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(Printed Pages 3)

(20425)

Roll No.

B.Sc. (Bio-Tech.)-I Year

3455

B.Sc. (Bio-Technology)

Examination, April-2025

Bio-Chemistry

(B-101)

(B.Sc. Bio-Tech.)

Time : Three Hours]

[Maximum Marks : 50

Note : Attempt any **five** questions. Each questions carries **10** marks.

1. Write short note on protein, its classification and uses. $1 \times 10 = 10$
2. Write notes on (any **two**) : $5 \times 2 = 10$
 - (a) Non-essential amino acid.
 - (b) A-DNA.
 - (c) Peptide bond.
 - (d) TAG.

P.T.O.

3. Write short notes on (any **two**): $5 \times 2 = 10$

(a) Coenzyme.

(b) T_m

(c) Vitamer.

(d) Supercoiled DNA.

4. Write short notes on (any **one**): $1 \times 10 = 10$

(a) Glycolysis.

(b) De novo synthesis of nucleotides.

5. Differentiate between (any two):

$5 \times 2 = 10$

(a) Monosaccharide and Disaccharide.

(b) B-DNA- and Z-DNA.

(c) Alpha and Beta fatty acid oxidation.

6. Describe the steps involved in Adenine biosynthesis. List the enzyme involved in regulation.

10

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7. Differentiate between: $5 \times 2 = 10$

(a) Competitive inhibition and uncompetitive inhibition.

(b) Water and Fat soluble vitamins.

8. Write a note on pentose phosphate pathway. Why PPP is important for different metabolic processes? $1 \times 10 = 10$

9. Write notes on: $5 \times 2 = 10$

(a) Glyoxylate cycle.

(b) Gluconeogenesis.

10. Write notes on: $5 \times 2 = 10$

(a) Vitamin-A and its function.

(b) Lipid and its classification.

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