



'সমানো মন্ত্র: সমিতি: সমানী'

UNIVERSITY OF NORTH BENGAL
B.Sc. Honours 4th Semester Examination, 2022

CC10- ZOOLOGY

FUNDAMENTALS OF BIOCHEMISTRY

Time Allotted: 2 Hours

Full Marks: 40

The figures in the margin indicate full marks.

1. Answer any **five** questions from the following: 1×5 = 5
 - (a) Name two polyunsaturated fatty acids.
 - (b) Draw the structure of dNTP.
 - (c) Name two electron carrier of electron transport system.
 - (d) Mention the number of the peptide bonds present in a tripeptide.
 - (e) What is homopolysaccharide? Give one example.
 - (f) What is Cofactor?
 - (g) Name two sulfur containing amino acids.
 - (h) What is Z DNA?

2. Answer any **three** questions from the following: 5×3 = 15
 - (a) Differentiate α helix and β pleated sheet of protein.
 - (b) Write the Michaelis-Menten equation. What do you mean by isozyme? Give 2+2+1 example.
 - (c) Write a note on deamination.
 - (d) Describe the structure of monosaccharide and disaccharide.
 - (e) Write a short note on phospholipid and glycolipid.

3. Answer any **two** questions from the following: 10×2 = 20
 - (a) With suitable example classify the standard amino acids on the basis of its R-group.
 - (b) Describe briefly the Boyer's model of ATP synthesis. How proton motive force is generated in intact mitochondria? 7+3
 - (c) Classify enzyme on the basis of the reaction they catalyze. Derive Lineweaver-Burk equation. Mention the importance of it. 6+2+2
 - (d) Describe the β -oxidation of standard even-carbon chain fatty acid. Write the balance sheet of this pathway. 8+2

—x—