



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – ADVANCED ZOOLOGY AND BIOTECHNOLOGY

SIXTH SEMESTER – APRIL 2017

AZ 6601 / AZ 6604 -BIOINFORMATICS

Date: 22-04-2017
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

PART – A

Answer ALL questions, each in a few words

10 × 2 = 20 marks

01. Define Bioinformatics.
02. What is a genome?
03. What is an algorithm?
04. What is amino acid substitution?
05. What is a designer drug?
06. What is the difference between DNA sequencing and mapping?
07. Differentiate phylogeny and systematics.
08. What is the percent identity between the following two DNA sequences?
A C C T G A G – A G
A C G T G – G C A G
09. Name any two protein amino acid sequence data bases.
10. Expand: (a) HTTP; (b) URL

PART B

Answer any FOUR questions, each in about two pages

4 × 10 = 40 marks

11. Explain briefly (i) Broadband; (ii) Search Engine; (iii) E-mail; (iv) URL
12. What are the softwares being used in exploring Bioinformatics.
13. Explain any four types biological databases.
14. Illustrate the rooted and unrooted phylogenetic tree with an example each.
15. Describe the process of DNA sequencing.
16. Evaluate Dot Matrix method of analysing the similarities and differences between two sequences.

PART C

Answer any TWO questions, each in about 4 pages

2 × 20 = 40 marks

17. Discuss the applications of Bioinformatics.
18. Examine any five DNA sequence data repositories.
19. Give an account of gene mapping and its applications.
20. Highlight on: (i) SQL; (ii) Expressed Sequence Tags; (iii) SWISS-PORT;
