

C 4355

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Name.....

Reg. No.....

**SECOND SEMESTER (CBCSS—UG) DEGREE EXAMINATION  
APRIL 2021**

Biochemistry

BCH 2C 02—BIOCHEMISTRY—II

Time : Two Hours

Maximum : 60 Marks

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

- In gel filtration chromatography molecules are separated on the basis of their :
  - Charge.
  - Solubility.
  - Size.
  - Affinity.
- The \_\_\_\_\_ buffer plays a major role in maintaining the pH of blood.
  - Phosphate.
  - Bicarbonate.
  - Citrate.
  - Acetate.
- The essential catalyst used in polyacrylamide gel electrophoresis (PAGE) is :
  - Sodium dodecyl sulphate.
  - Tetramethylethylenediamine.
  - Ammonium persulfate.
  - Bisacrylamide.
- The wavelength range of visible light is :
  - 700-800 nm.
  - 400-700 nm
  - 200-400 nm.
  - 800-1000 nm.
- Define Diffusion.
- What is partition co-efficient ?
- Write Henderson-Hasselbach equation.
- Calculate the pH of 0.1N HCl.
- Define colloid.

(9 × 1 = 9 marks)

**Turn over**

**Section B**

*Answer at least **six** questions.*

*Each question carries 3 marks.*

*All questions can be attended.*

*Overall Ceiling 18.*

10. What are Buffers ? Give two examples.
11. How coagulation of blood occurs ?
12. Discuss on the instrumentation of colorimeter.
13. List the applications of immunoelectrophoresis.
14. Name any *three* indicators commonly used to measure pH. Mention color and pH range.
15. What are the three different types of osmotic solutions ?
16. Write down the properties of colloids.
17. Give the differences between active transport and passive transport.

(6 × 3 = 18 marks)

**Section C**

*Answer at least **three** questions.*

*Each question carries 7 marks.*

*All questions can be attended.*

*Overall Ceiling 21.*

18. How amino acids are separated by thin layer chromatography.
19. Discuss on the titration curve of weak acid.
20. How acid-base balance is maintained in our body ?
21. Write down the principle and procedure of ion exchange chromatography.
22. Distinguish between lyophilic and lyophobic colloids.

(3 × 7 = 21 marks)

**Section D**

*Answer any **one** question.*

*It carries 12 marks.*

23. Explain the principle, procedure and application of gas liquid chromatography.
24. Describe SDS-PAGE.

(1 × 12 = 12 marks)