

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

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

# GUJARAT TECHNOLOGICAL UNIVERSITY

B.E. Sem-III Remedial Examination March 2010

**Subject code: 131402**

**Subject Name: Basic Food Microbiology**

**Date: 10 / 03 / 2010**

**Time: 11.00 am – 01.30 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) Write in detail regarding size, shapes and Arrangements of bacterial cells. **07**  
(b) Give detail structure of Gram Positive and Gram Negative bacterial cell wall. **07**

**Q.2** (a) Draw schematic diagram of compound microscope indicating each part. **07**  
(b) Give name of various physical processes for control of microorganisms and explain any two. **07**

**OR**

(b) Explain Active transport of nutrients in bacterial cell. **07**

**Q.3** (a) Write in detail regarding various phases of bacterial growth cycle with graph indicating various phases. **07**  
(b) Describe bacterial transformation process. **07**

**OR**

**Q.3** (a) Give the detail internal structure of flagella with diagram. **07**  
(b) Write various methods for maintenance and preservation of pure cultures. **07**

**Q.4** (a) Draw a typical bacterial cell and identify all parts. **07**  
(b) Enlist various methods for preservation of foods and explain any one. **07**

**OR**

**Q.4** (a) Define following terms: **07**  
(1) Sterilization (2) Disinfectant (3) Autotroph (4) Food Poisoning  
(b) Define Dye. Give the name of various dyes and explain any two. **07**

**Q.5** (a) List various bacterial associations in soil. Explain positive association in detail. **07**  
(b) Give name of various techniques for microbial examination and explain culture technique. **07**

**OR**

**Q.5** (a) Explain Gram's staining technique in detail. **07**  
(b) Give detail regarding nitrogen fixation in soil by bacteria. **07**

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