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**Question Paper Code: 31155**

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2016

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 any four objectives of water supply schemes.
2. Identify the factors governing design period.
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. Discuss the advantage and disadvantage of RCC pipes.

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) 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) (i) With a neat sketch explain the working of rapid sand filter. (8)
- (ii) Discuss the function and design aspects of flash mixer. (8)
- Or
- (b) Enumerate the coagulation and flocculation process in detail. (16)
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) (i) What are the requirements of a good distribution system? (8)
- (ii) Discuss the methods of leak detection. (8)
- Or
- (b) Describe the various methods of installation of water mains. (16)
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