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Fourth Semester B. Arch. Degree Examination, June/July 2025 Building Services – I

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. What are the different water sources? Explain with neat sketches. (10 Marks)
b. What is per capita demand of water? How is it determined? (10 Marks)

OR

- 2 Define the following terms with neat labelled sketches :
i) Aeration ii) Sedimentation iii) Coagulation iv) Flocculation. (20 Marks)

Module-2

- 3 a. Write a brief note on different types of sewerage. (10 Marks)
b. Draw a neat sketch of both septic tank and manhole and mention of parts. (10 Marks)

OR

- 4 a. What is rain water harvesting and what are the advantages of rain water harvesting? (10 Marks)
b. What are different active rain water harvesting and passive rainwater harvesting system that can be adapted in a building? (10 Marks)

Module-3

- 5 a. What is a trap? Explain the main functions of trap listing the requirements for a good trap with labelled diagrams. (12 Marks)
b. Enlist different types of valves available according to their shapes. (08 Marks)

OR

- 6 With the help of neat single line plan show the external and internal drainage system for a 2 BHK independent residence. Draw drainage plan with site boundary. (20 Marks)

Module-4

- 7 a. Draw neat sketches of following sanitary fixtures with dimension.
i) European type water closet (10 Marks)
ii) Flushing cisterns. (10 Marks)
b. Mention different wellness products used in bathroom. Explain any two with neat sketch. (10 Marks)

OR

- 8 a. What is solid waste? Explain different type of solid waste? What is the need of solid waste management? (10 Marks)
- b. Mention different methods of heat treatment of solid waste and bio treatment of solid waste. Explain one method in detail. (10 Marks)

Module-5

- 9 a. Mention different classification of fire based on NBC. (05 Marks)
- b. Draw a fire exit staircase mentioning the standard of :
i) Riser ii) Tread iii) Handing iv) Railing v) Balustrade vi) Headroom. (15 Marks)

OR

- 10 What are the advantages of :
i) Solar water heating system
ii) Medical gas system (20 Marks)

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