Seat No.:	Enrolment No.
-----------	---------------

## **GUJARAT TECHNOLOGICAL UNIVERSITY** B.Pharm - SEMESTER-VI • EXAMINATION - SUMMER-2017

Subject Code: 2260002 Date: 01/05/2017

Subject Name: Pharmaceutical Microbiology & Biotechnology- II

Time: 10.30 AM to 1.30 PM Total Marks: 80

## **Instructions:**

1.	Attemp	t any	five	questions

- 2. Make suitable assumptions wherever necessary.
- 3. Figures to the right indicate full marks.

Q.1	(a) (b) (c)	Describe scope of Biotechnology & its applications in pharmacy. Explain following Humulin and Streptokinase. Write a detail note on mutation.				
Q.2	(a) (b) (c)	Draw the diagram of fermentor. Write functions of its various parts.				
Q.3	(a) (b) (c)	Describe widal, ELISA diagnostic tests based on immunological principle. Discuss importance of sterility testing in pharmaceuticals. How surgical dressings sterility test is performed? Write in detail the fermentative productions of ethanol.	06 05 05			
Q.4	(a)	Enlist various sources of preparing viral vaccines. Write production method of rabis vaccine.	06			
	(b) (c)	Describe ideal properties of plasma substitutes. Write detail note on dextran.  Describe antigen-antibody reactions with examples.	05 05			
Q.5	(a)	Write methods for collection & storage of whole human blood. Draw flow chart of human normal immunoglobulin preparation.	06			
	<b>(b)</b>	Describe the methods for Standardization & Screening of soil for organisms producing antibiotics.	05			
	(c)	Enlist various methods for microbiological assay. Write a note on microbiological assay of vitamin $B_{12}$ .	05			
Q. 6	(a)	Explain MoAb production and biochemical principle involved in hybrid selection.	06			
	(b) (c)	Write a detail note on Mutagenic agents. What is gene cloning? Write a process of gene cloning with examples.	05 05			
Q.7	(a) (b) (c)	Differentiate between i) Active Vs passive immunity ii)Exotoxin Vs Endotoxin Write a detail note on new generation vaccines. Write a note on protoplast Fusion.	06 05 05			

\*\*\*\*\*\*