

GUJARAT TECHNOLOGICAL UNIVERSITY
B. PHARM. - SEMESTER – VI • EXAMINATION – WINTER 2012

Subject code: 260002**Date: 28/12/2012****Subject Name: Pharmaceutical Microbiology and Technology - 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 Biotechnology. What is the scope of Modern Biotechnology. | 06 |
| | (b) Explain bacterial variation with example. | 05 |
| | (c) How are mutants isolated? | 05 |
| Q.2 | (a) Differentiate the following::
i) Endotoxin & Exotoxin
ii) Active & Passive Immunity | 06 |
| | (b) Draw a labeled structure of antigen and antibody. Enumerate antigen-antibody reactions with examples. | 05 |
| | (c) Write in brief about Widal's test. | 05 |
| Q.3 | (a) How is sterilization process carried out for fermentor and media used for fermentation? | 06 |
| | (b) Write a note on substrates used in fermentation process. | 05 |
| | (c) How is streptomycin prepared by fermentation process? | 05 |
| Q.4 | (a) Explain the terms:
(i) Gene cloning
(ii) Monoclonal antibodies | 06 |
| | (b) Write a note on frame shift mutation. | 05 |
| | (c) What are immobilized enzymes? Give applications of immobilized enzymes. | 05 |
| Q.5 | (a) How is Humulin prepared biotechnologically? | 06 |
| | (b) Write in short about defensive mechanism in humans against diseases. | 05 |
| | (c) Discuss any two methods of immobilization of enzymes. | 05 |
| Q. 6 | (a) What is genetic recombination? How is it useful in the field of biotechnology? | 06 |
| | (b) Write a note on immunoglobulins. | 05 |
| | (c) Draw a neat and labeled diagram of fermentor. Mention function of each part in one word. | 05 |
| Q. 7 | (a) Classify immunological preparations. Write in brief about Tetanustoxiod. | 06 |
| | (b) How vitamin B2 is prepared using fermentation process? | 05 |
| | (c) How is drug recovered after completion of fermentation process? | 05 |
