Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.Pharm Sem-6th Regular Examination May 2011

Subject code: 260002

Subject Name: Pharmaceutical Microbiology and Biotechnology-II

Date:17/05/2011 **Time : 10.30a.m. – 01.30 p.m.**

Instructions: **Total Marks: 80**

1. **Attempt any five questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	(a)	Classify types of immunity.	**06**
	(b)	Differentiate between humoral immunity and cell-mediated immunity.	**05**
	(c)	Write on (anyone):- Antigen-antibody reactions, Immunoglobulins	**05**
Q.2	(a)	Write on: Production of monoclonal antibodies.	**06**
	(b)	Define "vaccine". Give a preparation of a bacterial vaccine.	**05**
	(c)	Discuss types of mutations.	**05**
Q.3	(a)	Double helical DNA structure and Replication of DNA.	**06**
	(b)	Genetic code.	**05**
	(c)	Regulation of gene expression in bacteria.	**05**
Q.4	(a)	Define antibiotics and write on methods used for standardization of antibiotics.	**06**
	(b)	Write on screening of microbes for antibiotic production.	**05**
	(c)	Give salient features of a fermenter with a labeled diagram.	**05**
Q.5	(a)	Write in general on design of fermentation processes .	**06**
	(b)	How are fermentation products extracted and purified?	**05**
	(c)	Draw a layout of commercial production of (anyone): A) Streptomycin B) Penicillin C) An organic acid	**05**
Q.6	(a)	Explain salient features of enzyme immobilization.	**06**
	(b)	Discuss types of matrices used in immobililization of enzymes.	**05**
	(c)	Give in details:-(any one) a) Covalent bonding in enzymes immobilization b) Method of entrapment c) Advantages of immobilization of enzymes	**05**
Q.7	(a)	Explain genetic recombination in general.	**06**
	(b)	Write on plasmids.	**05**
	(c)	Write on (anyone): 1. Production of insulin by genetic engineering 2. Transporons 3. Protoplast and fusion technology	**05**

****