

(T-365)

Roll No.

ID—180-CU-503841

B.Sc. (Hons.) EXAMINATION, 2023

(Fifth Semester)

ZOOLOGY

Code : 504

Biochemistry and Metabolism

Time : 3 Hours

Maximum Marks : 40

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all. Q. No. 1 is compulsory. Select *one* question from each Unit. Illustrate your answer with suitable diagram and flow chart wherever necessary.

1. Write about the following : 7 × 10 = 10

- (a) Cholestrol
- (b) Sphingolipids
- (c) Allosteric enzymes
- (d) Mutorotation
- (e) Glycogenolysis
- (f) Ketogenesis
- (g) Heteropolysaccharides
- (h) Oxidative phosphorylation
- (i) Transamination
- (j) Epimers.

Unit I

2. Explain the following :

- (a) Malate Aspartate shuttle system 4
- (b) Oxidative phase of pentose phosphate pathway. 3.5

3. Explain Kreb's cycle with the help of a flow chart. 7.5

Unit II

4. Explain the following :
- (a) Biosynthesis of saturated fatty acid 4
 - (b) Significance of steroid. 3.5
5. Explain the process of β oxidation of fatty acid. h 7.5

Unit III

6. Describe the fate of glucogenic and ketogenic amino acid. 7.5
7. Explain the following:
- (a) Mechanism of enzyme action 4
 - (b) Structure and properties of amino acids. 3.5

Unit IV

8. Explain the process of oxidative phosphorylation 7.5
9. Describe the interrelationship among carbohydrate, lipid and protein metabolism. 7.5