Acharya's NRV School of Architecture LIBRARY Bangalore

CBCS SCHEME

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21ARC35

Third Semester B.Arch. Degree Examination, Dec.2025/Jan.2026
Building Services – I

Time: 3 hrs. Max. Marks: 100

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

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-1

1 a. Give a brief explanation about urban and rural sanitation with respect to water supply engineering. **(08 Marks)**

b. Explain any two Ground Water Source and Surface Water Source each. **(08 Marks)**

c. Comment on water borne epidemic diseases. **(04 Marks)**

OR

2 a. Differentiate between slow sand filter and rapid sand filter. **(08 Marks)**

b. Explain distribution of water to fixture and fittings with a neat schematic diagram. **(08 Marks)**

c. Explain Gravity system and Hydro pneumatic system of pumping of water. **(04 Marks)**

Module-2

3 a. Explain the objectives of sewage treatment. **(08 Marks)**

b. Differentiate between piped drains and open drains. **(08 Marks)**

c. Give a brief note on :
(i) Manhole
(ii) Gully trap **(04 Marks)**

OR

4 a. Briefly explain the collection, conveyance and disposal procedure of sewage with a neat schematic diagram. **(10 Marks)**

b. Differentiate between Aerobic and Anaerobic type of sewage treatment. **(05 Marks)**

c. Briefly explain the importance of rain water harvesting. **(05 Marks)**

Module-3

5 Write short notes on:
(i) One pipe system
(ii) Single stack system
(iii) Piping in Sunken areas
(iv) Globe valves **(20 Marks)**

OR

6 a. Define trap and explain the uses and requirement of a good trap. **(10 Marks)**

b. Explain the different materials of construction of plumbing pipes. **(10 Marks)**

Module-4

7 a. Briefly explain the terms :
(i) Bio methanation
(ii) Vermi composting. **(10 Marks)**

b. Briefly explain the different wellness products in sanitary fittings. **(10 Marks)**

OR

8 a. Explain the process of collection segregation treatment and disposal of solid wastes. **(10 Marks)**

b. Differentiate between wash basin and sink. **(05 Marks)**

c. Comment on waste to wealth concept in solid waste management. **(05 Marks)**

Module-5

9 a. Briefly explain the importance of fire and safety systems in a building. **(10 Marks)**

b. List class of fire extinguishers for various fire hazards. **(10 Marks)**

OR

10 Write a short notes on:
(i) Smoke detectors.
(ii) Fire alarm
(iii) Causes of fire
(iv) Code of practice **(20 Marks)**

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