D 103731 **(Pages : 3)** **Name.....**

Reg. No.....

SECOND SEMESTER (CBCSS—UG) DEGREE EXAMINATION
APRIL 2024

Biochemistry

BCH 2C 02—BIOCHEMISTRY—II

(2020—2023 Admissions)

Time : Two Hours Maximum : 60 Marks

Section A

Answer **all** *questions.*
Each question carries 1 *mark.*

1. What is the process that dissolves blood clot ?
   a) Coagulation. b) Haemostasis.
   c) Fibrinolysis. d) Agglutination.
2. Particles diffuse from an area of ————————.
   a) Lower concentration to higher concentration
   b) Higher concentration to lower concentration.
   c) Both above.
   d) None of the above.
3. Separation in HPLC is accomplished using :
   a) Gravity. b) Centrifugation.
   c) High-pressure. d) Magnetic field.
4. Thin-layer chromatography uses a thin layer of ———————— as a stationary phase.
5. ———————— are special proteins found in the blood that play an important role in immune defence
6. What does HPLC stand for ?
7. According to Beer-Lambert's law, what does a coloured solution absorb ?

Turn over

8. Give an example of aerosol.
9. Specify the glucose transporter that is found in intestinal cells.

(9 × 1 = 9 marks)

Section B

Answer any **seven** *questions.*
Each question carries 3 *marks.*

10. What distinguishes hydrogen bonds and other weak interactions from covalent bonds ?
11. How do indicator solutions work ?
12. Explain the concept of pH and pOH as well as their relationship.
13. Describe the function of any two plasma proteins in the blood.
14. Write the principle of paper chromatography.
15. What are Anticoagulants ? Give examples.
16. What is the function of SDS in SDS-PAGE ?
17. Write the classification of colloids.

(7 × 3 = 21 marks)

Section C

Answer any **four** *questions.*
Each question carries 5 *marks.*

18. Discuss the role of hydrogen bonds and weak interactions in the structure and function of biological macromolecules.
19. Compare the advantages and disadvantages of the pH measurement method using a pH meter and indicator solution.
20. Describe the method of active transport and its different types.
21. Write the principle and applications of ion exchange chromatography.
22. What is Donnan membrane equilibrium, and what are the conditions for its establishment ?

(4 × 5 = 20 marks)

Section D

Answer any **one** *question.*
The question carries 10 *marks.*

23. Elaborate on the principles and uses of SDS PAGE and native PAGE electrophoretic techniques in biochemistry.

24. Give an account of the coagulation of blood.

(1 × 10 = 10 marks)