

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E Sem-I Regular Examination January / February 2011

Subject code: 711703N

Subject Name: Environmental Microbiology

Date: 02 /02 /2011

Time: 02.30 pm – 05.00 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) Name various fields of Microbiology. Sketch Bacterial and Animal cell. **07**
(b) Discuss the characteristics of Various Ingredients of Bacteriological Media Name Various Media. **07**
- Q.2** (a) Name Various types of Microscopy. Explain Limit of resolution, useful magnification and shadow casting. **07**
(b) Discuss fluorescent and phase contrast Microscopy. **07**
OR
(b) Discuss laboratory testing of coliform groups. Name Various Microbs present in Waste Water. **07**
- Q.3** (a) Discuss Various Electron Microscopies. **07**
(b) Discuss With sketch replication of Bacterio Phages. **07**
OR
Q.3 (a) Discuss limitation of electron microscopy. **07**
(b) Discuss Characteristics of gram negative family enterobacteriaceae and family Rhizobiaceae. **07**
- Q.4** (a) Name Various Staining technique. Discuss Gram Staining. **07**
(b) Discuss types of Microbs based on temperature for Growth and Gaseous requirements. **07**
OR
Q.4 (a) Explain the terms Convalescent carrier and Healthy Carriers, epidemic and endemic disease, Herd immunity, Virulence. **07**
(b) Discuss various physical agents for control of Microbs. **07**
- Q.5** (a) Discuss conditions affecting enzyme activity. **07**
(b) Discuss various Characteristics Of Enzyme. **07**
OR
Q.5 (a) Discuss about Active sites, Enzyme Specificity and cofactor of enzyme. **07**
(b) Give Path Way of glucose Fermentation by E-coli. Also discuss Competitive Inhibition of Enzyme action. **07**
