UNIVERSITY OF NORTH BENGAL

B.Sc. Honours 1st Semester Examination, 2021

CC2-BOTANY

Time Allotted: 2 Hours   Full Marks: 40

The figures in the margin indicate full marks.

GROUP-A

1.   Answer any *five* questions from the following: 1×5 = 5

   (a) What is buffer capacity?

   (b) Define active transport.

   (c) Name two aromatic amino acid.

   (d) What are co-factors?

   (e) Who discovered fluid mosaic model?

   (f) Define endocytosis.

   (g) Name two modified bases present in tRNA.

   (h) What is zwitter ion?

GROUP-B

2.   Answer any *three* questions from the following: 5×3 = 15

   (a) Discuss the Endosymbiotic theory with proper diagram.   5

   (b) Differentiate between passive and active transport. Define solenoid and mention   3+2
        its significance.

   (c) Define enzyme. What are the different classes of enzymes? Discuss along with   1+4
        examples of each class.

   (d) What are the different types of RNA? Discuss clover-leaf model regarding the   1+4
        structure of tRNA along with diagram.

   (e) Briefly describe the ultrastructure of Nuclear Pore Complex with suitable   5
        diagram.

GROUP-C

3.   Answer any ***two*** questions from the following: $10 \times 2 = 20$

   (a) Explain the Michaelis-Menten Equation. State the significance of K_m.   8+2

   (b) Define Carbohydrates. Briefly discuss the different types of carbohydrates with examples.   2+8

   (c) Define crossing over. Describe the different characteristics of different phases of meiosis-I along with proper sketches.   2+8

   (d) Define pH. What are the different structural forms of protein? Discuss with proper examples.   2+8

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