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## Third Semester B.Arch. Degree Examination, Jan./Feb. 2023 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. Explain briefly the principles of sanitation. (04 Marks)  
b. Discuss briefly the various stages of water treatment involved. (10 Marks)  
c. What are the various types of water demand of a city or town? (06 Marks)

OR

- 2 a. What is disinfection of water? List the chemical used. (04 Marks)  
b. Mention different method of layout of water distribution network and explain with neat sketch. (10 Marks)  
c. Explain the types of water carriage system. (06 Marks)

### Module-2

- 3 a. Explain with a neat sketch septic tank and name the parts. (12 Marks)  
b. Explain the commonly used fitting in domestic plumbing work. (08 Marks)

OR

- 4 a. Explain with a neat sketch section showing the Rain water Harvesting in a Residential building. (10 Marks)  
b. Discuss in your own word how to be use (grey water) water in a building for non drinking purpose. (10 Marks)

### Module-3

- 5 a. What is a Trap? Explain requirement of a good Trap. (04 Marks)  
b. Sketch the types of Traps and uses. (08 Marks)  
c. Sketch any two types of valves and explain. (08 Marks)

OR

- 6 With the help of a neat sketch, explain the internal and external drainage plan of 2BHK independent residence. Draw drainage plan with a site plan. (20 Marks)

### Module-4

- 7 a. Draw a typical toilet layout plan showing the sanitary fixtures, fitting and wellness. (12 Marks)  
b. Draw a neat sketch of i) Pedestal wash basin ii) Sink with Drain board. (08 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.

**OR**

- 8 a. Write a note on Medical and industrial waste the treatment and disposal. (10 Marks)  
b. Explain organic waste converter. (10 Marks)

**Module-5**

- 9 a. What are fire extinguishing systems adapted to a building? Explain. (12 Marks)  
b. Briefly explain the zoning and the classification. (08 Marks)

**OR**

- 10 a. Explain briefly the causes of the fire and the precaution to be taken. (10 Marks)  
b. Explain in your own words the use of solar energy and LPG supply systems reduce the electricity consumption in a building. (10 Marks)

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