>13,K2,CO2</i> |
| 13. a) Explain the procedure and methods of condition monitoring. | <i>13,K2,CO3</i> |
| OR | |
| b) Write short notes on
(i) Root cause analysis. (ii) Types of wear. | <i>13,K2,CO3</i> |

14. a) Explain Logical Fault Location method in detail. *13,K2,CO4*
OR
b) Briefly explain the repair methods of spindles. *13,K2,CO4*
15. a) Narrate repair methods of Material Handling Equipment (MHE). *13,K2,CO5*
OR
b) Schedule the maintenance procedure for various small equipment for material handling purpose like chain block, chain, rope, trolley. *13,K2,CO5*

PART - C (1 × 15 = 15 Marks)

16. a) Interpret the usage of computers in maintenance procedure. Explain it briefly. *15,K3,CO5*
OR
b) Demonstrate the maintenance procedure for two wheelers and four wheelers. *15,K2,CO1*