

AK-125

April-2015

B.Sc., Sem.-IV

Fire & Safety

CC-Fire Prevention & Protection

Time : 3 Hours]

[Max. Marks : 70

1. (a) Explain the role of a fire officer in petro chemical large industry and what are the points he should check daily ? 7

OR

Write down the fire resistance properties of bricks, timber, concrete and metals i.e wrought iron, cast iron, steel.

- (b) What is good housekeeping and give check list of good housekeeping. 7

OR

Design a fire training programme for workers in industry and list out the topics you would like to cover.

2. (a) Derive a plant safety inspection check list for a chemical plant. 7

OR

What are the 5 M's in industry and also explain total loss control and damage control systems.

- (b) What is work permit, types of work permit and suggest a format of vessel entry permit. 7

OR

Write short note on any **two** :

HAZOP, PHA, SAFETY AUDIT, BENEFITS OF DAMAGE CONTROL

3. (a) What is active fire protection and passive fire protection and explain segregation and compartmentation. 7

OR

Explain conduction, convection and radiation mode of heat transfer.

- (b) Explain fire rating of walls and define load bearing capacity, integrity and insulation of walls. 7

OR

Write short notes on any **two**

Mastics, intumescent coatings, fire paint, fiber glass

4. (a) What are the losses and expenses not covered in policy also the perils not covered and property not covered ? 7

OR

Give a complete list of documents to be submitted to insurance company to raise claim.

- (b) What are the perils and expenses which can be covered by paying additional premium ? 7

OR

Mention perils covered in insurance and what are the expenses which can be claimed with the damages ?

5. All questions carry **one** mark each. Do as directed : 14

- (1) Structural steel loses two third of its strength at which temperature ?
(a) 590 °C (b) 591°C
(c) 592 °C (d) 593 °C
- (2) Thermal conductivity of aluminum is more than steel.
Yes/No
- (3) Pure aluminum melts at how much temperature ?
(a) 650 °C (b) 660 °C
(c) 670 °C (d) 680 °C
- (4) These boards are made-up of thin wood laminates in alternate direction.
(a) plaster board (b) plywood board
(c) black board (d) plastic board
- (5) This type of plastic will not significantly soften when subjected to heat.
thermosetting/thermoplastic
- (6) Melamine is which type of plastic ? thermoplastic/thermosetting
- (7) The quality of workman ship in timber does not contribute to fire resistance.
Yes/No
- (8) Glass is combustible.
Yes/No
- (9) This metal fails with sudden jet of water
(a) carbon steel (b) mild steel
(c) stainless steel (d) cast iron
- (10) Full form of HVAC _____.
- (11) The major cause of death in Upphar cinema was due to
(a) Insulin (b) Aphelion
(c) Asphyxiation (d) Oxygenation
- (12) In reinforced cement concrete we use cement, sand, gravel which is 4th one
_____.
- (13) Damper is which type of protection ?
Passive/Active
- (14) What is full form of MCP ?