

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION-2023

B.Tech-III Semester (CE)

COURSE CODE (CREDITS): 18B11CE314 (3)

MAX. MARKS: 15

COURSE NAME: Water Supply Engineering

COURSE INSTRUCTORS: Dr. Rishi Rana Kalia

MAX. TIME: 1 Hour

Note: (a) All questions are compulsory.

(b) Marks are indicated against each question in square brackets.

(c) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

Q.1 What do you understand by continuous and intermittent system of water supply? What are their relative advantages and disadvantages? [2 Marks] (CO-1)

Q.2 In two periods of each of 20 years, a city has grown from 30,000 to 1, 70,000 and then to 3, 00, 00. Determine the saturation population, equation of the logistic curve and expected population after the next 20 years? [2 Marks] (CO-2)

Q.3 What are the objectives of water supply scheme? [1 Marks] (CO-2)

Q.4 (a) What is per capita demand? Explain seasonal variations of demand? [2 Marks] (CO-1)

(b) How much is the quantity of fire demand. Explain Bustons and Kuchlings formula. If a fire is occurring once in 3 years for two hours, compute the amount of water required using bustons formula. [3 Marks] (CO-1)

Q.5 The population data for a certain town is given below. Find out the population for the next three decades using: arithmetical, geometric, incremental and decrease rate of growth methods respectively: [5 Marks] (CO-1)

Year	Population
1950	1,10,000
1960	2,50,532
1970	4,58,799
1980	8,16,735
1990	9,50,325