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Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

MCA - SEMESTER–V • EXAMINATION – SUMMER 2013

Subject Code: 650015 Date: 20-05-2013

Subject Name: Bioinformatics

Time: 02.30 pm - 05.00 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 central dogma of molecular biology with diagram	**07**
	(b)	Explain biologist model with example	**07**
Q.2		Explain the following in detail	
	(a)	What is public biological database with types of databases	**07**
	(b)	What is data annotation and data format	**07**
		OR	
	(b)	Explain motifs and profiles with examples	**07**
Q.3		Attempt all questions	
	(a)	Write a short note on	**04+**
		1) Genbank	**03**
		2) PDB	
	(b)	Explain pairwise sequence comparison in detail	**07**
		OR	
Q.3	(a)	What is phylogenetic tree ? and Explain types of phylogenic tree in detail.	**07**
	(b)	What is mutation and explain point and segmental mutation in detail	**07**
Q.4		Attempt following questions	
	(a)	Explain chemical composition of Protein structure in detail	**07**
	(b)	What is Data mining and explain data mining techniques	**07**
		OR	
Q. 4	(a)	Explain SCOP,CATH and UNIPROT in detail.	**07**
	(b)	Explain Blast algorithm and its options	**07**
Q.5		Explain in brief	
	(a)	Write a short note on	**03+**
		1) Global alignment	**04**
		2) Gap panalty	
	(b)	What is Genomes and Genomics	**07**
		OR	
Q.5	(a)	Explain CGI and XML in detail	**07**
	(b)	Explain SwissPort, Ghostview ,GV ,Xgobi with example.	**07**

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