

29

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2025

B.Tech- B.Tech 5th Semester (CE)

COURSE CODE (CREDITS): 18B11CE512 (3)

MAX. MARKS: 15

COURSE NAME: Sewage Treatment and Disposal

COURSE INSTRUCTORS: Dr. Rishi Rana Kalia

MAX. TIME: 1 Hour

Note: (a) All questions are compulsory.

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

Q. No	Question	CO	Marks												
Q1	Differentiate between: (a) Domestic sewage, Industrial Sewage and Sanitary Sewage; (b) Combined sewage and separate sewage	CO-1	4 Marks												
Q2	<p>The population data for a town is given below. Find out the population for next 3 decades using arithmetic method, incremental increase method and decrease rate of growth methods respectively:</p> <table><thead><tr><th>Year</th><th>Population</th></tr></thead><tbody><tr><td>1930</td><td>25,550</td></tr><tr><td>1940</td><td>75,283</td></tr><tr><td>1950</td><td>90,000</td></tr><tr><td>1960</td><td>145,000</td></tr><tr><td>1970</td><td>286,000</td></tr></tbody></table>	Year	Population	1930	25,550	1940	75,283	1950	90,000	1960	145,000	1970	286,000	CO-1	3 Marks
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1930	25,550														
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Q3.	A 90 cm dia sewer having an invert slope of 1 in 150 was flowing full. What would be the velocity of flow and discharge. Use $n=0.014$.	CO-2	2 Marks												
Q4.	Draw a neat sketch of a drop man hole and indicate where it is used?	CO-2	2 Marks												
Q5	A main combined sewer was designed to serve an area of 95 sq.km with an average population of 266 persons/ hectare. The average rate of sewage flow is 550 litres/capita/day. The maximum flow is 50% in excess of the average together with the rainfall equivalent of 12mm in 24 hours, all of which are run off. What should be the capacity of the sewer in cu.m/sec?	CO-2	4 Marks												