Seat No.: _____ **Enrolment No._____**

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VI (NEW) - EXAMINATION – SUMMER 2017

Subject Code: 2160509 **Date: 05/05/2017**

Subject Name: Biotechnology

Time: 10:30 AM to 01:00 PM **Total Marks: 70**

Instructions:

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

Q.1	**(a)**	Explain types of culture media in brief.	**07**
	(b)	Define Genetic Engineering. Write down the various applications of genetic engineering.	**07**
Q.2	**(a)**	Discuss the application of culture media in biotechnology.	**07**
	(b)	Write a brief note on the production of monoclonal antibodies.	**07**
		OR	
	(b)	Briefly discuss the in vitro germplasm conservation and its techniques.	**07**
Q.3	**(a)**	Briefly discuss the various techniques of sterilization.	**07**
	(b)	Discuss any one method of vaccines production in industry.	**07**
		OR	
Q.3	**(a)**	How does the embryo transfer in human beings? Discuss with its procedure.	**07**
	(b)	What are the various roles of enzymes in food industries? Explain briefly.	**07**
Q.4	**(a)**	Explain the various application of cryopreservation.	**07**
	(b)	Discuss the models of Enzyme kinetics.	**07**
		OR	
Q.4	**(a)**	Discuss the basic tools used for rDNA technology.	**07**
	(b)	Write a short notes on: 1) Genome Map & (2) DNA figure printing	**07**
Q.5	**(a)**	Introduce the plant tissue culture with its application in agricultural practices.	**07**
	(b)	What are the methods for Gene therapy? Explain any one of them.	**07**
		OR	
Q.5	**(a)**	Explain the biosafety procedure in brief.	**07**
	(b)	Classify and discuss the characteristics of wastewater.	**07**

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