



# CBCS SCHEME

17CV743

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## Seventh Semester B.E. Degree Examination, Jan./Feb.2021 Design Concept of Building Services

Time: 3 hrs.

Max. Marks: 100

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

### Module-1

- 1 a. Describe the standard of drinking water. (10 Marks)  
b. Explain the function of biosand filter. (05 Marks)  
c. Write the disadvantage of reverse osmosis. (05 Marks)

OR

- 2 a. Explain the component involved in house water connection. (08 Marks)  
b. Explain the process of rain water harvesting adopted for a large roof tops. (07 Marks)  
c. Write the principles of house drainage. (05 Marks)

### Module-2

- 3 a. Explain the working principle of radiant and convector. (10 Marks)  
b. Write short notes on:  
(i) Mechanical ventilation and heat recovery. (ii) Types of Fan. (10 Marks)

OR

- 4 a. Explain the principles of air condition. (12 Marks)  
b. Explain the following :  
(i) Variable air volume (ii) Induction diffuser (iii) Humidifiers  
(iv) Chilled ceilings. (08 Marks)

### Module-3

- 5 a. Explain the basic concept of electrical power supply. (08 Marks)  
b. Explain the types of electrical wiring system. (07 Marks)  
c. Discuss the basic concept of fire control. (05 Marks)

OR

- 6 a. Explain the difference between active fire protection and passive fire protection. (05 Marks)  
b. Explain the procedure related policy to maintain high standard of fire safety. (07 Marks)  
c. Write the note on: (i) Circuit breaker (ii) Fuses (iii) Earthing (iv) Insulator (08 Marks)

### Module-4

- 7 a. Draw the layout of water supply and drainage system used in residential building. (15 Marks)  
b. Sketch the layout of hot and cold water system used in simple building. (05 Marks)

OR

- 8 a. Sketch the flow diagram of water supply from the source to the building. (05 Marks)  
b. Draw the plumbing layout of fire safety system. (15 Marks)

### Module-5

- 9 a. Explain the components of lift system. (07 Marks)  
b. Explain : (i) Hydro pneumatic system (ii) Storage histerm (08 Marks)  
c. Write the objectives of building maintenance escalator. (05 Marks)

OR

- 10 a. Explain the types of Escalator. (07 Marks)  
b. Explain the difference between predicative maintenance and run to failure maintenance. (05 Marks)  
c. Describe the maintenance of developing plan schedule. (08 Marks)

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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.