

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
BPharm - SEMESTER V – EXAMINATION - WINTER 2017

Subject code: 250002**Date: 03-11-2017****Subject Name: Pharmaceutical Microbiology - I****Time: 10:30 am to 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.

- Q.1** (a) What is Microbiology? Briefly describe the scope of microbiology. **06**
(b) Draw typical bacterial growth curve and explain various stages of bacterial growth. **05**
(c) Classify bacteria on the basis of: **05**
1. Oxygen requirement
2. Temperature requirement
- Q.2** (a) Classify methods of bacterial counting. Discuss methods for determining viable count. **06**
(b) How the electron microscopy differs from light microscopy? Write in brief on TEM. **05**
(c) Enlist the methods for isolation of microorganism. Discuss the streak plate technique. **05**
- Q.3** (a) Enumerate various factors affecting disinfectant action. Explain any two. **06**
(b) Describe in brief the Rideal walker test for the evaluation of disinfectant. Give its advantages and disadvantages. **05**
(c) Classify the disinfectants. Write the mode of action of any two. **05**
- Q.4** (a) Explain the principle of sterility testing. Which media are used for sterility testing? **06**
(b) Discuss the ethylene oxide gas sterilization. **05**
(c) Write the significance of sterility testing of pharmaceuticals. Discuss the method for sterility testing of soluble powders. **05**
- Q.5** (a) Classify various methods of sterilization. Describe principle and application of dry heat. **06**
(b) Write a short note on Autoclave. **05**
(c) Explain the D, Z and F values with their significance in sterilization. **05**
- Q.6** (a) Discuss in brief the microbial assay of vitamins. **06**
(b) Enlist various methods used for microbial assay. Discuss any one. **05**
(c) How the validation of bacterial filters is carried out? **05**
- Q.7** (a) Classify the staining techniques. Explain the principle of differential staining. **06**
(b) Write a brief note on spirochetes. **05**
(c) Discuss various techniques used for isolation and cultivation of virus. **05**
