(NO. OF PAGES: 2)

(FOR THE CANDIDATES ADMITTED DURING THE ACADEMIC YEAR 2020-22 ONLY)

20 PBY415

REG.NO. :

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI

END-OF-SEMESTER EXAMINATIONS : JULY-2022

M.Sc.-BOTANY **MAXIMUM MARKS: 70**

SEMESTER: IV **TIME : 3 HOURS**

BIOINFORMATICS AND CYBER SECURITY

SECTION - A (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.

MULTIPLE CHOICE QUESTIONS. (K1)

1. Which of the following is an example of Homology and similarity tool?
   a. BLAST b. RasMol c. EMBOSS d. PROSPECT

2. BLOSUM matrix is used for _____.
   a. protein targeting b. multiple sequence alignment
   c. ADME analysis d. Molecular visualization

3. Proteomics is the study of _____.
   a. Protein b. DNA c. crRNA d. tRNA

4. In a _____ attack, the extra data that holds some specific instructions in the memory for actions is projected by a cyber-criminal or penetration tester to crack the system
   a. Phishing b. MiTM c. Buffer-overflow d. Clickjacking

5. What are the different ways to classify an intrusion detection system?
   a. Zone based b. Host & Network based
   c. Network & Zone based d. Level based

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

6. Expand NCBI.
7. Define: lead compound.
8. Extend the application of Dendrogram.
9. Relate the importance of cryptography.
10. Interpret the role of sandboxing in cyber security.

SECTION – B (5 X 4 = 20 MARKS)

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

11. a) Examine the types of primary database.

(OR)

b) List the kinds of BLAST.

12. a) Show the methods used for pairwise sequence alignment.

(OR)

b) Elaborate the software used for phylogenetic analysis.

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13.a) Differentiate the levels of structures of protein.

(OR)

b) Examine SWISS PROT.

14.a) Interpret the threats to cyber security.

(OR)

b) Find the solutions to create secure password.

15.a) Compute the work of firewalls.

(OR)

b) Discover the possible ways to improve web security.

SECTION - C (4 X 10 = 40 MARKS)

ANSWER ANY FOUR OUT OF SIX QUESTIONS.

(16th QUESTION IS COMPULSORY AND ANSWER ANY THREE QUESTIONS)

(FROM Qn. No: 17 to 21) (K4 (Or) K5)

16. Analyse the nucleotide sequence databases. K4

17. Demonstrate the gene prediction methods. K4

18. Summarise the computer aided drug designing. K5

19. Outline the molecular visualizing tools. K4

20. Evaluate the various malicious software. K5

21. Write your opinion about the legal issues of network. K5

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