

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B. Pharm. – SEMESTER – V • EXAMINATION – WINTER • 2016

Subject Code: 250002

Date: 22-11-2016

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.**

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|-------------|-----|---|-----------|
| Q.1 | (a) | Discuss the scope of microbiology in Pharmaceutical industry. | 06 |
| | (b) | Enlist the various microscopic techniques. Describe in brief about SEM. | 05 |
| | (c) | Write a note on Ricktsia. | 05 |
| Q.2 | (a) | Differentiate gram positive and gram negative microorganisms. | 06 |
| | (b) | Classify the various media for bacterial growth. Explain selective Media. | 05 |
| | (c) | Define 'sterilization'. Explain moist heat sterilization with its mechanism of action. | 05 |
| Q.3 | (a) | Describe various methods used for classification of bacteria. Explain morphological classification of bacteria. | 06 |
| | (b) | Write a note on evaluation of disinfection. | 05 |
| | (c) | Classify the staining techniques. Describe Ziehl-Neelsen staining method | 05 |
| Q.4 | (a) | Classify type of bacteria on the basis of :
i) Nutritional requirement ii) Temperature requirement | 06 |
| | (b) | Enumerate methods for evaluation of disinfectants. Describe Rideal-Walker test | 05 |
| | (c) | Describe biological indicators for monitoring sterilization processes. | 05 |
| Q.5 | (a) | Enumerate the factors affecting on disinfection. Discuss any two. | 06 |
| | (b) | Enlist methods for sterility testing. Discuss direct inoculation method. | 05 |
| | (c) | Describe growth curve of bacteria with labeled diagram. | 05 |
| Q. 6 | (a) | Classify the various methods of bacterial counts. Discuss the plate count technique. | 06 |
| | (b) | Discuss the principle underlying microbiological assay of vitamins. | 05 |
| | (c) | Draw a labeled diagram of bacterial cell. Explain flagella. | 05 |
| Q.7 | (a) | Write significance of sterility testing in pharmaceuticals. Describe methods for sterility testing for sterile gauze. | 06 |
| | (b) | Write a note on validation of filtration sterilization. | 05 |
| | (c) | Write taxonomy of Rickettsia, Actinomycetes. | 05 |
