

GUJARAT TECHNOLOGICAL UNIVERSITY
BE – SEMESTER – V (NEW) EXAMINATION – WINTER 2015

Subject Code: 2150603

Date: 08/12/ 2015

Subject Name: Environmental Engineering

Time: 10:30am to 1:00pm

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Explain different phases of microbial growth and draw neat sketch of it. **07**
(b) Explain with neat sketch DO sag curve and write Strickland-Parthasarathy's equation. **07**
- Q.2** (a) Write a short note on Water borne Diseases. **07**
(b) Explain 1st stage BOD and derive its formula with usual notations **07**
 $L_t = L_0(1 - 10^{-kt})$.
- OR**
- (b) State physical and Chemical characteristics of water and describe any two physical characteristics in detail. **07**
- Q.3** (a) Explain zones of pollution in a river with a neat sketch. **07**
(b) During BOD test conducted on a 5% dilution of waste, the following observations were taken (i) DO of aerated water used for dilution = 3.6mg/l (ii) DO of original sample = 0.8mg/l (iii) DO of diluted sample after 5 day incubation = 0.7 mg/l
Compute : (a) 5 day BOD (b) Ultimate BOD
Assume deoxygenation constant at test temperature = 0.12
- OR**
- Q.3** (a) Enlist different components of House drainage system and explain any two in detail. **07**
(b) Classify the traps in house drainage system. **07**
- Q.4** (a) Enlist the advantages and disadvantages of Sanitary land filling. **07**
(b) Give the classification of Municipal solid waste in brief. **07**
- OR**
- Q.4** (a) Write a short note on Incineration. **07**
(b) What is solid waste management? Enlist its objectives. **07**
- Q.5** (a) Explain the effects of air pollution on human health. **07**
(b) Give a classification of Air pollutants. **07**
- OR**
- Q.5** (a) Write a short note on Environmental Impact Assessment. **07**
(b) What is Noise pollution? Describe the major effects of Noise pollution. **07**
