

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.**

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|-------------|--|-----------|
| <b>Q.1</b>  | (a) Enumerate factors affecting growth of microbes. Classify organisms according to oxygen requirement.                                    | <b>06</b> |
|             | (b) Differentiate between light and electron microscopy.   | <b>05</b> |
|             | (c) How is specimen prepared, stained and viewed with electron microscopy?   | <b>05</b> |
| <b>Q.2</b>  | (a) Write a note on scope of microbiology in pharmacy.   | <b>06</b> |
|             | (b) Draw a neat labeled sketch of bacterial cell.  | <b>05</b> |
|             | (c) Differentiate between: (i) capsule and spore<br>(ii) Selective and differential media  | <b>05</b> |
| <b>Q.3</b>  | (a) Classify media. Write in detail about any one media used for cultivation of anaerobic organisms.                                       | <b>06</b> |
|             | (b) Enumerate and discuss various methods used for isolation of aerobes.   | <b>05</b> |
|             | (c) Write a note on spirochetes.   | <b>05</b> |
| <b>Q.4</b>  | (a) Define disinfection. Enumerate five marketed disinfectants and give mechanism of action of each of them.                               | <b>06</b> |
|             | (b) What is the effect of temperature and concentration on rate of disinfection?   | <b>05</b> |
|             | (c) Give merits and demerits of phenol coefficient.  | <b>05</b> |
| <b>Q.5</b>  | (a) Why is bacterial count carried out in pharma industry?   | <b>06</b> |
|             | (b) Differentiate between Gram positive and Gram negative bacteria.  | <b>05</b> |
|             | (c) Discuss reproduction in fungi.   | <b>05</b> |
| <b>Q. 6</b> | (a) How are the following items sterilized?<br>(i) Ascorbic Acid injection<br>(ii) Ethyl oleate<br>(Give reasons for choosing the process) | <b>06</b> |
|             | (b) Give advantages, disadvantages, applications and precautions to be observed in Hot Air Oven.   | <b>05</b> |
|             | (c) Draw a neat and labeled diagram of an autoclave.   | <b>05</b> |
| <b>Q.7</b>  | (a) Describe any one method for assay of antibiotics.  | <b>06</b> |
|             | (b) How are bacterial filters evaluated?   | <b>05</b> |
|             | (c) How is the test for sterility of catgut carried out?   | <b>05</b> |

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