

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Ph. - SEMESTER-V • EXAMINATION – WINTER -2020**Subject Code:BP504TP****Date: 11/01/2021****Subject Name: Pharmaceutical Microbiology****Time: 10:30AM TO 12:30PM****Total Marks: 54****Instructions:**

1. Attempt any **THREE** questions from Q-1 to Q-6.
2. Q.7 is compulsory to attempt.
3. Make suitable assumptions wherever necessary.
4. Figures to the right indicate full marks.

- Q.1** (a) Define microscopy. Discuss specimen preparation for electron microscopy. **06**
(b) Describe physical, chemical and biological monitors for sterilization. **05**
(c) Discuss sterility testing of sulphacetamide eye drops as per IP. **05**
- Q.2** (a) Explain applications of animal cell culture in pharmaceutical research. **06**
(b) Discuss standards for clean room classifications and its applications. **05**
(c) Enlist suitable method for sterilization of following:
1. i.v sets 2. Culture media 3. Milk 4. Serum 5. Rubber closures 6. Petriplate
7. Suturing needle 8. Blanket 9. Eye ointment 10. Paraffin oil **05**
- Q.3** (a) Describe lytic and lysogenic cycle for virus multiplication. **06**
(b) Draw a well labeled lay out of aseptic area. **05**
(c) Write a note on: Bacterial endospore. **05**
- Q.4** (a) Classify staining techniques. Explain Gram staining in detail. **06**
(b) Name organisms used to perform microbiological assay of following:
1. Tetracycline 2. Candidicin 3. Mitomycin 4. Ampicillin 5. Chloramphenicol. **05**
(c) Elaborate types of spoilage in pharmaceutical formulations. **05**
- Q.5** (a) Classify sterilization techniques. Explain Autoclaving in detail. **06**
(b) Write a note on transformed cell cultures with examples. **05**
(c) Describe contribution of Louis Pasteur in Microbiology. **05**
- Q. 6** (a) Define total and viable counts. Discuss methods for measurement of bacterial counts. **06**
(b) Write a note on anaerobic growth medium. **05**
(c) What is fungal dimorphism? Discuss taxonomy of fungi. **05**
- Q.7** (a) Explain the following terms:
1. Psychrophiles 2. Lithotrophs 3. MIC 4. iMViC 5. Virion 6. Microaerophiles **06**
OR
(a) Describe preservatives for pharmaceutical products. **06**
OR
(a) Write a note: Bacterial Flagella. **06**
