

24702

B. Tech. 3rd Semester (Fire Technology and Safety)

F. Scheme Examination, December-2014

FIRE ENGINEERING

Paper-FT-203-F

Time allowed : 3 hours]

[Maximum marks : 100

Note : (i) *Question No. 1 is compulsory.*

(ii) *Attempt one question minimum from each section.*

(iii) *Total five questions to be attempted including Q. No. 1.*

(iv) *Figurative descriptions, wherever used, would be added advantage to candidates.*

1. Give short answers to any *four* of the following :

$5 \times 4 = 20$

- (a) Primary and secondary water supply.
- (b) Fire Drenchers.
- (c) Classification of Fire
- (d) Fire resistance rating.
- (e) Passive Fire Protection.
- (f) Affect of Heat on materials.

Section-A

2. What are basic principles of evacuation ? What points should be kept in mind while designing horizontal and vertical evacuation features in different types of occupancies ?

20

3. What is Air Conditioning ? How air conditioning systems can pose a threat to fire safety of premises? What measures can be adopted for safeguards from such threat ? 20

Section-B

4. Describe building elements and material used in construction of building. State fire behavior of each material. 20
5. What are basic principles of fire detection ? How many types of fire detectors are known to you ? Give working principle of any one of them. 20

Section-C

6. Describe the specific features of an emergency staircase. Describe various escape systems recommended for Hospitals. 20
7. (a) What is pressurized staircase/lobby ? What are it's benefits ? 10
- (b) Define Refuse area. Where these are provided in buildings ? What are specific constructional features of refuse area ? 10

Section-D

8. (a) What do you understand by Fire Resistance Rating? How many types of constructions are there in accordance to fire resistance ratings ? 10
- (b) Explain Fire Retardant Paints. 10
9. (a) Explain Wet and Dry risers system in detail. 10
- (b) What is the difference between Safety Audit and Safety Sampling ? Justify if both are complimentary to each other ? 10