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15CV743

**Seventh Semester B.E. Degree Examination, Feb./Mar. 2022**  
**Design Concept of Building Services**

Time: 3 hrs.

Max. Marks: 80

*Note: Answer any FIVE full questions, choosing ONE full question from each module.*

**Module-1**

- 1 a. What are the factors affecting Rate of Water demand? (05 Marks)
- b. Explain various methods of Water Purification. (05 Marks)
- c. Explain methods of laying and construction of sewers. (06 Marks)

**OR**

- 2 a. Write a note on size and shape of drain. (05 Marks)
- b. Explain fire demand and various formula used for calculation of fire demand. (06 Marks)
- c. Explain disinfection and various methods of disinfection. (05 Marks)

**Module-2**

- 3 a. Explain the behavior of heat propagation. (05 Marks)
- b. Explain the types of Air Condition. (05 Marks)
- c. Explain maintenance of Air condition system. (06 Marks)

**OR**

- 4 a. What are the thermal properties of building material? (06 Marks)
- b. Explain procedure for installation of Air conditioning. (05 Marks)
- c. Define Air condition and explain the principle of Air Condition. (05 Marks)

**Module-3**

- 5 a. Write a note on Electrical wiring and the type. (05 Marks)
- b. Explain parallel wiring and series wiring. (05 Marks)
- c. Write a note on Fire alarms Fire escape means. (06 Marks)

**OR**

- 6 a. Classify the building based on occupancy. (05 Marks)
- b. What are the characteristics of fire resisting materials? (06 Marks)
- c. Write a note on Fire Extinguishing Equipments. (05 Marks)

**Module-4**

- 7 a. Define plumbing and explain system of plumbing. (05 Marks)
- b. Write a note on fire zones. (05 Marks)
- c. What are the factors to be considered to limit the spread of fire? (06 Marks)

**OR**

- 8 a. Show a typical house plan giving details of plumbing for water supply. (05 Marks)
- b. Write a note on the detection and extinguishing system. (06 Marks)
- c. Draw a typical layout of plumbing system for a residential building for drainage system. (05 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and/or equations written eg, 42+8 = 50, will be treated as malpractice.

Module-5

- 9 a. What is an Elevator and Escalator? (05 Marks)  
b. What is a pump? What are the different types of pumps used for a building to supply water? Explain briefly. (06 Marks)  
c. Write a note on Building Maintenance. (05 Marks)

OR

- 10 a. Explain cold and hot water system for a building. (05 Marks)  
b. Explain life and their classification. (06 Marks)  
c. Write a note on size and safety norms for lift. (05 Marks)

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