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3 SEM TDC ZOOH (CBCS) C 7

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(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. $4+5=9$
