

**M. SC. (INDUSTRIAL SAFETY)**  
**(MSCIDS)**

**Term-End Examination**

**June, 2025**

**MIS-031 : FIRE SAFETY**

*Time : 3 Hours*

*Maximum Marks : 70*

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

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1. (a) What do you understand by the importance and need of fire safety ? 5
- (b) Explain how electrical faults can lead to fire accidents. 5
2. (a) How does a water extinguisher suppress fire ? Why should it not be used in case of electrical fires ? 5

- (b) Define fire prevention and explain its importance in workplace safety. 5
3. (a) What are the major fire detection and measurement techniques ? 5
- (b) What are the key mechanisms of heat transfer in combustion and how do they interact ? 5
4. (a) What role does turbulence play in flame extinction and flame spread ? 5
- (b) What are the key factors influencing flashover in a compartment fire ? 5
5. (a) What is the procedure for testing and maintenance of fire alarms ? 5
- (b) What are the components of a fire hydrant system and how is it used ? 5

6. (a) What are the common causes of residential fire ? 5
- (b) How do emergency exit routes contribute to effective evacuations ? 5
7. (a) What is the first step in providing first aid for a burn victim ? Why should ice be not applied in severe burn case ? 5
- (b) How do evacuation planning and crowd management improve fire safety ? 5
8. (a) Why are fire safety regulations important ? What are the key components in fire safety plan ? 5
- (b) How do forensic fire investigation techniques help in determining fire origins ? 5
9. Write short notes on any **four** of the following :  $4 \times 2.5 = 10$
- (a) National Fire Protection Association (NFPA)

- (b) Characteristics of fire triangle
- (c) Dry powder extinguisher
- (d) Fire Alarm Control Panel
- (e) Fire Blankets
- (f) Fire Extinguishers—advantages and limitations

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