23101

11920

3 Hours / 100 Marks Seat No. | | | | | | | | |

Instructions – (1) All Questions are *Compulsory.*

(2) Answer each next main Question on a new page.

(3) Illustrate your answers with neat sketches wherever necessary.

(4) Figures to the right indicate full marks.

(5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Answer any FIVE of the following: **20**

a) State physical and chemical properties of plastic.

b) Define fire point and flash point.

c) Explain auto ignition of the substance.

d) Explain hazards associated with methane.

e) State physical and chemical properties of sodium.

f) Explain hazards associated with transportation of LPG.

g) Explain the classification of flammable materials with example.

Marks

2. Answer any TWO of the following : **16**

a) Explain safe area and typical zone area.

b) Explain hazardous location classification.

c) Explain the concept of hazardous zones and typical zone areas.

3. Answer any TWO of the following : **16**

a) Explain the classification of fire with suitable method for controlling it.

b) Explain fire chemistry with the help of fire triangle and fire Tetrahedron.

c) Explain construction and working of dry chemical powder fire extinguisher.

4. Answer any TWO of the following : **16**

a) Explain endothermic and exothermic reaction with two examples each.

b) Define modes of heat transfer with suitable example.

c) Explain fire load concept and its calculations.

5. Answer any TWO of the following : **16**

a) Explain the terms:

(i) Back pressure

(ii) Water power

(iii) Break horse power

(iv) Efficiency

b) Explain the relationship between velocity and flow.

c) Explain discharge through nozzle and nozzle velocity.

Marks

6. Answer any TWO of the following : **16**

a) Explain the working of lightening arrester.

b) State precautions to be taken to avoid electric fires.

c) Define the terms:

(i) Current

(ii) Voltage

(iii) AC

(iv) DC