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FT - 505**B.E. V Semester**

Examination, December 2014

Fire Prevention & Protection Measures*Time : Three Hours**Maximum Marks : 70*

- Note:** i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.
 ii) All parts of each questions are to be attempted at one place.
 iii) All questions carry equal marks. out of which part A and B (Max.50 words) carry 2 marks. part C (Max.100 words) carry 3 marks, part D (Max.400 words) carry 7 marks.
 iv) Except numericals, Derivation, Design and Drawing etc.

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Unit - I

1. a) Define Personal Hazard, Internal Hazard and Exposure Hazard for fire grading of buildings?
- b) Define Sub Division C₃ Penal and mental institutions under Group (C) as mention in NBC Part IV?
- c) Explain the four objectives of fire safe building design?
- d) Enlist the Building design and construction features influencing fire safety?

OR

Explain the types of Non combustible construction and combustible construction with their fire Resisting time?

Unit - II

2. a) Define Floor Area Ratio (FAR) and Fire tower in terms of high rise buildings?
- b) Write the names of different type of Installation mentioned in table No. 23 of NBC?
- c) Give the detail description on occupant load per floor area in different group of occupancy?
- d) Give the mathematical expression for calculating Air Discharge Rate of Air blowers in forced ventilation?

OR

Give the mathematical expression on stack effect concern with Air movement inside the highrise building?

Unit - III

3. a) Write the names of major components of a Hydrant system?
- b) Write the names of major components of sprinkler system?
- c) Explain the different sections of underground static water tank used in fire fighting purpose with the help of neat and clean diagram?
- d) Explain the temperature rating, color code and bursting temperature of heat sensitive elements of Sprinkler Heads?

OR

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A ordinary hazard occupancy having the dimension $250 \times 350 \text{m}^2$ having total length of water mains about 1200m. If the total no. of hydrant points in the occupancy are 30 then calculate the percentage of piping for the system. **rgpvonline.com**

Unit - IV

4. a) Write the names of four method used to calculate the artificial lighting in industrial building?
- b) Explain the composition, induction ratio and Temperature Range for Fluoroprotein foaming agent?
- c) Write the composition of different type of Dry chemical powder used in fire extinguishment?
- d) Write the common basic components used in fire alarm system in each type?

OR

Explain the following fire fighting properties of Dry chemical powders used in fire extinguishment?

- i) Cooling Action
- ii) Radiation shielding
- iii) Smothering Action
- iv) Chain Breaking Reaction

Unit - V

5. a) Mentioned the statutory provisions section under factory Act 1948 which are directly and indirectly concern with Good House Keeping?

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- b) Write any five benefits of good Housekeeping at work places?
- c) Explain the four basic steps adopt by fire fighter in pre incident planning?
- d) Give a brief note on very famous fire case Siddhartha hotel on following points:
- i) Date and year
 - ii) Fire source
 - iii) Fire spread source **rgpvonline.com**
 - iv) Casualties

OR

Give a brief note on very famous fire case Uphaar Cinema on following points:

- i) Date and year
- ii) Fire source
- iii) Fire spread source
- iv) Casualties **rgpvonline.com**
