

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B. Pharm. – SEMESTER – VI • EXAMINATION – WINTER • 2014

Subject Code: 260002

Date: 23-12-2014

Subject Name: Pharmaceutical Microbiology and Biotechnology II

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) Define Mutation. Enumerate different types of Mutations, explain any one in details. | 6 |
| | b) What do you understand by the term mutagenesis? Explain Radiation as Mutagen. | 5 |
| | c) Describe the principle of the AMES test for identifying the chemical carcinogens. | 5 |
| Q-2 | a) Write short notes on any 2: i) Streptokinase ii) Humulin iii) Monoclonal antibodies. | 6 |
| | b) Discuss in details “Genetic Recombination”. | 5 |
| | c) What do you understand by primary and secondary defense mechanism. | 5 |
| Q-3 | a) Describe “Translation”, and be sure to include following terms: ribosome, rRNA, Amino acid activation tRNA, anticodon and codon. | 6 |
| | b) Explain the terminologies: i) Zone of Inhibition and ii) Zone of Exhibition. | 5 |
| | c) Briefly outline and explain the scope of Biotechnology. | 5 |
| Q-4 | a) What are interferons? Classify them. | 6 |
| | b) What are vaccines? How do vaccines work? | 5 |
| | c) Write a note on standardization of Vaccines. | 5 |
| Q-5 | a) Draw a flow sheet for the production of Penicillin. | 6 |
| | b) Draw a neat diagram of fermentor and label the different | 5 |
| | c) What do you understand by the term downstream processing? Enumerate two equipments used for it. | 5 |
| Q-6 | a) Give the importance of culture media and its constitution. | 6 |
| | b) How will you preserve bacterial culture? | 5 |
| | c) An aerobic fermentor in operation is under a positive pressure. Explain. | 5 |
| Q-7 | a) How is immobilization technique advantageous? Give different methods of immobilization. | 6 |
| | b) Write a note on enzyme kinetics. | 5 |
| | c) Briefly explain the technology utilized in “Dialysis”. | 5 |
