

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM - SEMESTER-5 EXAMINATION – WINTER -2023

Subject Code: BP504TP**Date: 12/12/2023****Subject Name: Pharmaceutical Microbiology****Time: 10.30 a.m. to 1.30 p.m.****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 are the criteria for ideal culture media? Give names of different types of media and discuss differential media in detail. **06**
- (b) How do you carried out the microbiological assay of Vitamin B12 as per IP. **05**
- (c) Enlist various evaluation tests for disinfectants. Describe the Rideal Walker test for phenol in detail. **05**
- Q.2** (a) Discuss applications of cell culture in pharmaceutical industry. **06**
- (b) Draw a labeled diagram of horizontal autoclave and discuss its principal, merits, demerits and applications. **05**
- (c) Explain: D- value, F- value, Z- value, Resolution, Numerical aperture. **05**
- Q.3** (a) Give classification of disinfectants with examples citing mode of action for each class. **06**
- (b) Explain Sterility testing of ophthalmic product according to IP. **05**
- (c) Differentiate virus from a bacterial cell and explain the generalized structure of a virus with a suitable diagram. **05**
- Q.4** (a) Differentiate following **06**
- i) Gram positive and Gram negative bacteria
- ii) Endotoxin & Exotoxin
- (b) Explain the bacterial Growth Curve. **05**
- (c) Enlist types of spoilage. Discuss factors affecting microbial spoilage. **05**
- Q.5** (a) Draw the label diagram of bacterial cell & Explain about flagella. **06**
- (b) Name organisms used to perform microbiological assay of following: **05**
1. Tetracycline 2. Streptomycin 3. kanamycin 4. Ampicillin
5. Chloramphenicol.
- (c) What is fungal dimorphism? Discuss taxonomy of fungi. **05**
- Q. 6** (a) Describe physical, chemical and biological monitors for sterilization. **06**
- (b) Write a short not on IMViC test for the identification of bacteria. **05**
- (c) Give a detailed account on Gaseous sterilization **05**
- Q.7** (a) Explain evaluation of bactericidal & Bacteriostatic. **06**
- (b) Explain the various sources of contamination in an aseptic area and methods of prevention **05**
- (c) Differential between TEM and SEM. **05**
