



MAR IVANIOS COLLEGE (AUTONOMOUS)
THIRUVANANTHAPURAM

Reg. No. :

Name :

Sixth Semester Career Related B.Sc. Degree Examination, April 2018

First Degree Programme under CBCSS

Elective Course – I: (for Botany and Biotechnology)

AUBB691.a: Bioinformatics

(for **Regular** – 2015 Admn. only.)

Time: 3 Hours

Max. Marks: 80

SECTION – A

Answer ALL the following in a word or one or two sentences.

1. What is a Server?
2. Expand LAN and WAN.
3. Write any one literature database.
4. What is a palindromic sequence?
5. Write any one protein structural database.
6. What do you mean by molecular docking?
7. BLAST stands for_____.
8. The term genomics was coined by _____.
9. What is a drug?
10. Write any one molecular docking software.

(10 × 1 = 10 Marks)

SECTION – B

Answer any EIGHT questions, not exceeding a paragraph.

11. Critic comment on Bio-chips.
12. Difference between hardware and software.
13. Write down the importance of search engines.
14. Write any two sequence databases.
15. What is a genome?
16. Explain the field Bioinformatics.
17. What is NCBI and write its importance in biotechnology?

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18. Write the different flavours of BLAST.
19. Write any one application of Proteomics in Biotechnology.
20. What do you mean by molecular modeling?
21. Describe SCOP.
22. Define genetic code and its importance in Biotechnology.

(8 × 2 = 16 Marks)

SECTION – C

Short essay type: Answer any SIX questions.

23. Explain BLAST and its uses.
24. Write down the various types of computer and its features.
25. What is sequence alignment? Write its importance.
26. Dissection of genbank database.
27. Write any four events that can add up with the history of bioinformatics.
28. What do you mean by Phylogenetic Analysis? What are its uses?
29. Briefly explain with examples
 - (i) Primary databases
 - (ii) Secondary databases
30. What do you understand by multiple sequence alignment, differentiate it with pair wise alignment?
31. Explain the major steps involved in drug discovery.

(6 × 4 = 24 Marks)

SECTION – D

Long essay type: Answer any TWO questions.

32. Explain sequence alignment with its types and various methods.
33. Explain biological databases and classify it with examples each.
34. Briefly explain on (1) Major components of computer (2) Software and its types (3) Assembler and Compiler.
35. Explain in details about (1) HGP (2) The role of bioinformatics in modern biology (3) DNA sequencing.

(2 × 15 = 30 Marks)