# LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

**B.Sc.** DEGREE EXAMINATION – **ADVANCED ZOOLOGY AND BIOTECHNOLOGY**

SIXTH SEMESTER – **APRIL 2015**

## AZ 6604/AZ 6601 - BIOINFORMATICS

Date : 17/04/2015
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. Comment on ISP.
02. Explain domain name of an URL.
03. What is an accession number in a biological database?
04. What is the difference between primary database and secondary database?
05. What is proteomics?
06. What is the difference between genome mapping and genome sequencing?
07. What is phylogenetics?
08. What is the difference between rooted and unrooted phylogenetic trees?
09. Define multiple sequence alignment.
10. Differentiate local alignment and global alignment.

## PART B

**Answer any FOUR questions, each in about two pages**                    **4 × 10 = 40 marks**

11. Explain how biological databases are searched.
12. Write brief notes on any four types biological databases.
13. Elaborate on the utilities of Hidden Markov models.
14. Explain and differentiae PAM and BLOSUM.
15. List the achievements of Human Genome Project.
16. Comment on: (i) HTTP; (ii) Dot Matrix; (iii) Query Languages; (iv) OMIM.

## PART C

**Answer any TWO questions, each in about 4 pages**                    **2 × 20 = 40 marks**

17. Discuss the medical applications of Bioinformatics.
18. Discuss the principles of different methods of DNA sequencing.
19. Give an account of DNA sequence data repositories.
20. Give an account of protein structure and function prediction.

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