

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 in usual notations. $L_t = L_o (1 - 10^{-kt})$ **07**
- Q.3** (a) Define following terms (i) Sullage (ii) Sewage (iii) Sewerage system (iv) House drainage system. **07**
(b) Draw neat sketch and describe the following traps (i) Nalni trap (ii) Intercepting trap. **07**
- 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**
