

Enrollment No./Seat No.:

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Pharm - SEMESTER - V EXAMINATION - WINTER 2025

Subject Code: BP504TP

Date: 24-11-2025

Subject Name: Pharmaceutical Microbiology

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.**

	Marks
Q.1 (a) Classify the Bacteria with respect to morphology and nutritional requirements with suitable examples	06
(b) With a schematic diagram, explain sporulation cycle of Bacteria	05
(c) Explain methods of cultivating Anaerobic organisms.	05
Q.2 (a) Differentiate i) Sterilization and Disinfection ii) Pasteruization and Tyndallization iii) Depth filter and Screen filter	06
(b) Give a brief account on Dry mount techniques used for identification of Bacteria.	05
(c) Write short notes on Biological Indicators used in Sterilization processes	05
Q.3 (a) Mention the Major factors affecting Disinfectant action and explain any two	06
(b) i) Mention most appropriate method of sterilizing following: Bedsheets, Surgical Powder, Oily injections, Catgut Suture, Intravenous infusion sets ii) State the reasons for use of following in Cell culture techniques: CO ₂ incubator , Deep freezer of minus 20°C, DMSO , Faetal Calf serum , Aspirator	05
(c) Explain Chick Martin Coefficient test of Disinfectant Evaluation	05
Q.4 (a) What are the different ways of sterilizing thermolabile materials and explain any one in detail with suitable examples	06
(b) Classify the disinfectants and their mechanism of actions	05
(c) Write short notes on Microbiological assay of Streptomycin	05
Q.5 (a) How to do enumeration of bacteria in terms of total count and viable count?	06
(b) Describe the layout of an aseptic room in the Microbiological laboratory	05
(c) Enlist types of Spiolage. Discuss factors affecting Microbial spoilage.	05
Q.6 (a) Give a brief account on Vitamin B1 microbiological assay	06
(b) Give a brief account on Animal Cell culture techniques	05
(c) Explain the media, Controls used for Test for Sterility	05
Q.7 (a) Classify the Viruses and their morphology	06

- (b)** How to preserve the Pharmaceutical products and evaluate the microbial stability? **05**
- (c)** Write short notes on different types of media used for cultivation of organisms. **05**
