2023
M.Sc.
First Semester
CORE – 02
ZOOLOGY
Course Code: MZOC 1.21
(Biochemistry)

Total Mark: 70 *Pass Mark: 28*
Time: 3 hours

Answer five *questions, taking* one *from each unit.*

UNIT–I

1. Derive the Henderson and Hasselbach equation. Rewrite the equation when
   (a) [A-]= [HA]
   (b) the ratio [A-]/[HA] = 100 to 1
   (c) the ratio [A-]/[HA] = 1 to 10 8+2+2+2=14

2. Write notes on the following: 7×2=14
   (a) Standard reduction potential
   (b) Group transfer

UNIT–II

3. Explain in detail the process of glycolysis. 14

4. Give a comparative account on glycogenolysis and glycogenesis. 7+7=14

UNIT–III

5. Write notes on the following: 7×2=14
   (a) Amino acids derivatives
   (b) Non-transcribed amino acids as protein constituents

6. Write notes on the following: 7×2=14
   (a) Oxidation and non-oxidative deamination
   (b) Amino acid pool

UNIT–IV

7. Write notes on the following: 7×2=14
   (a) Bonds involved in protein organization
   (b) Structure, functions and types of cytochromes

8. Write notes on the following: 7×2=14
   (a) Conversion of ribonucleotides to deoxyribonucleotides
   (b) Degradation of nucleotides

UNIT–V

9. Explain the role of liver and kidney in metabolic integration. 7+7=14

10. Write notes on the following: 7×2=14
    (a) Integration of metabolism
    (b) Metabolism in starvation