

00192

DIPLOMA IN FIRE SAFETY

Term-End Examination

June, 2010

BSEI-025 : INTRODUCTION AND ANATOMY
OF FIRE

Time : 3 hours

Maximum Marks : 100

Note : (i) All questions are compulsory except choice parts of question No. 2 and 3.

(ii) No Question can be repeated again.

PART - A

Multiple choice questions :

1. All Questions contain one mark each. 10x1=10

(a) Ignition temperature of yellow phosphorus is :

(i) 40°C

(ii) 30°C

(iii) 33°C

(iv) 48°C

(b) Approx. value of Nitrogen in Air is :

(i) 21%

(ii) 0.03%

(iii) 79%

(iv) 16%

- (c) Chemical formula of sulphur dioxide gas is :
- (i) H_2SO_4
 - (ii) H_2Cl_2
 - (iii) SO_2
 - (iv) CO_2
- (d) One of the example of class 'D' fire is :
- (i) Hydrogen
 - (ii) Potassium
 - (iii) Charcoal
 - (iv) None
- (e) Sodium Bicarbonate Based fire extinguisher is used for :
- (i) A.B.C. Fires
 - (ii) B.C.D. Fires
 - (iii) B.C. Elect. Fires
 - (iv) All Fires
- (f) Mechanical foam type fire extinguisher is pressurised by :
- (i) Nitrogen Gas
 - (ii) CO_2 Gas cartridge
 - (iii) Normal Air
 - (iv) None
- (g) Soda Acid - Water type fire extinguisher is an example of :
- (i) A Class
 - (ii) B Class
 - (iii) C Class
 - (iv) D Class

- (h) Flanking Roll is a method of :
- (i) Making-up hose
 - (ii) Cleaning of hose
 - (iii) Abrasion of hose
 - (iv) Percolation of hose
- (i) Diameter size of suction hose coupling is :
- (i) 100 m.m.
 - (ii) 150 m.m.
 - (iii) 63 m.m.
 - (iv) 70 m.m.
- (j) Three elements are used for combustion of fire are :
- (i) Air, fuel and water
 - (ii) Fuel, Heat and Ignition
 - (iii) Oxygen, Wood and Light
 - (iv) Heat, Fuel and Air

PART - B

2. Fill in the blanks : 10x1=10

- (a) Class 'D' fire consists of _____ fire.
- (b) Fourth element of Tetrahedron of fire is _____ instead of fuel, heat and oxygen.
- (c) Foam type fire extinguisher is used for mainly _____ class fire.
- (d) The capacity of first aid water type fire extinguisher is _____ litres.
- (e) Standard instantaneous coupling is generally used for _____ hoses.
- (f) Chemical formula of hydrochloric acid is _____.
- (g) Ternary Eutectic chloride powder is for _____ class fire.
- (h) The temperature at which a solid melts is called _____ point of that solid.
- (i) Class IA : Shall include those liquid having flash point below 22.8°C and having a boiling point at or below _____ °C.
- (j) Specific gravity of water is – 01 and specific gravity of petrol is _____.

PART - C

3. Match the following : 8x1=8

- | | |
|----------------------------------|-------------------------------------|
| (a) 100 P.S.I | (i) Reactive Metal |
| (b) Sodium | (ii) \square B Class fire |
| (c) Sodium Bicarbonate | (iii) Oxygen |
| (d) Water type fire Extinguisher | (iv) 07 Bar |
| (e) Mechanical foam | (v) Dry Chemical powder |
| (f) Oxidising agent | (vi) $Mg_3 N_2$ |
| (g) Magnesium Nitrate | (vii) Universal Extinguishing Agent |
| (h) Water | (viii) \triangle A Class fire |

4. Short answer type questions. *Any seven* questions out of **10** to be attempted : 7x6=42

- (a) Write a short note on physical properties of matter ?
- (b) What are the principles of combustion of different combustible materials ? Give examples also.
- (c) What are the requirements of storage for different flammable and combustible liquids ?

- (d) Write down the different classifications of fire ?
- (e) What is triangle of fire ? Write a short note on triangle of fire ?
- (f) What are the fire fighting techniques for fire ?
- (g) What are the different methods for extinguishing for different types of fire ?
- (h) What is fire extinguisher ? Write a short note on D.C.P. type fire extinguisher ?
- (i) What is hose ? Write a short note on delivery hose ?
- (j) Write down the different characteristic of hose ?

5. Long answer type questions. *Any three* out of 5 to be attempted : **3x10=30**

- (a) Write a brief note on oxidizing agent and reducing agent ?
- (b) What are the different materials used for manufacturing of a non-percolating hose ?
- (c) Write down the different methods of care and maintenance of a hose ?
- (d) What are the factors involved in combustion ? Write a brief note on it.
- (e) Write down the classification of fire by size and what are the three different methods for extinguishing of fire ?