



B.E DEGREE EXAMINATIONS: NOV/DEC 2024

(Regulation 2018)

Fifth Semester

MECHANICAL ENGINEERING

U18MEE0018: Industrial Safety

COURSE OUTCOMES

- CO1:** Understand the industrial safety, health standards and safety measures.
CO2: Illustrate the philosophies behind industrial accidents and hazards.
CO3: Analyze about Industrial fatigue, Environmental factors and Industrial waste.
CO4: Discuss about human side of safety.
CO5: Illustrate human welfare and discuss about handling emergencies.
CO6: Study the different types safety organization and acts.

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 2 = 20 Marks)

(Answer not more than 40 words)

- | | | |
|---|-----|-------------------|
| 1. Define industrial safety. | CO1 | [K ₁] |
| 2. What are the safety measures to be followed during production? | CO1 | [K ₁] |
| 3. Classify types of industrial accidents. | CO2 | [K ₁] |
| 4. Recall any one method of accident reporting. | CO2 | [K ₁] |
| 5. What is industrial fatigue? | CO3 | [K ₁] |
| 6. Classify types of industrial waste. | CO3 | [K ₁] |
| 7. What is the role of personal protective equipment in safety? | CO4 | [K ₁] |
| 8. What are statutory welfare schemes for employees? | CO5 | [K ₁] |
| 9. What are safety symbols and their importance in a workplace? | CO5 | [K ₁] |
| 10. Define the Factories Act 1948 and its relevance to safety management. | CO6 | [K ₁] |

Answer any FIVE Questions: -

PART B (5 x 16 = 80 Marks)

(Answer not more than 400 words)

- | | | | |
|--|----|-----|-------------------|
| 11. Explain the importance of industrial safety planning during the production process.
Discuss how Occupational Safety and Health Administration (OSHA) guidelines contribute to improving workplace safety. | 16 | CO1 | [K ₃] |
|--|----|-----|-------------------|

- | | | | | |
|-----|---|----|-----|-------------------|
| 12. | Analyze the causes of major industrial accidents. Propose strategies for preventing such accidents and ensuring hazard control. Include an example of a real-life industrial accident to support your analysis. | 16 | CO2 | [K ₄] |
| 13. | Discuss the role of environmental factors such as noise, temperature, and ventilation in contributing to industrial fatigue. How can proper waste management reduce workplace hazards? | 16 | CO3 | [K ₃] |
| 14. | Evaluate fire hazard prevention techniques and electrical safety measures in industrial settings. How does proper training and maintenance of equipment contribute to reducing hazards? | 16 | CO4 | [K ₄] |
| 15. | Create an emergency response plan for a fire outbreak in a textile manufacturing unit. Discuss the essential steps and roles of various team members. | 16 | CO5 | [K ₅] |
| 16. | Examine the purpose of a safety organization and the role of safety committees in managing workplace safety. How do ISO14000 and ISO9000 standards contribute to safety management? | 16 | CO6 | [K ₄] |
