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Roll No

FT-7001-CBGS

B.E. VII Semester

Examination, December 2020

Choice Based Grading System (CBGS)

Fire Fighting Installation

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) Explain the fire protection water storage tank equipment and accessories with the help of suitable diagram.
b) Describe the different contributing factors used to determine the Needed Fire Flow Rate (NFFR) in insurance service office method.
2. What are the various temperature ratings available for sprinklersheads based on standardized test? What are the four categoriesof sprinkler systems?
3. a) Give the detail description on operation of auto mode fire pump house? Explain the major components with individual function in system actuation.
b) Define fire load? How degree of hazard can be evaluated based on fire load density.
4. a) Give a systematic approach for producing and applying fire fighting foam to the hazards? Explain proportioning process, foam generation phase and distribution method.
b) Explain a schematic arrangement of foam protection for storage tanks with suitable diagram.

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5.
 - a) What are the listed agents available for specific metals based on their physical form as per UL? Explain suitability for MET-L-X powder and its application.
 - b) What are the methods of Dry chemical application to the hazards as per NFPA-10 and NFPA-17? Give a schematic block diagram for application methods.
6.
 - a) Explain the difference between dry pilot deluge valve and wet pilot deluge valve with the help of suitable diagram.
 - b) Give detail description of Periodic Inspection, Testing and Maintenance of foam equipments.
7.
 - a) Explain the extinguishing properties and thermodynamic properties of carbon-dioxide gas used in fire fighting.
 - b) Explain the chemical mechanism of Halon-1301 and Ozone with history of halogenated fire fighting agents.
8. Write short notes on the followings.
 - a) Escape route during fire
 - b) ISU and ISO methods
 - c) Deluge system
 - d) Usefulness of Earthing and Bonding
