Reg. No. :

Question Paper Code: 35105

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2022

Fifth Semester

Civil Engineering

01UCE505 – WATER SUPPLY ENGINEERING

(Regulation 2013)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. List the various types of water demand.

2. Identify the factors governing design period.

3. What are the factors governing the location of an intake?

4. What are the factors involved in the selection of pipe materials?

5. Distinguish between coagulation and flocculation.

6. How will you remove the iron and manganese from the water?

7. Define adsorption.

8. Differentiate desalination and demineralization.

9. State the functions of service reservoir.

10. Name the various methods of distribution systems.

PART - B (5 x 16 = 80 Marks)

11. (a) (i) Given the following data, calculate the future population for the year 2030 by incremental increase method. (8)

Year	1970	1980	1990	2000	2010
Population	85000	110500	144000	184000	221000

    (ii) Discuss the factors affecting per capita demand. (8)

Or

(b) (i) Explain the various sources of water. (8)

    (ii) Enumerate the physical and chemical characteristics of water and their examination methods. (8)

12. (a) Explain the different types of Intake structures. (16)

Or

(b) (i) Discuss the steps involved in laying of water supply pipes. (8)

    (ii) Discuss the factors involved in the selection of pumps for water supply schemes. (8)

13. (a) Enumerate the coagulation and flocculation process in detail. (16)

Or

(b) Interpret the various disinfection processes in detail. (16)

14. (a) (i) Explain the Zeolite method of water softening with its advantages. (10)

    (ii) With a neat sketch explain the reverse osmosis method for desalination. (6)

Or

(b) Explain the recent advances in water treatment processes. (16)

15. (a) Discuss about the service reservoirs in detail. (16)

Or

(b) Describe the various methods of installation of water mains. (16)

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