

One to One.

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

T2 - EXAMINATION (October - 2018)

B.Tech. (IX- SEM)

Dr. Ashi Rana

COURSE CODE: 10B11CE613

MAX. MARKS: 25

COURSE NAME: Sewage Treatment and Disposal

COURSE CREDIT: 3

MAX. TIME: 1.5 HRS

*Note: Attempt all questions. Assume suitable data if required. Carrying of mobile phone during examinations will be treated as case of unfair means*

1. Determine the 1 day BOD and ultimate BOD for a wastewater sample whose  $BOD_5$  at  $20^\circ\text{C}$  is 250 mg/l. Also determine the  $BOD_5$  values at  $30^\circ\text{C}$  (1+1+1) (CO-3)
2. With neat sketch, if appropriate explain the procedure for layout of sewer pipes in ground (3) (CO-2)
3. A 1000 mm diameter concrete pipe has a slope of 1.0% and the flow is  $1.5 \text{ m}^3/\text{s}$ . If the  $BOD_5$  is 350 mg/L, determine the potential for sulfide generation when the wastewater temperature is  $35^\circ\text{C}$  (4) (CO-3 & 4)
4. Write a note on the following:
  - (a) Disposal by dilution
  - (b) Self-Purification of Natural Streams
  - (c) Zones of Pollution in River Stream(2+2+2) (CO-3)
5. What is stratification of lakes? (4) (CO-3)
6. Discuss methods of applying sewage effluents to farms? (5) (CO-4)