

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

MCA - SEMESTER-V • EXAMINATION – WINTER • 2014

Subject Code: 2650015

Date: 08-12-2014

Subject Name: Bioinformatics

Time: 10:30 am - 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) What is Bioinformatics? Explain the first information age in biology. **07**

(b) Describe molecular central dogma with diagram **07**

Q.2 (a) Explain Data Annotation and data formats. **07**

(b) Explain pairwise sequence comparison in detail **07**

OR

(b) Explain motifs and profiles with examples. **07**

Q.3 (a) Write a short note on:

1.Genbank **04**

2.Gap penalty **03**

(b) Explain Blast algorithm in detail. **07**

OR

Q.3 (a) What is phylogenetic tree? Explain types of phylogenetic tree in detail. **07**

(b) Explain protein resource database in detail. **07**

Q.4 (a) Describe SCOP, CATCH and UNIQ. protein structured data set. **07**

(b) Explain motifs and profiles with examples. **07**

OR

Q.4 (a) Define Data mining. Explain data mining techniques. **07**

(b) List out and explain the types of database. **07**

Q.5 (a) Explain Swiss port, GV, Xgobi with examples. **07**

(b) Write a short Note on:

1.PAM and BLOSUM **04**

2.CGI **03**

OR

- | | | | |
|------------|------------|--|-----------|
| Q.5 | (a) | List and explain all SQL commands in detail. | 07 |
| | (b) | Explain Transcription of DNA with diagram. | 07 |
