Seat No.:	Enrolment No

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

GUJARAI IECIINOLOGICAL UNIVERSIIII				
B.Pharm - SEMESTER-VI- (OLD SYLLABUS) EXAMINATION – SUMMER-2015 Subject Code: 260002 Date: 01/05/201		Date: 01/05/2015		
		me: Pharmaceutical Microbiology & Biotechnology – II	Date: 01/05/2015	
Time: 10:30 a.m. to 1:30 p.m. Instructions:		Total Marks: 80		
1. 2. 3.	Mal	empt any five questions.  The second sumptions wherever necessary.  The second sumptions wherever necessary.  The second sumptions wherever necessary.		
Q.1	(a) (b) (c)	Define Biotechnology. Explain the scope of biotechnology in Pharmacy.  Explain genetic codes in detail.  Write in brief about bacterial variation by conjugation.	n the field of	06 05 05
Q.2	(a) (b) (c)	Write a note on mutation and its consequences. Write a note on genetic engineering. What is gene vector? Explain plasmids.		06 05 05
Q.3	(a) (b) (c)	Write on techniques and applications of protoplast fusion. Give brief note on production of humulin. Explain Polymerase Chain Reaction in detail.		06 05 05
Q.4	(a) (b) (c)	Write a note on antigen antibody reactions.  Differentiate between Cellular and humoral immunity.  Explain the method of production and standardization of atte	enuated vaccine.	06 05 05
Q.5	(a) (b) (c)	What are antibodies? How monoclonal antibodies are produ What are the fermenters? Draw neat and labeled diagram of How the organisms for fermentation are isolated, cultivated	it.	06 05 05
Q. 6	(a) (b) (c)	Draw and explain a generalized flowchart of antibiotic production process with suitable example.  Explain replica plate technique.  Enumerate and explain factors affecting enzymatic reactions.		06 05 05
Q.7	(a)	Draw and explain Watson and Crick model of DNA.		06

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Define enzyme immobilization and explain different techniques adopted.

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How protein is synthesized from RNA?

**(b)** 

**(c)**