

Roll No

**FT - 505**

**B.E. V Semester**

Examination, December 2013

**Fire Prevention & Protection Measures**

*Time : Three Hours*

*Maximum Marks : 70*

- Note:**
1. Attempt all questions.
  2. All questions carry equal marks.
  3. There is internal choice among the questions.

1. a) Explain the design criteria of a building or site where corrosive, poisonous, explosive and easily combustible materials are handled and processed.  
b) What general principles of fire prevention and protection measures is considered during planning and constructions of the building?

OR

2. Explain the following terms:
  - a) Fire separation
  - b) Fire steps
  - c) Fire walls
  - d) Fire barricades
3. a) What fire and safety factor should consider while deciding the layout of hazardous pipeline?  
b) What are the protection measures and devices are used for fire due to lightning.

[2]

OR

4. Discuss the minimum light required in domestic, industrial and public assemblies? 20

5. a) Explain the spacing criteria of sprinkler head in a sprinkler system as per TAC?  
b) What are the main components of Hydrant system? Explain with the help of suitable diagram?

OR

6. a) Explain the exit requirement in an educational building prescribed in NBC part IV? 10  
b) Discuss a recent fire case study which involved the death of more than 50 persons? 10

7. a) Explain the typical arrangement of water supply for water based fire fighting system? 10  
b) Explain the IS specification of mechanical foam based fire extinguisher? 10

OR

8. Write short note on : 20  
a) Fire load and its calculation  
b) Principles of fire grading  
c) Fire appliances  
d) Clean agent system

[3]

9. a) What are the different fire fighting facilities shall be available with plant fire brigade? 10  
b) Give a brief note on smoke movement with in a high rise building.

OR

10. Explain the provisions made in table no 23 of NBC for following fire fighting arrangement in educational building based on height: 20

- i) Wet Riser  
ii) Fire Extinguisher  
iii) Pump House  
iv) Hose Reel

\*\*\*\*\*