

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST-3 EXAMINATION- JUNE 2024

B.Tech V Semester (Civil)

COURSE CODE (CREDITS): 18B11CE512 (3)

MAX. MARKS: 35

COURSE NAME: SEWAGE TREATMENT AND DISPOSAL

COURSE INSTRUCTOR: NIRAJ SINGH PARIHAR

MAX. TIME: 2HRS

Note: All questions are compulsory. Marks are indicated against each question in square brackets.

Assume suitable data if required.

1. Differentiate between various types of sewage conveyance systems. [5] [CO1]
2. A 40 cm dia sewer is to flow at 0.4 depth on a grade ensuring a degree of self cleansing equivalent to that obtained at full depth at a velocity of 80 cm/sec. Find the required grade, associated velocity and discharge rate at this depth of flow. [5] [CO2]
3. Describe in brief any two types of sewer appurtenances with neat figures. [5] [CO2]
4. List the important factors taken into consideration while selecting the sewer material. Describe relative advantages and disadvantages of any two sewer materials. [2+4] [CO2,3]
5. For a wastewater sample, 5-day BOD at 20°C is 200 mg/l and is 67% of the ultimate. Determine the 4-day BOD at 30°C. [4] [CO3]
6. Write short notes on any four of the following:
 - a. Trickling Filter
 - b. Flow Pattern in Aerobic and Anaerobic treatment process
 - c. Sludge Thickening Process
 - d. Sludge Digester
 - e. Methods of sewage disposal [2.5x4] [CO2,3,4]