Seat No.:	Enrolment No.
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Subject code: 260002

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

Date: 28/12/2012

	Subject Name: Pharmaceutical Microbiology and Technology - II Time: 02.30 pm - 05.30 pm Total Marks: 80		
	1	1. Attempt any five questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks.	
Q.1	(a) (b) (c)	Define Biotechnology. What is the scope of Modern Biotechnology. Explain bacterial variation with example. How are mutants isolated?	06 05 05
Q.2	(a) (b) (c)	Differentiate the following:: i) Endotoxin & Exotoxin ii) Active & Passive Immunity Draw a labeled structure of antigen and antibody. Enumerate antigen-antibody reactions with examples. Write in brief about Widal's test.	06 05 05
Q.3	(a) (b) (c)	How is sterilization process carried out for fermentor and media used for fermentation? Write a note on substrates used in fermentation process. How is streptomycin prepared by fermentation process?	06 05 05
Q.4	(a) (b) (c)	Explain the terms: (i) Gene cloning (ii) Monoclonal antibodies Write a note on frame shift mutation. What are immobilized enzymes? Give applications of immobilized enzymes.	06 05 05
Q.5	(a) (b) (c)	How is Humulin prepared biotechnologically? Write in short about defensive mechanism in humans against diseases. Discuss any two methods of immobilization of enzymes.	06 05 05
Q. 6	(a) (b) (c)	What is genetic recombination? How is it useful in the field of biotechnology? Write a note on immunoglobulins. Draw a neat and labeled diagram of fermentor. Mention function of each part in one word.	06 05 05
Q. 7	(a) (b) (c)	Classify immunological preparations. Write in brief about Tetanustoxiod. How vitamin B2 is prepared using fermentation process? How is drug recovered after completion of fermentation process?	06 05 05
