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Third Semester B.Arch. Degree Examination, June/July 2017

Building Services – I

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

- 1 a. Explain briefly various sources of water. (10 Marks)
b. Define per capita demand. Explain briefly the factors affecting the water demand. (10 Marks)
- 2 a. Explain the effect of the following substance when exceed the prescribed limit in water, also mention the treatment for the following: i) Chloride; ii) Carbon dioxide; iii) Nitrate; iv) Sodium; v) Oxygen. (10 Marks)
b. Define sedimentation and water softening. (10 Marks)
- 3 a. List different types of valves used in water supply. With neat sketch, explain any two of them highlighting the location and utility. (10 Marks)
b. What are traps? Explain the requirement of good traps, explain P and S trap with neat sketches. (10 Marks)
- 4 a. List various layout of distribution system of pipes. Explain any three with neat sketches. (14 Marks)
b. Explain the necessity of pumping in water supply. (06 Marks)
- 5 a. With neat sketches, explain one pipe and two pipe system for plumbing for house drainage. (10 Marks)
b. Explain various system of sewerage with neat sketches. (10 Marks)
- 6 Write short notes on:
a. Rain water harvesting
b. Oxidation pond
c. Manholes
d. Septic tank. (20 Marks)
- 7 a. Compare rapid sand filter and slow sand filter. (10 Marks)
b. Compare conservation system and water carriage system. (10 Marks)
- 8 Sketch the following with required dimensions:
a. Bath tub
b. Drinking fountain
c. Wash basin
d. Water closet. (20 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification appear to evaluate and be in violation of rules of the examination.