Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VII • EXAMINATION – SUMMER • 2015

Subject Code: 170405 **Date: 06/05/2015**

Subject Name: Genomics and Proteomics

Time:02.30pm-05.00pm **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 the procedure for 2D-PAGE.	**10**
	(b)	Explain any one method of protein structure prediction.	**04**
Q.2	**(a)**	Explain construction and application of protein microarray.	**07**
	(b)	Write note on protein interaction network.	**07**
		OR	
	(b)	Write note on any two secondary protein database.	**07**
Q.3	**(a)**	Explain construction and application of DNA microarray.	**10**
	(b)	Explain biomedical genome research for vaccine.	**04**
		OR	
Q.3	**(a)**	Explain principle and procedure of Mass spectroscopy.	**10**
	(b)	Enlist the various types of databases used in proteomics.	**04**
Q.4	**(a)**	Describe Serial Analysis of Gene Expression.	**10**
	(b)	Define genomics and give historical background of genomics.	**04**
		OR	
Q.4	**(a)**	Give the overviews of Natural Gene circuits.	**07**
	(b)	Define EST and comment on the construction and applications of Expressed Sequence Tag.	**07**
Q.5	**(a)**	Discuss various applications of genome analysis and genomics.	**07**
	(b)	Enlist gene prediction methods and explain any one.	**07**
		OR	
Q.5	**(a)**	Comment on human genomic variations.	**07**
	(b)	Comment on generalized and specialized nucleotide database.	**07**

****