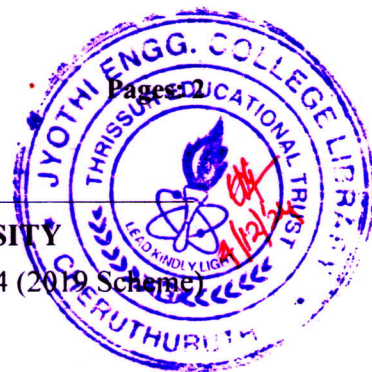


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Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

B.Tech Degree S7 (R, S) / S7 (PT) (R,S) Examination November 2024 (2019 Scheme)

Course Code: MCN401

Course Name: INDUSTRIAL SAFETY ENGINEERING

Max. Marks: 100

Duration: 3 Hours

PART A

Answer all questions, each carries 3 marks.

Marks

- | | | |
|----|---|-----|
| 1 | Differentiate between unsafe act and unsafe condition. | (3) |
| 2 | Define safety policy. | (3) |
| 3 | What is PTW in industrial safety engineering? | (3) |
| 4 | Define the terms severity rate, incident rate, and activity rate. | (3) |
| 5 | List the safety practices when working at heights. | (3) |
| 6 | What is the relevance of ergonomics in construction safety? | (3) |
| 7 | Which are the hazards associated with manual material handling? | (3) |
| 8 | What is meant by point of operation? | (3) |
| 9 | What are material safety data sheets? | (3) |
| 10 | Why MSDS is mandatory for chemical products? | (3) |

PART B

Answer any one full question from each module, each carries 14 marks.

Module I

- | | | |
|----|---|------|
| 11 | a) Explain different types of safety organizations. | (10) |
| | b) Explain the importance of establishing a safety committee. | (4) |

OR

- | | | |
|----|--|-----|
| 12 | a) Explain the roles of supervisors in safety. | (6) |
| | b) Explain about different types of safety committees. | (8) |

Module II

- | | | |
|----|---|------|
| 13 | a) Describe any four respiratory personal protection devices. | (10) |
| | b) What are the safety precautions to be followed before entering a confined space? | (4) |

OR

- | | | |
|----|--|------|
| 14 | a) Explain the hot work permit and cold work permit. | (10) |
| | b) Examine some strategies to make employees comfortable with PPE. | (4) |

Module III

- 15 a) Discuss the safety and fire protection facilities required for a high-rise building as per the National Building Code of India (8)
b) Explain how the safety of workers can be ensured during a demolition operation (6)

OR

- 16 a) Distinguish ladders and scaffolds, along with their safety features. (7)
b) Discuss important types of ergonomic hazards associated with industries (7)

Module IV

- 17 a) Which are the various types of machine-guarding devices used in industries? (14)
Discuss the suitability of each machine guarding device.

OR

- 18 a) What are all the potential hazards in Arc welding, and how to protect from hazards? (8)
b) Explain the four key areas of manual handling. (6)

Module V

- 19 a) Explain the different classifications of Fire. (14)

OR

- 20 a) Describe the different types of risk assessment tools (14)
