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Reg. No. :

Name :

Third Semester B.Sc. Degree Examination, January 2023

Career Related First Degree Programme under CBCSS

Group 2(a) – Botany and Biotechnology

Complementary Course

BB1331 : PHYSIOLOGICAL ASPECTS IN BIOCHEMISTRY

(2019 Admission)

Time : 3 Hours

Max. Marks : 80

SECTION – I

(Very short answer type - Maximum 2 sentences)

Answer all questions.

1. In which part of the body lymphocytes are formed?
2. What is Rh factor?
3. Define BMR.
4. Name any two water soluble vitamins.
5. What are monooxygenases?
6. What is Bohr effect?
7. Name any two risk factors for hypercholesterolemia.
8. What causes hemophilia A?
9. Name two peptide hormones.
10. Draw the structure of cortisone.

(10 × 1 = 10 Marks)

P.T.O.

SECTION – II

(Short answer questions – not to exceed one paragraph.)

Answer any **eight** questions.

11. Differentiate between heme A and B.
12. What is meant by clotting time? How is it measured?
13. What is meant by erythropoiesis?
14. How do other dietary components affect the absorption of iron?
15. Describe the functions and sources of vitamin C.
16. Mention the functions of iodine and name any one clinical condition caused by its deficiency.
17. Mention the functions of folate.
18. Name the abnormal constituents in urine.
19. What is loop of Henle? Mention its function.
20. What is meant by renal clearance tests? Give an example.
21. Explain the role of carbonic anhydrase in transport of gases in blood.
22. Write a brief note on respiratory alkalosis.
23. What is obstructive jaundice?
24. Account for ketonuria in Diabetes mellitus.
25. What are the hormones secreted by pancreas? Mention their functions.
26. Describe the functions of gonadotropin.

(8 × 2 = 16 Marks)

SECTION – III

(Short essay – not to exceed 120 words)

Answer any **six** questions.

27. Describe the composition of blood.
28. Give an account of the extrinsic pathway of coagulation.
29. Explain the chemical basis of blood group specificity.
30. Give an account of the sources, functions and deficiency diseases of vitamin K.
31. Write a note on different types of B vitamins and their sources.
32. Write a note on the normal composition and characteristics of urine.
33. Explain the significance of conjugation as a detoxification event.
34. How partial pressures of gases influence their transport in blood?
35. Explain the role of blood buffers in homoeostasis.
36. Write a note on the diagnosis of diabetes mellitus.
37. Explain the significance and organization of endocrine system.
38. Write a note on thyroid hormones.

(6 × 4 = 24 Marks)

SECTION – IV

(Long Essay)

(Answer any **two** questions.)

39. Write a note on the metabolism of iron.
40. Write an essay on different Liver and kidney function tests.
41. Write a note on the sources and functions of Ca, Na, K, I and Fe.

42. Give an account of the maintenance of acid-base balance in human body.
43. Write an essay on the causes, risk factors, clinical features and management of atherosclerosis.
44. Write an essay on the structure and functions of adrenalin, nor-adrenalin, T3, T4 and cortisone.

(2 × 15 = 30 Marks)
