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Third Semester B.Arch. Degree Examination, Dec.2014/Jan.2015
Building Services – I

Time: 3 hrs.

Max. Marks:100

Note: 1. Answer any FIVE full questions.
2. Assume any missing data suitably.

- 1**
- What are the various sources of water? Explain them briefly. (12 Marks)
 - Briefly explain the qualities of potable water. (04 Marks)
 - State the per capita water requirement for the following buildings: (04 Marks)
 - Hostel
 - Hotel
 - Airport
 - Cinema theatre
- 2** Differentiate between slow sand filters and rapid sand filter with neat labeled sketches. (20 Marks)
- 3**
- What is meant by disinfection of water? List different methods used for disinfection of water. Discuss the advantages of chlorination. (10 Marks)
 - Explain the different layouts of distribution system with neat sketches. (10 Marks)
- 4**
- Explain necessity of pumping in water supply. (06 Marks)
 - Classify the pumps based on the type of services. (06 Marks)
 - Briefly explain the line diagram of the different units of water treatment. (08 Marks)
- 5**
- Draw neat sketches with dimensions for any two of the following : (10 Marks)
 - Oxidation pond
 - Soak pit
 - Washbasin
 - Bath tub.
 - Write short notes on the following with neat sketches. (10 Marks)
 - Floor trap
 - Gully trap
- 6**
- With the help of neat sketch, briefly explain one pipe system and two pipe systems. (08 Marks)
 - Design a septic tank for small residential colony having population of 500 persons. The rate of water supply is 150 litres/head/day. (12 Marks)
- 7**
- Differentiate between conservancy system and water carriage system. (10 Marks)
 - What is trap? What are the requirements of good trap? Explain with sketches. (10 Marks)
- 8** With the help of neat schematic diagram show the external and internal drainage system for a two bedroom, independent residence. Draw drainage plan of the building with the site boundary. (20 Marks)