

Total No. of Printed Pages—3

3 SEM TDC ZOOH (CBCS) C 7

2 0 2 1

(Held in January/February, 2022)

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) The linkage between two monosaccharides is called _____.
- (b) The number of stereoisomer(s) of sugar having one chiral carbon is _____.
- (c) The non-protein part of enzyme is _____.
- (d) Nucleic acids are polymers of _____.
- (e) Immunoglobulin _____ can pass through human placenta.

(2)

2. (a) Distinguish between (any two) : $3 \times 2 = 6$

(i) Saturated and Unsaturated fatty acids

(ii) Phospholipid and Glycolipid

(iii) Allosteric enzymes and Isozymes

(b) Draw the structures and write the significance of the following (any two) :

$3 \times 2 = 6$

(i) Disulphide linkage

(ii) Phosphodiester linkage

(iii) Peptide bond

(iv) Cot curve

3. Define V_{\max} and K_m of an enzyme catalyzed reaction. Describe the mechanism of action of an enzyme catalyzed reaction. $2 + 7 = 9$

Or

Write an explanatory note on different types of enzyme inhibition. Describe the factor affecting enzyme activity. $6 + 3 = 9$

4. Write a comparative account on the structures of A, B and Z forms of DNA. 9

Or

Draw labelled diagrams of (a) tRNA and (b) nitrogenous bases of RNA. $4\frac{1}{2} \times 2 = 9$

(3)

5. Define carbohydrate. Give an outline classification of different types of carbohydrate. Add a note on biological significance of carbohydrates. $1+5+3=9$

Or

What are immunoglobulins? Write about the different classes of immunoglobulins with their functions. $1+4+4=9$

6. What are fatty acids? Explain the physiological importance of lipids. $2+7=9$

Or

What are phospholipids and glycolipids? Add a note on the importance of steroids. $4+5=9$
