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MIS-038

M. SC. (INDUSTRIAL SAFETY)

(MSCIDS)

Term-End Examination

December, 2025

**MIS-038 : HAZARDOUS MATERIAL
MANAGEMENT**

Time : 3 Hours

Maximum Marks : 70

Note : Answer any *five* questions. All questions carry equal marks.

1. (a) What is material safety data sheet ?
Describe the various types of hazards in process industry. 7
- (b) What is hazardous waste ? How do you dispose hazardous waste safety ?
Explain briefly. 7

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2. (a) What is Hazard and Operability (HAZOP) study ? How can it be applied in Hazardous Materials Management ? 7
- (b) How hazardous waste affect the public health and environment ? Explain briefly. 7
3. (a) What are the types of training provided to the employees while handling hazardous materials ? Explain briefly. 7
- (b) Discuss the key aspects of safe transportation of hazardous materials with suitable examples. 7
4. (a) Explain the hazardous waste management hierarchy with suitable diagram. 7
- (b) Describe the progressive development of fire from ignition through its various stages. 7
5. (a) Discuss the sample collection, preservation and holding times for various types of samples. 7

- (b) Describe the Hazardous wastes listed under Schedule-II of Hazardous Wastes Amendment Rules, 2000. 7
6. (a) Discuss the instruments required for analysis and characterization of hazardous waste. 7
- (b) What is Emergency Response Plan ? How does it help in handling of hazardous material. 7
7. (a) What is personal protective equipments ? How does it provide safety to handle the hazardous materials ? Explain briefly. 7
- (b) Discuss in detail on the biological methods available for treating hazardous waste along with their advantages and disadvantages. 7
8. (a) What are the factors to be considered during location selection of landfill ? Explain briefly. 7

- (b) Discuss the fire hazards, fire precautions and firefighting equipment used for dangerous chemicals. 7
9. Write short notes on any *four* of the following : 4×3.5=14
- (a) Fire fighting equipment
 - (b) Packaging of hazardous waste
 - (c) Safe handling of hazardous biological waste
 - (d) Exposure monitoring
 - (e) Role of technology in safe transportation
 - (f) Fire triangle

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