

**B.Sc. (F&S) Sem.-6 Examination****CC****Fire Safety Design****April 2022****Time : 2-00 Hours]****[Max. Marks : 50****General Instructions:**

1. This question paper contains TWO sections: Section – I and Section – II.
2. It is compulsory to attempt both the sections.
3. Read the instructions given for each section carefully.
4. Please mention clearly the questions you attempt.

**Section – I. Attempt ANY THREE of the following questions:****42 Marks**

Q.No1(A) Define sprinkler system and write down in details the wet sprinkler and dry sprinkler system .Where dry sprinkler is used.

Q.No1(B) Draw the diagram of Tree fed ,grid fed, and loop fed system and explain its working.

Q.No.2(A)What do you understand by temperature rating of bulb and difference between QBD and fusible link sprinkler.Draw figure of pendant sprinkler.

Q.No.2(B) Explain deluge sprinkler system and its working principle.

Q.no.3(A) What is fundamental role of fire detection system ,its working principle and give names of any 4 detectors.

Q.No.3(B) Write down types of smoke detectors and explain ionization smoke detector with the help of diagram.

Q.No.4(A) Indicate the types of heat detectors and explain fixed temperature heat detector with the help of diagram.

Q.No.4(B) Why emergency light is necessary and indicate locations where emergency light should be provided.

Q.No.5(A) Define tactical ventlation, types of tactical ventilationin details.

Q.No.5(B) What is ventilation,its necessity and difference between natural and mechanical ventilation.

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Q.No.6(A) Define composition of smoke, and write down 2 basic methods to keep escape route clear of smoke.

Q.No. 6(B) Explain stack effect and wind effect ,how it helps in movement of smoke in building.

Q.No.7(A) Howmany types of dry chemical powder are used in fire fighting,which is most common DCP powder,describe total flooding system with simple diagram.

Q.No.7(B)Explain extinguishing properties of Co2 and what are the limitations of Co2 and application of Co2 system.

Q.No.8(A).In case you have to install total flooding Co2 system what are the components required .

Q.No.8(B) What is the difference between total flooding and local applicationand hand held line ,Describe extinguishing properties of DCP.

**Section – II. MCQ : (Any Four)**

**08 Marks**

1.NFPA code for Co2 flooding is

10, 11, 12, 14

2.Solid particles of CO2 can conduct electricity

yes/no

3.Co2 is not effective on this material

electrical, electronics, potassium, petrol

4Potassium chloride is also called

purple, violet, red, super K

5.A separate detection system is required in this system.

Deluge system, fusible link system, QBD system, none

6.This factor is responsible for operation of sprinkler

pressure, heat, IR, UV

7..In this system air is charged in the pipe line

wet, dry, pre action none

8.Which fed system is preferred for sloping roof

tree, end, loop, grid

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