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

Term-End Examination

June, 2011

**BSE-043 : STRUCTURAL FIRE PROTECTION
OCCUPANCIES AND COMMUNICATIONS**

Time : 3 hours

Maximum Marks : 75

*Note : (i) Please draw drawings which will fetch you more marks.
(ii) Attempt all questions. Please write neatly.*

1. Write True or False against correct statement : 5x1=5
- (a) Timber structures do not collapse suddenly in fire.
 - (b) Sandstone shrinks and cracks in fire.
 - (c) Structural steel loses 2/3rd of its strength at 593°.
 - (d) As per Bureau of Indian Standards Fires are classified into five class i.e. A, B, C, D and E.
 - (e) Composition of air after exhalation :- Nitrogen - 79%, Oxygen - 17%, Carbon dioxide - Traces.

2. Fill in the blanks :

5x1=5

- (a) _____ is a mass of bubbles, formed by the mixing of air or gases and suitable foam solutions.
- (b) Dry chemical powders are extremely effective and useful for Class B and C fires, while new powders also find uses in Class _____ application.
- (c) Potassium Bicarbonate is popularly known as _____.
- (d) _____ is a colourless, odourless gas at normal temperature and does not support combustion.
- (e) Ropes are made of _____ and _____. (Any two)

3. Write short notes on *any* 7 (seven) :

7x5=35

- (a) Timber and stone
- (b) Metals and Building Boards
- (c) Dead Load, Imposed Load and Wind Load.
- (d) Fire Test of elements of construction :- Stability, Integrity, Insulation
- (e) Factor affecting operation of Detectors
- (f) Types of Ventilation
- (g) List the equipment used for Salvage
- (h) Compartmentation in Buildings
- (i) Means of Escape
- (j) Why Small Gears are useful for firefighters ?
Name 10 Small Gears.

4. Give answer of *any Three*.

3x10=30

- (a) What fire safety measures you will recommend for Industrial and High-rise Buildings ?
 - (b) What are the land line and wireless base communication, which can be used for the Fire Service communication ?
 - (c) What is Self Contained Breathing Apparatus ? Describe its various parts with the help of neat sketch. What is the rate of Breathing at rest and excitement ?
 - (d) Describe the types of Fire detectors, risk wise, recommended by the Fire Services in India.
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