SHAHEED BHAGAT SINGH STATE TECHNICAL CAMPUS, FEROZEPUR

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B.Tech. || CE || 5th Sem
Environmental Engineering-I (RP)
Subject Code: BTCE-505
Paper ID: M118
(2011-2014 batch)

Time allowed: 3 Hrs Max Marks: 60

Important Instructions:

- All questions are compulsory
- Assume any missing data

PART A (10x 2marks)

Q. 1. Short-Answer Questions:

(a) How would you describe the water demands based on purposes?
(b) What is Artesian well?
(c) What are the Beneficial uses of water?
(d) How would compare between gravity and pressure filters?
(e) What are the advantages and disadvantages of various types of pipes used in water supply?
(f) How would you describe various investigation required for reservoir planning?
(g) What do you mean by Enrichment of ground water?
(h) What is mass curve method?
(i) How would you describe the thermal stratification?
(j) What is the pH range required for alum using coagulant?

PART B (5×8marks)

Q. 2. Explain the examination of water on the basis of physical, chemical and microbiological analysis. CO1

OR

What are two major types of sources of water supplies? Discuss the comparative merits and demerits of both these types of sources. CO1

Q. 3. The population of five decades from1930 to 1970 are given below Find out the population after one ,two and three decades beyond the last known decade by using geometric inc. method CO2

year	1930	1940	1950	1960	1970
Population	25,000	28,000	34,000	42,000	47,000

OR

What is meant by the variations in the rate of demand? What are the effects of these variations on the design of various units of a water supply scheme? CO2

Q. 4. Describe Base exchange process. Give advantages and disadvantages of this process. CO3

OR

Chlorine usage in the treatment of 20,000 cubic meters per day is 8 kg/day. The residual after 10 min. contact is 0.20mg/l. Calculate the dosage in milligrams per liters and chlorine demand of water. CO3

Q. 5. Design the approximate dimensions of a set of rapid sand filters for treating water required for a population of 50,000 the rate of supply being 180 liters per day person .The filters are rated to work 5000 liters per hour per sq. m. Assume whatever data are necessary. CO3

OR

Describe briefly the various constituents of a coagulation-sedimentation plant. CO3

Q. 6. Discuss various corrective treatments to prevent corrosion of water supply pipes? CO4

OR

Discuss with the help of diagrams various methods of laying out the distribution system. CO