



WEST BENGAL STATE UNIVERSITY
B.Sc. Honours 1st Semester Examination, 2021-22

PHYACOR02T-PHYSIOLOGY (CC2)

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.
Candidates should answer in their own words and adhere to the word limit as practicable.
All symbols are of usual significance.*

Answer any five questions from the following

8×5 = 40

1. (a) What do you mean by molarity and molality? 2
(b) How does dialysis work? 4
(c) What are the factors affecting diffusion? 2
2. (a) What do you mean by zwitterion? Give one example. 2
(b) How does hemoglobin act as buffer? 3
(c) Explain the mechanism of action of acidic buffers. 3
3. (a) Define mechanism of action of transferases and hydrolases with proper example. 2
(b) What are co-enzyme? Briefly explain the role of co-enzyme in enzyme action. 3
(c) Define the importance of serum enzymes in the diagnosis of diseases. 3
4. (a) What is activation energy? 2
(b) Explain the effect of pH on enzyme action. 2
(c) Write two features of active site. 1
(d) Differentiate between non-competitive and uncompetitive inhibition. 3
5. (a) Explain endergonic reaction with proper example. 2
(b) What do you mean by Gibbs free energy? 2
(c) How hydrophobic and electrostatic interactions work? 4
6. (a) What are dispersed phase and dispersion medium? 2
(b) State the important characteristics of colloidal system. 4
(c) What is viscosity? 2

7. (a) State two differences between SDS-PAGE and Agarose gel electrophoresis. 2
(b) Explain briefly affinity chromatography. 4
(c) What is sedimentation coefficient? 2
8. Write short notes: 2×4 = 8
(a) Reynolds number
(b) Laplace's Law
(c) Ribozyme
(d) Henderson-Hasselbalch equation.

N.B. : *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

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