

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA – SEMESTER-V • EXAMINATION – WINTER 2015

Subject Code: 650015

Date: 10/12/2015

Subject Name: Bioinformatics

Time: 10.30 am to 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) Explain the first information age in biology in detail. [07]

(b) Describe Molecular central dogma with diagram [07]

Q. 2(a) Explain Data Annotation with its format. [07]

(b) Explain pairwise sequence comparison in detail [07]

OR

(b) Explain motifs & 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

(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 & UNIQUE protein structured data set. [07]

(b) How to judge the quality of information? [07]

OR

(a) Define Data mining. Explain data mining techniques. [07]

(b) List out & 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 & BLOSUM [04]

2. CGI [03]

OR

(a) List & explain all SQL commands in detail. [07]

(b) Explain Transcription of DNA with diagram. [07]