

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B. Pharm. – SEMESTER – V • EXAMINATION – WINTER • 2014

Subject Code: 250002

Date: 28-11-2014

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) Write a note on scope of microbiology in pharmacy. | 06 |
| | (b) Explain: Thermal death point, Thermal death time, RWC, Bio-burden, Inactivation factor. | 05 |
| | (c) Write down ideal requirements of disinfectant. Enlist factor affecting disinfection process & describe any one in brief. | 05 |
| Q.2 | (a) Enlist various evaluation tests for disinfectants. Describe the Rideal Walker test for phenol. Write its merits & demerits. | 06 |
| | (b) Draw a neat and labelled diagram of an autoclave. | 05 |
| | (c) Write a note on gaseous sterilization along with its mechanism. | 05 |
| Q.3 | (a) Classify various methods of sterilization. Describe working principle of Dry heat sterilization with merits & demerits. | 06 |
| | (b) Write a note on mechanical sterilization method in detail. | 05 |
| | (c) Describe various chemical & biological sterilization indicators. | 05 |
| Q.4 | (a) Enumerate factors affecting growth of microbes. Classify organisms according to Oxygen Requirement, Temperature Requirement and Nutritional Requirement. | 06 |
| | (b) Enumerate the conditions requires for the growth of microorganism. Draw a typical bacterial growth curve. | 05 |
| | (c) Write a note on cell wall of gram negative bacteria & gram positive bacteria. | 05 |
| Q.5 | (a) Write morphological classification of virus. Describe structure & composition of virus. | 06 |
| | (b) Classify staining techniques. Discuss ZN staining method. | 05 |
| | (c) Enlist the methods for isolation of pure culture. Discuss the streak plate technique along with different patterns. | 05 |
| Q. 6 | (a) Enlist the components of bacterial cell. Describe the flagella with labeled diagram. | 06 |
| | (b) Discuss microbiological assay of Vitamin B ₁₂ . | 05 |
| | (c) Define Viable count & Total count. Enlist method of bacterial count. Describe any one method. | 05 |
| Q.7 | (a) Explain microbiological assay. Name microbes used in assay of: Neomycine, Erythromycin, Carbenicillin, Rifampicin, Tetracycline. | 06 |
| | (b) How do perform test for sterility of sodium sulphacetamide eye drops. | 05 |
| | (c) Write significance of sterility testing in pharmaceuticals. Describe methods for sterility testing for surgical dressings. | 05 |
