

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 phylogenetic 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 penalty	
	(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
