

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Ph. - SEMESTER-V • EXAMINATION – WINTER -2022

Subject Code:BP505TT**Date:28/12/2022****Subject Name: Pharmaceutical Biotechnology****Time: 10:30am to 01:30pm****Total Marks: 80****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

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| Q.1 | (a) | Discuss applications of Biotechnology in Pharmaceutical Industry. | 06 |
| | (b) | Write applications of Enzyme Immobilization. Discuss physical entrapment method of Enzyme Immobilization. | 05 |
| | (c) | What is biosensor? Discuss components of biosensors. | 05 |
| Q.2 | (a) | What is Recombinant DNA technology. Write steps involved in Recombinant DNA Technology. | 06 |
| | (b) | Define Mutation. Discuss types of mutation. | 05 |
| | (c) | Write a note of Polymerase Chain Reaction. | 05 |
| Q.3 | (a) | Draw a well labeled diagram of ideal industrial the fermenter. Explain brief the controls of the Fermenter. | 06 |
| | (b) | Discuss production of Penicillin with flow chart. | 05 |
| | (c) | Differentiate between Eukeryotes and Prokaryotes. | 05 |
| Q.4 | (a) | Write short note on Hybridoma Technology in production of monoclonal antibody. | 06 |
| | (b) | Discuss insulin production by rDNA technology. | 05 |
| | (c) | Explain working of ELIZA. | 05 |
| Q.5 | (a) | Explain general method of preparation of bacterial vaccine. | 06 |
| | (b) | Define terms: 1. Bacterial Vaccine 2. Antitoxins 3. Immunoglobulins, 4. Active immunity 5. Passive immunity. | 05 |
| | (c) | Give structure and function of major hystocompatibility complex. | 05 |
| Q. 6 | (a) | Discuss microbial generic method of conjugation. | 06 |
| | (b) | List out types of hypersensitivity reactions and write on Type-I hypersensitivity reactions. | 05 |
| | (c) | Discuss applications of recombinant DNA technology. | 05 |
| Q.7 | (a) | Discuss production of enzyme-amylase. | 06 |
| | (b) | Write a note on microbial biotransformation. | 05 |
| | (c) | Write a short note on plasma substitute. | 05 |
