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Third Semester B.Arch. Degree Examination, Dec.2013 / Jan. 2014
Building Services - I

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

- 1 a. Explain various types of ground water which is suitable for drinking water. (10 Marks)
b. Define per capita demand. Explain the factors affecting the per capita demand. (10 Marks)
- 2 a. State the limits and effects when each of the following substances exceed the prescribed limit in water : i) pH value ii) Chloride iii) Nitrates iv) Iron v) Fluoride. (10 Marks)
b. Define Aeration, Sedimentation, Coagulation, Flocculation and Disinfection. (10 Marks)
- 3 a. With the help of neat sketch, explain the working of Rapid Sand Filter. (10 Marks)
b. Describe the various methods of disinfecting the potable water. (10 Marks)
- 4 a. List the different layouts of the distribution system and explain any two with advantages and disadvantages. (10 Marks)
b. Draw a neat sketch of : i) Reflux valve ii) Post fire hydrant. (10 Marks)
- 5 a. List the different systems of drainage and explain each system with their advantages and disadvantages. (10 Marks)
b. Draw a neat sketch of: i) Manhole ii) Septic tank. (10 Marks)
- 6 a. Define traps. List and draw the sketches of various types of traps. (10 Marks)
b. Explain the principle and working of oxidation pond. (10 Marks)
- 7 a. Draw a neat sketch of i) Wash basin with dimension ii) European water closet with dimensions. (10 Marks)
b. Explain single stack and two pipe systems of plumbing, with neat sketches. (10 Marks)
- 8 Write short notes on any Four of the following :
a. Water borne diseases.
b. Water connection to houses.
c. Water softening.
d. Rural sanitation.
e. Rain water harvesting. (20 Marks)

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.