

GUJARAT TECHNOLOGICAL UNIVERSITY
BPHARM - SEMESTER- V • EXAMINATION – WINTER 2012

Subject code: 250002**Date: 11-01-2013****Subject Name: Pharmaceutical Microbiology-I****Time: 10:30 am – 01:30 pm****Total Marks: 80****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Draw a labeled diagram of bacterial cell. Explain flagella. **06**
(b) Classify microorganism on the basis of morphologically. Discuss the spirochetes. **05**
(c) Write a note on Electron microscope. **05**
- Q.2** (a) Discuss the importance of staining in microbiology. Classify different staining techniques. **06**
(b) Discuss the scope of microbiology in Pharmaceutical industry. **05**
(c) Classify the methods of isolation of microbes. Discuss roll tube method. **05**
- Q.3** Differentiate following: **16**
a) Gram negative and Gram positive microbes.
b) Spores and capsules
c) Viruses and bacteria
d) RWC and CMC
- Q.4** (a) Define disinfection. Classify the factors influencing disinfectant and discuss any two. **06**
(b) Discuss the nutritional requirement of microbes. **05**
(c) Describe cultivation of aerobic microbes. **05**
- Q.5** (a) Explain the principle underlying the microbiological assay of antibiotics. **06**
(b) How do you carried out the microbiological assay of Vitamin B₁₂ as per IP. **05**
(c) What is sterility test? Give the importance of control test in the sterility testing of Pharmaceuticals. **05**
- Q. 6** (a) Classify the methods of sterilization. Discuss Hot air oven with its applications. **06**
(b) Discuss the Ethylene oxide gas sterilization. **05**
(c) Discuss the saturated steam as a sterilizing agent. **05**
- Q. 7** (a) Write a note on following: Growth phase of microorganisms **06**
(b) Total counts **05**
(c) Validation of bacterial filters **05**
