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JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2026

M.Tech I[st] Semester (CE)

COURSE CODE (CREDITS): 14M31CE116 (3) MAX. MARKS: 15

COURSE NAME: Wastewater Treatment

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

(c) ***Use of Calculator allowed***

Q.No	Question	CO	Marks
Q1	What are the various types of storm water regulators used in a wastewater system? Explain briefly the working of each of these with sketches?	CO-1	2 Marks
Q2	A population of 90,000 is residing in a town having an area of 75 hectares. If the average coefficient of runoff for this area is 0.89, and the time of concentration of design rain is 60 minutes. Calculate the discharge for which the sewer of a proposed combined system will be designed for the town in question. Make suitable assumptions where needed.	CO-1	3 Marks
Q3	An analysis for suspended solids run as follows: fiber filter is dried to a constant mass of 0.137 g, 100 ml of sample is drawn through filter, and the filter and residue are placed in a drying oven at 104°C until a constant mass of 0.183 g is reached. Determine the suspended solids concentration in mg/l.	CO-2	4 Marks
Q4	A 30 cm dia. Sewer having an invert slope of 1 in 150 was flowing full. What would be the velocity of flow and discharge? (n=0.013). Is the velocity self cleansing?	CO-2	3 Marks
Q5	Why it is necessary to treat wastewater before disposal? What is the objective of the sewerage works?	CO-1	3 Marks