

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER– V • EXAMINATION – WINTER 2016**

**Subject Code: 150603****Date: 19/11/2016****Subject Name: Environmental Engineering****Time: 10:30AM – 01:00PM****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 the growth process of bacteria based upon number. **07**  
(b) Enlist and explain physical characteristics of wastewater **07**
- Q.2** (a) Enlist different methods of population forecasting. Explain any four in detail. **07**  
(b) Enumerate different sources of water. Explain surface water source in detail **07**
- OR**
- (b) Derive the first stage equation of BOD **07**
- Q.3** (a) Explain the different factors affecting the self purification capacity of the stream. **07**  
(b) Give the classification of bacteria which are important to an environmental engineer **07**
- OR**
- Q.3** (a) Explain different systems of plumbing used for house drainage system **07**  
(b) Explain mechanical composting as a method for solid waste disposal. **07**
- Q.4** (a) Give the classification of traps used in house drainage system. **07**  
(b) Give the chemical and physical characteristics of solid waste. **07**
- OR**
- Q.4** (a) Enlist different equipments used to control particulate matter. Explain working of any one with neat sketch. **07**  
(b) Explain the different sources of noise pollution. **07**
- Q.5** (a) Write a short on EIA. **07**  
(b) Explain the effect of air pollution on building material and climate. **07**
- OR**
- Q.5** (a) Explain different factors affecting the rate of water demand. **07**  
(b) Write short on different types of pipes used in house drainage system. **07**

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