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Question Paper Code : 90799

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2025.

Fifth/Sixth/Seventh/Eighth Semester

Mechanical Engineering

CME 388 — INDUSTRIAL SAFETY

(Common to : Mechanical Engineering (Sandwich))

(Regulations 2021)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define industrial safety.
2. List any four types of fire extinguishers and their applications.
3. Distinguish preventive and breakdown maintenance.
4. What are the primary functions of a maintenance department?
5. What do you mean by adhesive wear?
6. List the various types of corrosion?
7. Define the term "fault tracing"
8. How decision tree are used in machine tool?
9. What is the purpose of overhauling?
10. Define the term "repair cycle".

PART B — (5 × 13 = 65 marks)

11. (a) Explain the different type of industrial hazards with examples.

Or

- (b) Discuss the importance of safety color codes and their applications in an industrial environment.

12. (a) Describe the different types of maintenance and their advantages and disadvantages.

Or

- (b) Explain the roles of lubrication in maintenance. Discuss different types of lubricants and their applications.

13. (a) Explain the various mechanisms of wear and their effects on equipment.

Or

- (b) Discuss the different types of corrosion and their prevention methods.

14. (a) Explain the process of fault tracing in a hydraulic system.

Or

- (b) Describe the common faults in an electric motor and their troubleshooting techniques.

15. (a) Explain the concept of preventive maintenance and its advantages over corrective maintenance.

Or

- (b) Discuss the step involved in overhauling an internal combustion engine.

PART C — (1 × 15 = 15 marks)

16. (a) A manufacturing plant is experiencing frequent equipment breakdowns, leading to production downtime and increased maintenance costs. Analyze the possible causes of these breakdowns and suggest a comprehensive maintenance plan to improve the situation.

Or

- (b) A worker was injured due to an electrical shock while operating a machine. Investigate the possible causes of the accident and recommend safety measures to prevent similar incidents in the future.