

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.Pharm - SEMESTER- V • EXAMINATION – SUMMER -2020****Subject Code: BP504TP****Date: 29-10-2020****Subject Name: Pharmaceutical Microbiology****Time: 2:30 PM TO 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.

- Q.1** (a) How is preparation of microbial specimen done for compound microscopy? **06**  
(b) Write a brief note on (any one) **05**  
i. Phase contrast Microscopy  
ii. Fluorescence Microscopy  
iii. Electron Microscopy  
(c) What are Differential stains? Write on principle and procedure citing a suitable example. **05**
- Q.2** (a) Draw a labeled diagram of a Prokaryotic cell. **06**  
(b) Write on (any two) **05**  
i. Cell wall of Gram positive and Gram negative cell  
ii. Endospores  
iii. Ribosomes  
(c) Give differences between a Eukaryotic cell and a Prokaryotic cell. **05**
- Q.3** (a) Write on different Nutrient media in details. **06**  
(b) Give methods of Preservation of bacterial cultures. **05**  
(c) Explain methods of Direct measurement of microbial growth. **05**
- Q.4** (a) Enumerate Physical methods of microbial control and write on Autoclaving with a labeled diagram. **06**  
(b) Classify Disinfectants. Enumerate their methods of evaluation. Write on Ethylene oxide as chemo sterilizer. **05**  
(c) Write in brief on (any one) **05**  
i. Filtration sterilization  
ii. Radiation sterilization
- Q.5** (a) Write in defects (any one) **06**  
i. Viruses  
ii. Classification of Fungi  
(b) Give objective and Pharmacopoeial method for Sterility testing of Water for Injection. **05**  
(c) Write on various methods of Microbiological Assay explaining standardization of an antibiotic. **05**
- Q.6** (a) Write on : Laminar flow equipments **06**  
(b) Write on : Different sources of contamination **05**  
(c) Write on : Clean area classification **05**
- Q.7** (a) What are called Microbial Spoilages? Give their types. Write on factors affecting spoilage of pharmaceutical products by microbes. **06**  
(b) Differentiate between a Bacteriostatic and a Bacteriocidal agent giving suitable examples. **05**  
(c) Write on Biochemical tests for identification and classification of bacteria. **05**