

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Pharm. - SEMESTER– V • EXAMINATION – WINTER -2020

Subject Code: BP505TT**Date: 13/01/2021****Subject Name: Pharmaceutical Biotechnology****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.**

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|-------------|---|-----------|
| Q.1 | (a) Write a short note on PCR. | 06 |
| | (b) Give brief note on production of hepatitis B vaccines. | 05 |
| | (c) Write a note on production of Enzyme Amylase. | 05 |
| Q.2 | (a) Explain Structure and Function of MHC. | 06 |
| | (b) Give working and applications of biosensors. | 05 |
| | (c) What are antibodies? Write a detail note on Immunoglobulins. | 05 |
| Q.3 | (a) Give the flow sheet of Vitamin B12 production, isolation and recovery by fermentation. | 06 |
| | (b) Write a brief note on PBR 322 vector. | 05 |
| | (c) Explain general method of the preparation of bacterial vaccines. | 05 |
| Q.4 | (a) Write a short note on Hypersensitivity reactions. | 06 |
| | (b) Define enzyme immobilization and explain different techniques adopted. | 05 |
| | (c) Detail discussion on Recombinant DNA technology. | 05 |
| Q.5 | (a) Discuss Microbial genetic method of conjugation. | 06 |
| | (b) Give the difference between humoral immunity vs cellular immunity. | 05 |
| | (c) Give the brief application of genetic engineering in medicine. | 05 |
| Q. 6 | (a) Design Fermenter and explain its various controls. | 06 |
| | (b) Give the list of different mutagenic agents. How mutants are identify. | 05 |
| | (c) Write a note on Hybridoma technology. | 05 |
| Q.7 | (a) Give the flow sheet of Griseofulvin production, isolation and recovery by fermentation. | 06 |
| OR | | |
| | (a) Explain Principle and Procedure of Western blotting. | 06 |
| OR | | |
| | (a) Write a note on whole human blood and its storage. | 06 |
