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0904E075

Candidate's Seat No : _____

**B.Sc. (F&S) Sem.-6 Examination
CC**

Fire Safety Design

April-2025

[Max. Marks : 70

Time : 2-30 Hours]

All questions carry seven marks:

Q.no.1(a). Draw the diagram of center fed , grid fed and loop fed and End fed system and explain its working.

OR

Q.No1(a) Why the colored QBD,s are used , what the different colors indicate , compare QBD with fusible link sprinkler What will be the color of bulb for 79* , 93* , 141*c

Q.No1(b) Compare Sprinkler system with hydrant system and explain in details the working of wet sprinkler system.

OR

Q.No1(b) Draw the diagram of pendant , upright and side wall sprinkler , where these sprinklers are used, difference between pendant and upright sprinkler head.

Q.No2(a) Write down the types of heat detectors and explain fixed temperature heat detector with diagram.

OR

Q.No2(a) What is the necessity of emergency lights, in your opinion where these lights should be installed.

Q.No2(b). How many types of smoke detectors are there, explain ionisation smoke detector with diagram.

OR

Q.No2(b) what is the fundamental role of fire detection system , on what principle it works, give names of any 4 detectors.

Q.No3(a) What is the definition of smoke as per NFPA, what makes it dangerous for human beings how to keep escape routes clear of smoke.

OR

Q.No3(a) What is tactical ventilation, and what are the 3 methods of tactical ventilation, explain any two methods in details.

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Q.no3(b)What is ventilation , how ventilation helps in fire fighterswhile entering and during fire fighting ,differentiate between Natural and mechanical ventilation.

OR

Q.No3(b)Explain stack effect and wind effect ,how it affects the movement of smoke in a building.

Q.no4(a),what are the general properties and extinguishing properties of Co2 gas.Explain total flooding system of Co2.

OR

Q.No4(a)What is the difference between Total flooding, local application ,hand held line,and describe extinguishing properties of D C P

Q.No4(b)What are the limitations of Co2 as an extinguishing agent,A room size 40 mtrsx30mtrs x4 mtrs will require how much of Co2 in kg for total flooding at 34 % concentration.

OR

Q.No4(b)Describe D C P total flooding extinguishing system and physical properties of DCP.

Q.No5. MCQ.Each carries 2 marks

(14)

1.Potassium chloride is also called purple, violet, super K, red,

2.NFPA code for Co2 flooding system is 11, 12, 13, 14

3.This factor is responsible for operation of sprinkler pressure, heat, IR UV

4.Which fed system is most common end fed, loop fed, grid fed, tree fed

5.A separate detection system is required in this system

Fusible link, QBD, deluge, none

6.Co2 gas as compared to air is lighter, heavier, equal to air, none

7.Solid particles of CO2 do not conduct electricity true/ false
