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

Question Paper Code: 31155

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2017

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. Identify the factors governing design period.
2. Mention the acceptable limits for drinking water quality standards of calcium, iron, chlorides and total dissolved solids as per *IS:10500*.
3. Define intake structures.
4. List the criteria for selection of pumps.
5. Distinguish between coagulation and flocculation.
6. What is a Chloramine?
7. State water softening.
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) What are the factors to be considered while planning a public water supply scheme in India. (16)

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) Discuss the various tests carried out in pipes. (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) (i) Explain the causes and control measures for pipe corrosion. (8)

(ii) Discuss the principle and methods of disinfection. (8)

14. (a) (i) Explain the Zeolite method of water softening with its advantages. (8)

(ii) With a neat sketch explain the reverse osmosis method for desalination. (8)

Or

(b) Brief about the membrane filtration techniques. (16)

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

Or

(b) (i) Explain the analysis of distribution network using Hardy Cross method. (8)

(ii) Explain the components of house service connection with a neat sketch. (8)

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