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## Fourth 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. What are water borne diseases? Explain briefly its causes and most commonly observed diseases. (10 Marks)  
b. Describe conservancy and water carriage system of sanitation. (10 Marks)

OR

- 2 a. What are the factors affecting rate of Demand of water? Explain. (10 Marks)  
b. How do you assess the requirement of water for a residence? (10 Marks)

### Module-2

- 3 Sketch and explain the difference between :  
a. Inspection chamber and man hole (10 Marks)  
b. Gully trap and grease trap. (10 Marks)

OR

- 4 a. Explain with neat sketches methods of Rain water harvesting. (15 Marks)  
b. Explain. What is first flush? (05 Marks)

### Module-3

- 5 What do you understand by traps? Explain the requirements of good trap. Sketch and explain the types of traps based on their shape and function. (20 Marks)

OR

- 6 a. Discuss the merits and demerits of stone ware pipes and cast iron pipes. (10 Marks)  
b. Explain Gate valve and Butterfly valve. (10 Marks)

### Module-4

- 7 Explain with neat sketch :  
a. Water closet (03 Marks)  
b. Bath tub (03 Marks)  
c. Taps (02 Marks)  
d. Wellness products like sauna, steam and Jacuzzi. (12 Marks)

OR

- 8 Explain your understanding about solid waste management. Explain various steps involved in solid waste management. (20 Marks)

### Module-5

- 9 Suggest various measures for fire safety and prevention high rise buildings. (20 Marks)

OR

- 10 a. Explain LPG supply system in high rise residential building. (10 Marks)  
b. Explain your understanding of solar Hot water generation in buildings. (10 Marks)

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