



**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**

**B.Sc. DEGREE EXAMINATION – PHYSICS, CHEMISTRY, PLANT BIO.TECH.**

**FOURTH SEMESTER – NOVEMBER 2016**

**AZ 4200 – BIOINFORMATICS**

Date: 11-11-2016

Dept. No.

Max. : 100 Marks

Time: 01:00-04:00

**PART – A [10 X 2 = 20]**

ANSWER ALL THE QUESTIONS IN 50 WORDS EACH

1. Define Bioinformatics.
2. Name any four public domains.
3. How do you predict primary and secondary structure of protein?
4. Define homology modelling.
5. Distinguish analog and digital computers.
6. Name any four tools of genetic engineering.
7. Define Genetic Algorithm.
8. Compare primary and secondary structures of a protein.
9. Expand : a) EMBL b) SQL.
10. State the role of BLAST and AUTODOCK.

**PART – B [4 X 10 =40]**

ANSWER ANY FOUR QUESTIONS IN 600 WORDS

11. How do you construct a phylogenetic tree using CLUSTAL-W?
12. Examine principle and applications of microarray
13. Examine the steps involved in DNA Southern blotting or fingerprinting
14. Depict an overview on network protocol, architecture, topology and wide area network.
15. What are biological data bases? How are they classified?
16. How do you compile and run a C-program?

**PART - C [2 X 20 =40]**

ANSWER ANY TWO QUESTIONS IN 1200 WORDS

17. Discuss the applications of bioinformatics
18. How do you perform computer aided drug designing using pharmacogenomics ?
19. What are the steps involved in DNA computing?
20. What are the events in post translational modifications of protein?

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