

## SECOND SEMESTER B.A./B.Sc. DEGREE EXAMINATION, APRIL 2020

(CBCSS—UG)

Biochemistry

BCH 2C 02—BIOCHEMISTRY—II

(2019 Admissions)

Time : Two Hours

Maximum : 60 Marks

## Section A

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

1. The color exhibited by universal indicator for a strong acid of pH < 3 is :  
(a) Green. (b) Blue.  
(c) Violet (d) Red.
2. Agarose is a polymer of \_\_\_\_\_.  
(a) D-galactose and glucose. (b) D-galactose and 3,6 -anhydro-L-galactose.  
(c) Amylose. (d) N-acetylglucosamine.
3. The inert gas used as mobile phase in gas chromatography is :  
(a) Hydrogen. (b) Argon.  
(c) Helium. (d) Neon.
4. pH of blood is :  
(a) 7.4. (b) 8.5.  
(c) 6.5. (d) 4.5.
5. What is buffer action ?
6. Name an anion exchanger.
7. Give two examples for colloids in daily life.
8. What is the basis of separation of proteins by SDS-PAGE ?
9. Define osmotic pressure.

(9 × 1 = 9 marks)

Turn over

**Section B**

*Answer any seven questions.*

*Each question carries 3 marks.*

10. State the principle and uses of photometry.
11. List the advantages of TLC.
12. Indicate the different wavelength regions of electromagnetic spectrum.
13. Discuss briefly on immunoelectrophoresis.
14. Give an account of the biological significance of osmosis.
15. Briefly explain the instrumentation of spectrophotometer.
16. Write short note on the principle and application of ion exchange chromatography.
17. How pH of blood is maintained ?

(7 × 3 = 21 marks)

**Section C**

*Answer any four questions.*

*Each question carries 5 marks.*

18. Detail the principle and procedure of gel filtration chromatography.
19. Derive Henderson-Hasselbach equation. Give its importance.
20. What is Donnan membrane equilibrium ? Mention its importance.
21. Discuss briefly on the proteins present in blood.
22. How lipids are separated by paper chromatography ?

(4 × 5 = 20 marks)

**Section D**

*Answer any one question.*

*It carries 10 marks.*

23. Give a detailed account of the transport of molecules across membranes.
24. Describe HPLC and its applications.

(1 × 10 = 10 marks)