Reg. No. : | | | | | | | | | | | | |

Question Paper Code: 1035088

B.E. / B.Tech. DEGREE EXAMINATIONS, NOV/ DEC 2024
Fifth Semester
Civil Engineering
U20CE502 – PUBLIC WATER SUPPLY SYSTEM & TREATMENT
(Regulation 2020)

Time: Three Hours Maximum: 100 Marks

Answer ALL questions

PART – A (10 x 2 = 20 Marks)

1. Define potable water.
2. Outline the various sources of water.
3. What are the advantages and limitations of RCC pipes?
4. Illustrate the properties of Ductile Iron pipes.
5. State the function of sedimentation tanks.
6. Label the term coagulation.
7. List the methods of removing temporary and permanent hardness.
8. Define Zeolite process.
9. Mention the important components needed for the water distribution to buildings.
10. Outline about air valves. Mention the different types of air valves.

PART – B (5 x 16 = 80 Marks)

11. (a) Identify the daily water demand of the city in 2031, if the per capita water demand is 135 Lpcd and the city population records is as given below. (16)

Census Year	1950	1965	1980	1995	2010
Population	25000	52000	94000	164000	247000

(OR)

(b) Explain the different methods used for prediction of future population of a city, with reference to the design of a water supply system. (16)

12. (a) Explain the different types of pumps used in water supplies with a neat ketch. (16)

(OR)

(b) Discuss the points which should be taken into consideration in deciding the location of an intake for the water supply of a large town, the source being a perennial river. Draw a neat sketch of a canal intake and explain the salient features. (16)

13. (a) Explain about slow sand filter and rapid sand filter with suitable diagram and also write their advantages over them. (16)

(OR)

(b) Explain the various methods of removing excess Iron and Manganese from Ground water. (16)

14. (a) Describe Chlorination and its types. Explain the various process or methods. (16)

(OR)

(b) Describe in detail about the principle and mechanism of desalination process. (16)

15. (a) Explain are the functions of service reservoir, Briefly outline the design aspects of service reservoir. (16)

(OR)

(b) Discuss the role of computer applications in the water distribution system? (16)

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