

Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
**SECOND SEMESTER (R) M Tech DEGREE EXAMINATION, OCTOBER 2023**

**Discipline: CIVIL ENGINEERING**

**Course Code & Name: 222EME106 - Industrial Safety In Engineering**

Max. Marks: 60

Duration: 2.5 Hours

**PART A**

*Answer all questions. Each question carries 5 marks*

- |  | Marks |
|--|-------|
| 1 What are the key elements and components that should be included in a company's written safety policy to ensure management's commitment to personnel and plant safety? | (5)   |
| 2 How accidents are categorized based on severity and causation factors?   | (5)   |
| 3 Explain the requirements for the proper selection, use, and maintenance of personal protective equipment in various work environments?                                 | (5)   |
| 4 What are some of the key occupational health risks associated with modern industries?  | (5)   |
| 5 What are the factors that contribute to the occurrence of fires, both easily detectable and hidden, in industrial settings?  | (5)   |

**PART B**

*Answer any 5 questions. Each question carries 7 marks*

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|--|-----|
| 6 Explain the key principles of safety management that emphasize the importance of safety as a management function?            | (7) |
| 7 Explain the procedure for comprehensive accident analysis?   | (7) |
| 8 Describe the various types of mechanical equipment typically employed in material handling processes?                        | (7) |
| 9 Elucidate how each category of physical industrial hazard poses risks to both workers and the overall workplace environment? | (7) |
| 10 Explain the essential fire protection measures that should be implemented in buildings to minimize fire-related risks.      | (7) |
| 11 a. Explain the fire detection methods and their significance in early fire prevention                                       | (7) |
| b. Define the concept of 'fire load' and its role in assessing fire risks within buildings and industrial settings?            |     |
| 12 How does accident impact the economic aspects of individuals, organizations, and broader society                            | (7) |