

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM – SEMESTER– VI – EXAMINATION – SUMMER-2017

Subject Code: 260002

Date:01/05/2017

Subject Name: Pharmaceutical Microbiology and Biotechnology - II

Time: 10.30 AM to 1.30 PM

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) Define Biotechnology. Discuss scope and application in the field of Pharmacy. | 06 |
| | (b) Describe bacterial variation with suitable example. | 05 |
| | (c) Enumerate different types of mutations. Explain in details any one. | 05 |
| Q.2 | (a) Define Genetic Recombination. Write a short note on Protoplast fusion. | 06 |
| | (b) How humulin is prepared biotechnological. | 05 |
| | (c) How monoclonal antibodies are produced? | 05 |
| Q.3 | (a) What is antigen? Write a detail note on Immunoglobulins. | 06 |
| | (b) Classify different types of immunity with example. | 05 |
| | (c) Explain the method of production and standardization of BCG vaccine. | 05 |
| Q.4 | (a) Describe antigen antibody reactions and its application. | 06 |
| | (b) Describe the various steps involved in gene cloning with suitable diagram | 05 |
| | (c) Write difference between 1) Vaccine & Sera, 2) Active & Passive immunity. | 05 |
| Q.5 | (a) Describe in detail the design of ideal fermenter with a labeled diagram. | 06 |
| | (b) Describe methods for preparation and maintenances of master culture in industries. | 05 |
| | (c) Give the flow chart for the production of penicillin. | 05 |
| Q. 6 | (a) Write a note on recombinant DNA technology. | 06 |
| | (b) Explain Polymerase Chain Reaction in detail. | 05 |
| | (c) Write short notes on fermentation media and pretreatments. | 05 |
| Q.7 | (a) What is enzyme? Explain in detail enzyme kinetics | 06 |
| | (b) Describe surface immobilization by covalent coupling. | 05 |
| | (c) Give applications of Immobilized enzymes in pharmacy | 05 |
