(FOR THE CANDIDATES ADMITTED DURING THE ACADEMIC YEAR 2023 ONLY)

23UBY509

REG.NO. :

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI
END-OF-SEMESTER EXAMINATIONS : NOVEMBER-2025

B.Sc.-BOTANY **MAXIMUM MARKS: 75**
SEMESTER V **TIME : 3 HOURS**

PART - III
BIOINFORMATICS

SECTION – A (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.
MULTIPLE CHOICE QUESTIONS. (K1)

1. Which of the following can access the server?
   a) Web Client (b) User (c) Web Browser (d) Web Server

2. Select the following language does the computer understand_____.
   (a) Computer understands only C Language (b) Computer understands only Assembly Language
   (c) Computer understands only Binary Language (d) Computer understands only basic

3. Choose which database is used for protein sequence analysis_____.
   (a) GenBank (b) UniProt (c) PDB (d) RefSeq

4. Recall an example of Homology and similarity tool_____.
   (a) BLAST (b) RasMol (c) EMBOSS (d) PROSPECT

5. The identification of drugs through the genomic study is called_____.
   (a) Genomics (b) Pharmacogenomics (c) Pharmacogenetics (d) Cheminformatics

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES. (K2)

6. State input device.
7. Expand HTML.
8. Summarize LAN.
9. Express the uses of phylogenetic trees.
10. Outline CAD that is used in recent trend.

SECTION – B (5 X 5 = 25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K3)

11. a) Explain LINUX and its types.

(OR)

b) Compare machine language which differs from high-level programming languages.

12.a) Elaborate HTML. How to Link External Web Pages to a Website.

(OR)

b) Outline the structure and function of C language.

(CONTD……..2)

13. a) Describe FTP and its working propose.

(OR)

b) Organize the genome database sequence with example.

14. a) Discuss BLAST What are types of BLAST?

(OR)

b) Write nucleic acid database with suitable examples.

15. a) Summarize the main purpose of using visualizing tools like RASMOL.

(OR)

b) Distinguish CAD and its types.

SECTION – C (5 X 8 = 40 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K4 (Or) K5)

16. a) Explain the basic components of a computer system, including input, processing, storage, and output.

(OR)

b) Organize the operating system its types and function in detail.

17.a) List the types of C program with an example.

(OR)

b) Prepare a note on Variables statements and its function.

18. a) Classify the biological databases and their usage in biotechnological research.

(OR)

b) Explain LAN. Discuss the types and benefits of LAN.

19. a) Examine the multiple sequence alignment tools in bioinformatics.

(OR)

b) List the steps involved in phylogenetic tree construction and discuss with a distance based method.

20.a) Determine secondary structure prediction of a protein. Give examples of any two tools used for prediction of secondary structure.

(OR)

b) Categorize the bioinformatics tools employed in drug discovery.

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ETHICAL PAPER