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15ENG/ARC43

# Fourth Semester B.Arch. Degree Examination, Dec.2019/Jan.2020 **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 is meant by Potable Water?	4	(05 Marks)
	1			

Explain link between hygiene and water borne diseases. (05 Marks)

Explain water carriage and water conservancy system. Compare the two systems. (10 Marks)

Explain Gravity system and Dual system of water supply. 2 a. (10 Marks)

Explain How to quantify water requirement for a residence and city. **b**. (10 Marks)

### Module-2

Differentiate between Sewage and Sullage. a. (05 Marks) Sketch and explain Manhole. b.

(05 Marks)

Briefly compare separate and combined sewerage conveyance systems. (10 Marks)

Explain one method of harvesting roof top water. (10 Marks)

Sketch and explain one landscape feature for recharging storm water. (10 Marks)

### Module-3

Sketch and explain Hot and Cold water supply piping in a typical bathroom of a residence 5 mark all the fittings and fixtures. (20 Marks)

Sketch and explain Globe value, floor trap. (10 Marks)

Explain single stack and two stack system. Mention the suitability of each system. (10 Marks)

### Module-4

Sketch and explain the functioning of water closet and flushing cistern. (10 Marks)

Sketch and explain the functioning of Bathtub. (10 Marks)

Mention different types of waste; explain the importance of waste segregation. (10 Marks)

Explain process and method of Bio-methanation and verimi compositing. (10 Marks)

## Module-5

9 Suggest various important measures for fire safety and prevention in a commercial building. (20 Marks)

### OR

Explain what is fire control room. 10 (10 Marks)

Explain central vacuum waste collection system. (10 Marks)

2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8=50, will be treated as malpractice. Important Note: 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.