

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

Bachelor of Pharmacy Sem-V-Examination-Nov/Dec-2011

Subject code: 250002

Date: 22/11/2011

Subject Name: Pharmaceutical Microbiology-I

Time: 2.30 pm -5.30 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) Enumerate factors affecting growth of microbes. Classify organisms according to oxygen requirement. **06**
(b) Differentiate between light and electron microscopy. **05**
(c) How is specimen prepared, stained and viewed with electron microscopy? **05**
- Q.2** (a) Write a note on scope of microbiology in pharmacy. **06**
(b) Draw a neat labeled sketch of bacterial cell. **05**
(c) Differentiate between: (i) capsule and spore **05**
(ii) Selective and differential media
- Q.3** (a) Classify media. Write in detail about any one media used for cultivation of anaerobic organisms. **06**
(b) Enumerate and discuss various methods used for isolation of aerobes. **05**
(c) Write a note on spirochetes. **05**
- Q.4** (a) Define disinfection. Enumerate five marketed disinfectants and give mechanism of action of each of them. **06**
(b) What is the effect of temperature and concentration on rate of disinfection? **05**
(c) Give merits and demerits of phenol coefficient. **05**
- Q.5** (a) Why is bacterial count carried out in pharma industry? **06**
(b) Differentiate between Gram positive and Gram negative bacteria. **05**
(c) Discuss reproduction in fungi. **05**
- Q. 6** (a) How are the following items sterilized? **06**
(i) Ascorbic Acid injection
(ii) Ethyl oleate
(Give reasons for choosing the process)
(b) Give advantages, disadvantages, applications and precautions to be observed in Hot Air Oven. **05**
(c) Draw a neat and labeled diagram of an autoclave. **05**
- Q.7** (a) Describe any one method for assay of antibiotics. **06**
(b) How are bacterial filters evaluated? **05**
(c) How is the test for sterility of catgut carried out? **05**
