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20UZY510

FOR THE CANDIDATES ADMITTED
DURING THE ACADEMIC YEAR 2020 ONLY) REG.NO

NGM COLLEGE (AUTONOMOUS) POLLACHI

END-OF-SEMESTER EXAMINATIONS: DECEMBER-2022

B. Sc-ZOOLOGY **MAXIMUM MARKS: 70**

V SEMESTER **TIME: 3 HOURS**

PART III

BIOCHEMISTRY AND BIOINFORMATICS

SECTION – A (10 X1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS
MULTIPLE CHOICE QUESTIONS (K1)

1. Sucrose is a _____
   a) Monosaccharide b) Disaccharide
   c) Homopolysaccharides d) Heteropolysaccharides

2. How many ATP's are produced in complete oxidation of one molecule of glucose?
   a) 28 b) 32 c) 36 d) 38

3. EMBL stands for_____
   a) European Model Biotechnology Laboratory
   b) European Molecular Biology Laboratory
   c) European Molecular Biology Library
   d) European Molecular Bioinformatics Library

4. The term Genomics was coined by_____
   a) Tom Roderick b) Thomas Cech c) T.H.Morgan d) Craig Venter

5. Which of the following is used to comparing the aminoacid query against the protein sequence database?
   a) blastn b) blastp c) blastx d) blastt

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

6. Conjugated Proteins
7. Ketone bodies
8. Functional Genomics
9. Agonist
10. Cladogram

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SECTION – B (5 X 4 = 20 MARKS)

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

11. a) Differentiate between Saturated and Unsaturated fatty acids.

(OR)

b) Classify Proteins based on their solubility. With examples.

12. a) Describe the steps involved in Glucogenesis.

(OR)

b) Explain the mechanism of transamination.

13. a) Illustrate the tools and techniques of Data mining.

(OR)

b) Write a short note on Virtual library.

14. a) State and explain the types of Proteomics.

(OR)

b) Narrate the applications of Bioinformatics.

15. a) Summarize the usage of RasMol tool.

(OR)

b) Derive the types of BLAST services available in NCBI.

SECTION – C (4 X 10 = 40 MARKS)

ANSWER ANY FOUR OUT OF SIX QUESTIONS.
(16TH QUESTION IS COMPULSORY AND ANSWER ANY THREE QUESTIONS FROM Q.NO: 17 TO 21) (K4) OR (K5)

16. Describe in detail the β – Oxidation of Fatty acids.
17. Outline the classification of Carbohydrates. Explain them with an example.
18. Discuss the steps involved in Kreb's cycle.
19. Classify biological databases with their characteristic features.
20. Elaborate the goals and techniques used in Human Genome Project. Highlight their benefits.
21. Illustrate the methods in the construction of Phylogenetic tree.

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