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Roll No GREST ASSESSMENT

## FT-5003 (CBGS) B.E. V Semester

Examination, December 2017

## Choice Based Grading System (CBGS) Fire Prevention and Protection Measures

Time: Three Hours

Maximum Marks: 70

Attempt any five questions.

ii) All questions carry equal marks.

- Explain in detail various Fire Test with their expression and example?
  - What is the different Fire Resistance rating of Structural elements? 14

Write short note:

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- Refuge Area
- ii) Fire Doors
- iii) Fire Tower
- iv) Fire Zone

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What would be the time for total evacuation of a residential building if the building contains 43 upper floors with two stairs and each floor has 42 residents when nominal occupant flow on stairs is 0.5 persons/m/s. effective width of the stairs is 1.2m and walking time between adjacent floors is 30s.?

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Explain various Smoke and Heat Detector with its Selection. Installation as per Indian standards? 14

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- 4. Describe Fire Alarm System and its design specification as per IS 2189:2008. Also draw the alarm circuit diagram. 14
- 5. a) Describe the Design and installation of High velocity water spray system as per IS?
  - b) Discuss the System Design for carbon dioxide flooding system as per IS 15528:2004?

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- 6. Explain the hydrant system on the following parameters?
  - Capacity of static water tank
  - Discharge rate and pressure requirement
  - iii) Percentage of piping https://www.rgpvonline.com
- 7. a) Explain different types of fixed foam installations, foam properties, application rate, bubble size as per NFPA?
  - b) Write the various terms used for Dry Chemical powder:
    - Composition
    - ii) Particle size
    - iii) Radiation Shielding
    - iv) Chain Breaking Mechanism

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- Write a Fire Case Study in which large No. of people has been evolved?
  - Write short notes on following:
    - Fire Control Room
    - Safety Requirement in Storage Building
    - iii) Safety Requirement in Underground Structure

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