Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–VII • EXAMINATION – WINTER 2013

Subject Code: 170406   **Date: 03/12/2013**
Subject Name: Bioinformatics
Time: 10:30 TO 01:00   **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)**	Define Bioinformatics. Enlist numerous fields of applications.	**07**
	(b)	What is molecular docking? Give its principles and softwares.	**07**
Q.2	**(a)**	Why and how are evolutionary relationships treated in bioinformatics?	**07**
	(b)	Elaborate on various matrix for calculating alignments scores.	**07**
		OR	
	(b)	Discuss base of multiple sequence alignment.	**07**
Q.3	**(a)**	What are global alignments? How it differs from local alignment? Can it be compared with dynamic programming?	**07**
	(b)	Discuss features of Chau-Fasman Method for secondary structure prediction.	**07**
		OR	
Q.3	**(a)**	Explain GOR 4 method.	**07**
	(b)	Why structure predictions are necessary? Discuss in Detail.	**07**
Q.4	**(a)**	What are the methods to predict the protein functions.	**07**
	(b)	Write the different structures of protein.	**07**
		OR	
Q.4	**(a)**	Compare SRS and DBGET.	**07**
Q.4	**(b)**	Write a note on role of cheminformatics for drug discovery.	**07**
Q.5	**(a)**	Give the major perspectives of proteomics.	**07**
	(b)	Compare and contrast MMDB and PDB.	**07**
		OR	
Q.5	**(a)**	What is protein microarray? Write the uses.	**07**
	(b)	Describe network concept and electronic mail.	**07**

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