

**GUJARAT TECHNOLOGICAL UNIVERSITY****B.E. Sem-V<sup>th</sup> Examination December 2010****Subject code: 150603****Subject Name: Environmental Engineering****Date: 16 /12 /2010****Time: 03.00 pm - 05.30 pm****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) Enumerate different types of microbes and draw the microbial growth curve stating its all components. **07**
- (b) What are the sources of water? Describe the different impurities present in water with particle size distribution. **07**

- Q.2** (a) Enlist different physical and chemical characteristics of water and wastewater and discuss their environmental significance. **07**
- (b) What is pH? How is it determined? Find out how much acidic is sample of pH 2.0 compared to sample of pH 6.0. **07**

**OR**

- (b) Define DO and give its value to be maintained in aquatic ecosystem. Explain in detail the oxygen sag curve. **07**

- Q.3** (a) Enumerate different types of sanitary fittings and explain the functioning of wash basin showing a neat sketch. **07**
- (b) Describe the single pipe system and two pipe system of plumbing with sketches. **07**

**OR**

- Q.3** (a) What is water seal? Why is it required? Draw the sketches of S trap and Gully trap. **07**
- (b) Draw the drainage layout plan for the apartment having 2 BHK flats. **07**

- Q.4** (a) What are the sources of municipal solid waste? Give the classification of materials found in municipal solid waste. **07**
- (b) Write short notes on (a) Physical compositions of solid waste (b) Composting **07**

**OR**

- Q.4** (a) What is solid waste management? Describe it with flow diagram indicating its all functional elements. **07**
- (b) What is sanitary land filling? Describe the different factors to be considered for the site selection of sanitary land filling. **07**

- Q.5** (a) Explain the effect of air pollution on men, material and animals. **07**
- (b) What is noise pollution? How is it measured? Describe some control measures required to control noise pollution. **07**

**OR**

- Q.5** (a) Write short notes on (a) EIA (b) Electrostatic precipitator **07**
- (b) Describe different primary and secondary air pollutants. **07**

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