

GUJARAT TECHNOLOGICAL UNIVERSITY**B.E. Sem-III Regular / Remedial Examination December 2010****Subject code: 131302****Subject Name: Environmental Microbiology****Date: 14 /12 /2010****Time: 10.30 am – 01.00 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) State the difference between Sterilization and disinfection. Explain the different types of disinfectants. **07**
- (b) Give the classification of bacteria with sketches. **07**

- Q.2** (a) Describe the microbial procedure to estimate the MPN of water (Presumptive Test). **07**
- (b) With the help of a neat sketch, explain the different parts of a bacterial cell. **07**

OR

- (b) Answer the following: **07**
- (i) Enlist and explain the different types of media used in microbiology.
- (ii) Differentiate between pure culture and mixed culture.

- Q.3** (a) Explain the significance of microbiology in the field of Environmental Engg. **07**
- (b) Explain the procedure for production of vinegar. **07**

OR

- Q.3** (a) Prepare a list of different physical agents for killing of microbes and explain any one. **06**
- (b) Write a short note on isolation and preservation of pure culture. What is the significance of pure culture? **08**

- Q.4** (a) Give the classification of eukaryotic algae. **07**
- (b) With the help of neat sketch explain the morphology and reproduction of viruses. **07**

OR

- Q.4** (a) Explain the taxonomy of protozoa with figure. **08**
- (b) Differentiate between **06**
- (i) Actinomycetes and streptomycetes.
- (ii) Bright field and dark field microscopy.

- Q.5** (a) Prepare a list of water-borne diseases and explain any one giving causative agent, symptoms and preventive measures. **07**
- (b) What is eutrophication? Explain the measures to control eutrophication. **07**

OR

- Q.5** (a) Write a note on disease Malaria highlighting the causes, symptoms, treatment and prevention. **07**
- (b) Give the classification of fungi and explain any one in detail with sketch. **07**
