

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.Pharmacy Sem-V Examination June 2011

Subject code: 250002 Subject Name: Pharmaceutical Microbiology-I

Date: 20/06/11

Total Marks: 80

Time: 10:30 am to 1:30pm

Instructions:

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

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|-------------|-----|---|-----------|
| Q.1 | (a) | Enlist the components of bacterial cell. Describe the flagella. | 06 |
| | (b) | Classify the microorganisms. Differentiate the bacteria and viruses. | 05 |
| | (c) | Discuss the Scope of Microbiology. | 05 |
| Q.2 | (a) | Enlist the various microscopic techniques. Give the three limitations of electron microscopy. | 06 |
| | (b) | Differentiate gram positive and gram negative microorganisms. | 05 |
| | (c) | Enumerate the conditions requires for the growth of microorganism. Draw a typical bacterial growth curve. | 05 |
| Q.3 | (a) | Enlist the methods for isolation of pure culture. Discuss the streak plate technique. | 06 |
| | (b) | Classify the various media for bacterial growth. Discuss selective media. | 05 |
| | (c) | Write a note on nutritional requirements of bacteria. | 05 |
| Q.4 | (a) | Classify the disinfectants. Discuss the mechanism of action of any three. | 06 |
| | (b) | Enumerate the factors affecting disinfection. Discuss any two. | 05 |
| | (c) | Write a note on Rideal Walker coefficient (RWC). | 05 |
| Q.5 | (a) | Define sterilization. Classify the different methods of sterilization with mechanism of action. | 06 |
| | (b) | How do you validate the bacteriological filters used for sterilization? | 05 |
| | (c) | Write a note on an autoclave. | 05 |
| Q. 6 | (a) | Why test for sterility is carried out? What is the importance of control test in the test for sterility? | 06 |
| | (b) | Discuss the principle underlying microbiological assay of vitamins. | 05 |
| | (c) | Discuss the cup plate method for the microbiological assay of antibiotics. | 05 |
| Q.7 | (a) | Classify the various methods of bacterial counts. Discuss the plate count technique. | 06 |
| | (b) | How do perform test for sterility of sodium sulphacetamide eye drops. | 05 |
| | (c) | Write a note on gaseous sterilization. | 05 |
