

**DIPLOMA IN FIRE SAFETY MANAGEMENT
(DFSTYM)**

Term-End Examination

June, 2011

BSE-041 : BASIC OF FIRE AND FIRE SCIENCE

Time : 3 hours

Maximum Marks : 75

Note : Attempt all questions.

1. Write *True* or *False* against each statement : **5x1.5=7.5**
- (a) Hydrogen is the lightest of all gases and is difficult to liquefy.
 - (b) The unit of Resistance in an electrical circuit is Ohm.
 - (c) The process of transfer of heat in liquids is called conduction.
 - (d) Method of Removal of heat is called smothering.
 - (e) Water type fire extinguisher is best suitable for oil fires.
2. Fill in the blanks. **5x1.5=7.5**
- (a) _____ is the ratio of the density of a substance to the density of water.

- (b) Combustion may be defined as a chemical reaction taking place with the evolution of _____ and _____.
- (c) Liquids and Gases transmit heat by _____ .
- (d) Metals are _____ conductors of heat and electricity.
- (e) Discharge horn is provided in _____ fire extinguisher.

3. Write short notes on *any six*.

6x6=36

- (a) Ignition Temperature and Spontaneous Combustion.
- (b) Methods of Heat Transfer.
- (c) Diffusion flames and Premixed flames.
- (d) Static Electricity and its Preventive measures.
- (e) Vapour Density and Specific Gravity.
- (f) The Tetrahedron Concept of Fire.
- (g) Flashover and Back Draft.
- (h) Sprinklers and Drenchers.
- (i) Gas and Dust explosion.

4. Answer *any two* of the following.

2x12=24

- (a) What is triangle of fire ? Also explain the classification of fire with suitability of fire extinguishers on each type.
 - (b) Explain the common causes of fires in Electrical installations and their preventive measures.
 - (c) Explain the fire fighting properties of water, CO₂ and dry chemical powder.
 - (d) Explain the fire hazards of smoke and how to carryout fire and rescue operation in such situations.
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