



Reg. No. :

Name :

Third Semester B.Sc. Degree Examination, March 2022

Career Related First Degree Programme under CBCSS

Group : 2(a) - Botany and Biotechnology

Complementary Course I

BB 1331 : PHYSIOLOGICAL ASPECTS IN BIOCHEMISTRY

(2019 Admission)

Time : 3 Hours

Max. Marks : 80

SECTION - I

(Very short answer type - Maximum **two** sentences)

Answer **all** questions.

1. What are the different types of WBCs?
2. How do phytates act on iron absorption?
3. What is meant by nutrients? List the different types.
4. Name any two fat soluble vitamins.
5. What is meant by renal threshold?
6. Name any two buffers in blood.
7. What do you mean by obesity?
8. What are the types of diabetes mellitus?

9. Name a hormone synthesised by chromaffin cells.
10. Which hormone is called anti diuretic hormone?

(10 × 1 = 10 Marks)

SECTION – II

(Short answer questions - not to exceed **one** paragraph)

Answer **any eight** questions.

11. Describe the mechanism of the effect of dicoumarol on blood clotting.
12. What are the different types of hemes?
13. Describe the physical properties of blood.
14. Write a note on hemosiderin.
15. Describe the functions and sources of vitamin A.
16. Differentiate carbohydrates, lipids and proteins based on their calorific values.
17. What causes beriberi? What are its clinical manifestations?
18. Describe the normal composition of urine.
19. Give an example of detoxification by hydrolysis.
20. Explain the clinical significance of GFR.
21. Explain chloride shift.
22. Write a brief note on respiratory acidosis.
23. How atheromatous plaques are formed?

24. Account for the condition of polyphagia in Diabetes mellitus.
25. Name any four hormones secreted by the pituitary gland.
26. Describe the functions of oxytocin.

(8 × 2 = 16 Marks)

SECTION – III

(Short essay - not to exceed 120 words)

Answer **any six** questions.

27. Write a note on the different types of blood cells.
28. Give an account of the intrinsic pathway of coagulation.
29. Write a note on the ABO blood grouping system.
30. Give an account of the sources, functions and deficiency diseases of vitamin C.
31. Describe the sources and functions of calcium.
32. Give an account of the structure and functions of nephron.
33. Explain the significance of liver function tests.
34. Give an account of Bohr effect.
35. Describe metabolic acidosis and alkalosis.
36. Write a note on the cause, clinical features and management of hemophilia.
37. Explain the causes and diagnosis of thyroid malfunction.
38. Write a note on steroid hormones.

(6 × 4 = 24 Marks)

SECTION – IV

(Long essay)

Answer **any two** questions.

39. Give an account of the structure, types and functions of hemoglobin.
40. Write an essay on the role of liver in detoxification.
41. Describe the role of kidney in osmoregulation.
42. Give an account of the mechanism and events in respiration.
43. Write an essay on the causes, risk factors, clinical features and management of hypercholesterolemia.
44. Describe the organization of endocrine system and classification of hormones.

(2 × 15 = 30 Marks)
