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Third Semester B.Arch. Degree Examination, June/July 2014
Building Services – I

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

- 1
 - a. Explain various sources of water. (10 Marks)
 - b. Explain briefly the qualities of potable water. (06 Marks)
 - c. State the per capita water requirement for the following buildings: (04 Marks)
 - i) Residences ; ii) Apartments with 12 units.
- 2
 - a. With neat sketch explain rapid sand filter and its working. (12 Marks)
 - b. Define the following: (08 Marks)
 - i) Sedimentation
 - ii) Coagulation
 - iii) Disinfection
 - iv) Softening.
- 3
 - a. Explain any two methods of layout of distribution pipe systems. (10 Marks)
 - b. What are the advantages and disadvantages of solar heating systems and gas geysers? (10 Marks)
- 4
 - a. What is a trap? What are the requirements of a good trap? Explain with sketches. (10 Marks)
 - b. What are the advantages and disadvantages of separate, combined and partially separate systems? (10 Marks)
- 5
 - a. List the importance and principle of sanitation. (10 Marks)
 - b. With neat sketch, explain the working of a manhole. (10 Marks)
- 6
 - a. Explain with neat sketch the working of a septic tank. (10 Marks)
 - b. Explain the treatment of sewage, with the help of flow chart. (10 Marks)
- 7
 - a. Sketch a typical Indian and European type of water closet. (08 Marks)
 - b. Write short notes on: (12 Marks)
 - i) Oxidation ponds.
 - ii) Rain water harvesting.
 - iii) Soak pit.
 - iv) Bath tub.
- 8

With the help of neat schematic diagram show the external and internal drainage system for a two bed room, independent residence. Draw drainage plan of building with site boundary. (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, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.