

Seat No. : _____

NB-104

November-2013

B.Sc. (Fire & Safety) Semester-III

CC-202 : Fire Protection System

Time : 3 Hours]

[Max. Marks : 70

1. (A) Describe technical requirement of fire door and applications of fire door. What is mastics. 7
(B) What are the critical areas requiring cable coating, briefly describe each area. 7

OR

- (A) What should be the consideration for fire resistant material and also write few lines regarding choice of right material for right application.
(B) What do you understand by active and passive fire protection, list out 5 names each of both the systems.

2. (A) Describe in details fire buckets and fire blankets and in what way fire blankets are classified. 7
(B) Why fire extinguisher are called first aid fire equipment. What are the 4 classes of fire and suitable extinguishers to extinguish these fires. 7

OR

- (A) Why extinguishers are subjected to hydrotest and at what intervals water CO₂ store pressure and mechanical foam extinguishers are hydrotested at what pressure and time duration.
(B) What is site selection and maintenance procedure of hand applicances like i.e buckets, extinguishers.

3. (A) Produce a chart showing sizing of main without hydraulic calculation for LH and OH risks. 7
(B) Write short notes on any **three** : 7
(1) Location of pump house
(2) Booster pump
(3) Jockey pump
(4) Fire pump house

OR

- (A) In connection with testing and inspection of fire hydrant describe flow test, radiography test and holiday test. 7
(B) How a sprinkler system works and use of sprinkler system. Explain with the help of a sketch. What are the different types of sprinklers head based on mounting requirement ?

4. (A) Explain gaseous fire protection systems. What are the different types of gases available and general properties of carbon dioxide ? 7
(B) What is FM 200 system ? Benefits of FM 200, physical and chemical properties of FM 200. 7

OR

- (A) What are the limitations of CO₂ extinguishing system, extinguishing properties of CO₂ and general safety guidelines.
(B) What are the extinguishing properties of DCP, method of application, what is MAP, on which fires it can be used ?

5. Short questions : 14

- (1) The red sprinkler bulb will operate at
(a) 57 C (b) 68 C
(c) 79 C (d) 93 C
- (2) CO₂ gas is how many times heavier than air ?
(a) 2 times (b) 2.5 times
(c) 1.5 times (d) 3 times
- (3) IG 55 contains how much concentration of N₂ = _____% Argon = _____%
- (4) Halon was found to be responsible for depleting.
(a) Zone (b) Protozone
(c) Ozone (d) None of them
- (5) In which year halon was recognized as harmful gas ?
(a) 1985 (b) 1982
(c) 1980 (d) 1979
- (6) FM 200 gas is replacement of which gas ?
(a) Halon 1211 (b) Halon 1201
(c) Halon 1301 (d) Halon 1311
- (7) MAP powder is used for which fire ?
(a) Class A (b) Class B
(c) Class AB (d) Class ABC
- (8) CO₂ gas is a conductor of electricity
Yes/No

- (9) What is another name of gas HFC 227 _____
- (10) Fat 0 Butter fire falls in which category of fire
(a) Class A (b) Class B
(c) Class C (d) Class D
- (11) CO₂ portable extinguisher hydro tested at _____ pressure.
(a) 230 bar (b) 232 bar
(c) 235 bar (d) 236 bar
- (12) FM 200 removes _____ energy _____ oxygen
- (13) FM 200 system requires less than _____ % to quickly extinguish a fire.
- (14) For metal fire the agent used is
(a) TBC (b) TEC
(c) TCE (d) TCB
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