



'সমানো মন্ত্র: সমিতি: সমানী'

UNIVERSITY OF NORTH BENGAL

B.Sc. Honours 1st Semester Examination, 2023

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 apoenzyme?
 - (b) Why does DNA is acidic in nature?
 - (c) Name one reducing sugar.
 - (d) What is exergonic reaction?
 - (e) What are Cajal bodies?
 - (f) Write the names of constituent molecules of cell membrane.
 - (g) Name one acidic amino acid.
 - (h) Give an example of coenzyme.

GROUP-B

2. Answer any **three** questions from the following: 5×3 = 15
- (a) What is pH? Name one non-reducing disaccharide. Write down the role of Buffer in brief. 2+1+2
 - (b) What is free energy? Write down the formula of Gibb's free energy. Define redox reaction. 2+1+2
 - (c) Discuss the secondary structure of tRNA with suitable diagram. 5
 - (d) What is tubulin? Briefly discuss the role of microtubules in chromosome segregation. 2+3
 - (e) Write short notes on: 5
 - (i) Nuclear pore complex
 - (ii) Golgi apparatus.

GROUP-C

3. Answer any **two** questions from the following: 10×2 = 20
- (a) Name three cytoskeleton elements present in cell. State their functions in detail. What is dynamic instability? 3+5+2
 - (b) Define enzyme. Discuss the mechanism of enzyme action. 2+8
 - (c) Write the difference between prokaryotic and eukaryotic. Discuss the endosymbiotic theory with proper diagram. 5+5
 - (d) Discuss the structure of proteins according to the level of organisation. 10

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