

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Pharm. - SEMESTER-VI • EXAMINATION – WINTER -2020**Subject Code:2260002****Date: 05/01/2021****Subject Name: Pharmaceutical microbiology & Biotechnology-II****Time: 2:00 PM TO 4:00 PM****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 mutation. Discuss the importance of Frame shift mutation and point mutation. **06**
(b) Write a note on physical, chemical and biological type of mutagens. **05**
(c) Discuss the Gradient Plate Method. **05**
- Q.2** (a) Write a note on transformation, conjugation and transduction. **06**
(b) Write a note on Gene cloning and their applications **05**
(c) Explain applications of HAT media in production of monoclonal antibodies. **05**
- Q.3** (a) Discuss the result interpretation of sterility testing. **06**
(b) Comments: (i) Sub-culturing is required in sterility testing of oily injections. **05**
(ii) Positive control is also known as sterility control. **05**
(c) Write a note on cylindrical plate method. **05**
- Q.4** (a) Discuss general production, standardization and storage of vaccines. **06**
(b) Differentiate: (i) Vaccines and sera **05**
(c) Comments: (i) Second line defence is not a specific defence. **05**
(ii) TAB is simple monovalent vaccine.
- Q.5** (a) Classify different types of vaccines and write a note on vaccines for hepatitis and AIDS. **06**
(b) Write a note on Blotting techniques. **05**
(c) Write a note on Immunoglobulins. **05**
- Q.6** (a) Write a note on processing and storage of whole human blood and dried human plasma. **06**
(b) Discuss media and media sterilization in Fermentation technique. **05**
(c) Draw diagram of ideal fermentor. What are the roles of different part of fermentor. **05**
- Q.7** (a) Give the Name of organisms required for production of: (i) Alcohol (ii) Vitamin B12 (iii) Riboflavin (iv) Tetracyclines (v) Streptomycins (vi) Citric acid. **06**

OR

- (a) Compare and Contrast: Fermentation technique for production of penicillin G and Penicillin V. **06**

OR

- (a) Discuss the different parameter needs to be adjusted for fermentation technique. **06**
