

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE SEM-V Examination-Nov/Dec.-2011**

**Subject code: 150603**

**Date: 26/11/2011**

**Subject Name: Environmental Engg.**

**Time: 2.30 pm -5.00 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) Describe role of microbes in the environment. **07**  
(b) State various types of microbes and describe growth of microbes. **07**
- Q.2** (a) Explain DOSAG curve. **07**  
The wastewater has  $BOD_5^{20}$  of 200 mg/l what shall be its  $BOD_3^{25}$   
take  $K_{20} = 0.15 \text{ d}^{-1}$
- (b) Discuss the physical chemical and biological characteristics of industrial wastewater. **07**
- OR**
- (b) Distinguish between BOD and COD and derive the following BOD equation **07**  
in usual notations.  $L_t = L_o(1 - 10^{-kt})$
- Q.3** (a) Define following terms (i) Sullage (ii) Sewage (iii) Sewerage system **07**  
(iv) House drainage system.
- (b) Draw neat sketch and describe the following traps (i) Nahni trap **07**  
(ii) Intercepting trap.
- OR**
- Q.3** (a) Describe principles of house drainage system. **07**  
(b) Explain a typical house drainage plan with neat sketch. **07**
- Q.4** (a) Describe composition and characteristics of solid waste. **07**  
(b) Write short note on "Composting" **07**
- OR**
- Q.4** (a) Explain the difference between pyrolysis and incineration. **07**  
(b) Discuss any two methods for collection of solid waste. **07**
- Q.5** (a) Describe effects of air pollutants on humans, animals and plants. **07**  
(b) Describe the devices used for control of particulate matter. **07**
- OR**
- Q.5** (a) Write short notes on (i) Environmental Audit (ii) Environmental impact assessment. **07**  
(b) Describe methods of measurement and control of noise. **07**

\*\*\*\*\*