

Total No. of Printed Pages—3

3 SEM TDC ZOOH (CBCS) C 7

2023

(Nov/Dec)

ZOOLOGY

(Core)

Paper : C-7

(Fundamentals of Biochemistry)

Full Marks : 53

Pass Marks : 21

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

1. Fill in the blanks : 1×5=5

(a) Pentose sugar present in RNA is _____.

(b) Different functional forms of gene are called _____.

(c) In neutral lipid, all the three molecules of fatty acids are attached to a molecule called _____.

- (d) Myoglobin shows _____ structure of proteins.
- (e) Two types of pathways lead to synthesis of nucleotides—de novo pathway and _____ pathway.

2. Distinguish between the following (any two) : $4 \times 2 = 8$

- (a) Secondary and Tertiary protein structure
- (b) Competitive and Non-competitive inhibition of enzyme
- (c) Saturated and Unsaturated fatty acids

3. Write short notes on any two of the following : $4 \times 2 = 8$

- (a) Types of DNA
- (b) Isomerism and its significance
- (c) Properties of amino acids

4. Describe the biological functions of protein. Classify protein on the basis of structural organization. $3 + 7 = 10$

Or

What is RNA? Explain with schematic diagrams and functions of different types of RNA molecules. $1 + 3 + 6 = 10$

5. Justify that 'lipids are a heterogenous group of chemical substances'. How does unsaturation affect the physical properties of fatty acids? $6 + 4 = 10$

Or

What is antigenic determinants? Describe the classes and functions of immunoglobulin. $4 + 6 = 10$

6. Explain the mechanism of enzyme action. What is K_m value? Mention its significance. $5 + 3 + 4 = 12$

Or

What are the factors that affect the rate of enzyme action and how? Classify enzyme according to IUB rules. $6 + 6 = 12$
