

GUJARAT TECHNOLOGICAL UNIVERSITY
B. Pharm. – SEMESTER – VI • EXAMINATION – WINTER • 2015

Subject Code: 2260002

Date: 30-12-2015

Subject Name: Pharmaceutical Microbiology & Biotechnology-I

Time: 02:30 pm - 05:30 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) Write a note on Recombinant DNA technology. | 06 |
| | (b) Explain Hybridoma cell technology in detail. | 05 |
| | (c) Write in brief about bacterial variation by conjugation. | 05 |
| Q.2 | (a) Write a note on mutation and its consequences. | 06 |
| | (b) How Humulin is produced? | 05 |
| | (c) Write a note on techniques and applications of protoplast fusion in plant biotechnology. | 05 |
| Q.3 | (a) Explain phagocytosis in detail. | 06 |
| | (b) Give brief note on production of Diphtheria toxoid. | 05 |
| | (c) Define and classify immunity in detail. | 05 |
| Q.4 | (a) Enlist different types of antigen antibody reactions. Explain ELISA in detail. | 06 |
| | (b) What are antibodies? Describe the general structure of antibody with neat diagram. | 05 |
| | (c) Explain the method of production and standardization of BCG vaccine. | 05 |
| Q.5 | (a) Define fermentation. Write a note on media used for fermentation. | 06 |
| | (b) What are the fermenters? Draw neat and labeled diagram of it. | 05 |
| | (c) How the organisms for fermentation are isolated, cultivated and screened? | 05 |
| Q. 6 | (a) Give the importance of control test in the sterility testing of Pharmaceuticals. | 06 |
| | (b) Explain the diffusion method for antibiotic assay. | 05 |
| | (c) How cynocobalamine is prepared by fermentation. | 05 |
| Q.7 | (a) Explain following techniques. | 06 |
| | 1. PCR | |
| | 2. Agarose Gel Electrophoresis | |
| | (b) Describe ideal characteristics of plasma substituent. Explain Dextran as a plasma substituent. | 05 |
| | (c) How is the test for sterility of catgut carried out? | 05 |
