

Reg. No. :

Name :

Sixth Semester B.Sc. Degree Examination, March 2021

First Degree Programme Under CBCSS

Chemistry

Elective Course

CH 1661.4 — BIOCHEMISTRY

(2018 Admission Regular)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **all** questions. Marks **1** for each.

1. Which blood cells secrete antibody?
2. Absence of which clotting factor leads to Hemophilia-A?
3. What is catabolic process?
4. In which part of the respiratory system, gaseous exchange takes place?
5. What happens if the proximal convoluted tubule is removed from nephron?
6. What is the activity of Atrial Natriuretic peptide (ANP)?
7. How many servings of vegetables do we need each day?

8. Which is a water-soluble vitamin?
9. What is the enzyme that breaks down lactose?
10. In which paper chromatography does the mobile phase move horizontally over a circular sheet of paper?

(10 × 1 = 10 Marks)

SECTION – B

Answer **any eight** questions. Marks **2** for **each**.

11. What are the different types of hemoglobin?
12. Give the constituents of blood cells.
13. Give the functions of lipoproteins.
14. Discuss about Myo-inositol trispyrophosphate.
15. With an increased level of carbon monoxide, a person can suffer from severe tissue hypoxia. Explain the reasons.
16. What is Root effect?
17. What is the importance of Plasma osmolality?
18. What is Diuresis?
19. What is renal threshold?
20. What are the factors which determine the amount of energy required by a person?
21. What are the causes of obesity?
22. Define ADIME.
23. What are bile acids?

24. What is Biliverdin?
25. Differentiate between primary and secondary bile acids.
26. Differentiate cataphoresis and anaphoresis.

(8 × 2 = 16 Marks)

SECTION – C

Answer **any six** questions. Marks **4** for **each**.

27. What is coagulation? Discuss different coagulation factors.
28. Discuss the oxygen dissociation curve of hemoglobin.
29. What are plasma proteins? What are the functions?
30. Discuss about the influence of CO₂ in the hemoglobin saturation curve.
31. Discuss the physiology of the formation of urine.
32. Write a note on the constituents of urine.
33. Discuss the functions of Antidiuretic hormone.
34. Discuss about calorific value of food.
35. Discuss the digestion process of fats.
36. What are bile pigments? Explain their functions.
37. What are ion exchange resins? Discuss the principle of ion exchange chromatography.
38. Write a note on ultracentrifugation.

(6 × 4 = 24 Marks)

SECTION – D

Answer **any two** questions. Marks **15** for **each**.

39. Discuss in detail the mechanism of cloating.
40. Discuss the mechanism of diffusion on CO₂ and O₂ during respiration. What are the factors affect on this?

41. Write a note on :
- (a) body water balance and
 - (b) buffers in blood.
42. What is Specific dynamic action of food? Discuss the factors that affect the thermic effect of food.
43. Discuss about the digestion and absorption of carbohydrates and proteins.
44. Discuss about the principle, procedure and applications of gas-liquid chromatography.

(2 × 15 = 30 Marks)