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(FOR THE CANDIDATES ADMITTED
DURING THE ACADEMIC YEAR 2022 ONLY)

22PBY414

REG.NO. :

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

END-OF-SEMESTER EXAMINATIONS : MAY-2024

COURSE NAME: M.Sc.- BOTANY **MAXIMUM MARKS: 50**

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 a sequence alignment tool?
   a) BLAST b) Print c) Prosite d) PIR
2. Which of the following techniques is commonly used for gene prediction?
   a) Polymerase chain reaction (PCR) b) Northern blotting
   c) Reverse transcription d) Computational algorithms
3. When was the SWISSPROT protein sequence database initiated?
   a) 1988 b) 1985 c) 1986 (d) 1987
4. What does cyber security protect?
   a) Cyber security protects criminals b) Cyber security protects internet-connected systems
   c) Cyber security protects hackers d) None of the mentioned
5. Which of the following does not help to protect your computer from external threats?
   a) System Restore b) Internet Security c) Firewall d) Antivirus software

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

6. Interpret why BLAST is used.
7. Define pairwise alignment.
8. Expand PDB.
9. Define cryptography.
10. Differentiate software security and network security .

SECTION – B (5 X 3 = 15 MARKS)

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

11. a) Describe the scope of bioinformatics.

(OR)

b) Interpret NCBI.

12.a) Examine cladistics.

(OR)

b) Assess scoring matrix.

(CONTD…..2)

13. a) List the applications of system biology.

(OR)

b) Describe protein secondary structure prediction.

14.a) List the threats of cyber security.

(OR)

b) Compare windows security and cyber security.

15.a) Interpret cyber crime.

(OR)

b) Examine web security.

SECTION – C (5 X 5 = 25 MARKS)

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

(K4 (Or) K5)

16.a) Interpret Genbank.

(OR)

b) Examine different types of BLAST.

17. a) Point out the key steps in building multiple sequence alignment.

(OR)

b) Interpret molecular phylogeny.

18. a) Inspect SWISSPROT.

(OR)

b) Summarize computer aided drug designing.

19. a) Discuss cyber security.

(OR)

b) Outline the types of authentication.

20. a) Determine network intrusion detection and prevention systems.

(OR)

b) Discuss intellectual property rights.

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