उत्तर बङ्ग

विश्वविद्यालय

'समानो मन्त्रः समितिः समानी'

UNIVERSITY OF NORTH BENGAL
B.Sc. Honours 2nd Semester Examination, 2023

CC3-Microbiology

(Biochemistry)

Time Allotted: 2 Hours   Full Marks: 40

The figures in the margin indicate full marks.

1.   Answer any *five* of the following: 1×5 = 5
   (a) What is epimerism?
   (b) Define entropy.
   (c) Name one water-soluble vitamin.
   (d) What is Rheumann purple complex?
   (e) Why proline is referred to as imino acid?
   (f) Define activation energy of Enzyme.
   (g) What do you mean by liposome?
   (h) Write the general structure of sphingomyelins.

2.   Answer any *three* of the following: 5×3 = 15
   (a) Write a short note on Gramicidin.   5
   (b) Describe the general structure and functions of phosphoglycerides.   5
   (c) Elucidate different types of chemical bonds involved in the spatial structure of   5
       proteins.
   (d) Write a short note on chitin.   5
   (e) Classify enzymes based on reaction they catalyses.   5

3.   Answer any *two* of the following: 10×2 = 20
   (a) Explain titration curve of any one deprotic amino acid. State two significances of   6+2+2
       titration curve. What is competitive inhibition of enzymes?
   (b) Write short notes on: 5+5
       (i) Human Haemoglobin structure   (ii) 1,3- Bisphosphoglycerate
   (c) Discuss briefly about multienzyme complex. Describe the sources and biological   5+5
       functions of Vitamin D and Vitamin A.
   (d) State the differences between saturated and unsaturated fatty acids. What is   3+2+5
       saponification? Illustrate the functions of lipids in cellular signaling.

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