

D (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)~~ Tm

~~(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) Monosacchride and Disacchride.

(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

**3455/2**

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.