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Reg. No. :

Name :

Second Semester B.Sc. Degree Examination, September 2022

Career Related First Degree Programme under CBCSS

Group 2 (a) – Botany and Biotechnology

Complementary Course II

BB 1231 : BIOMOLECULES

(2020 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **all** questions in **one** word or in two sentences. Each question carries **1** mark.

1. Define anomer.
2. What are glycosides?
3. What is phosphatidyl ethanolamine?
4. Give a short note on essential fatty acid.
5. Define zwitter ion.
6. Give a short note on peptide.
7. Mention any few essential amino acids.
8. Define isoelectric point.

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9. Write the names of pyrimidines.

10. What are coenzymes?

(10 × 1 = 10 Marks)

SECTION – B

Answer any **eight** questions, not exceeding **one** paragraph. Each question carries **2** marks.

11. Write the structure of sucrose.

12. Mention the importance of glycogen.

13. Draw the ring structure of any two monosaccharides.

14. Give a note on acrolein test.

15. Illustrate the importance of fatty acids.

16. What are derived lipids? Give example.

17. Point out the few functions of proteins.

18. Write the ninhydrin test for amino acids.

19. Write the structure of any two hydroxyl group contain amino acids.

20. Write a note on disulphide with example.

21. Give a short note on the significance of fibrous protein.

22. What is dialysis and its application?

23. Write the structure of purine bases.

24. What are nucleotides? Give example.

25. Define V max.

26. Write a note on progress curve.

(8 × 2 = 16 Marks)

SECTION – C

Answer any **six** questions, Short essay. Each question carries **4** marks.

27. Differentiate between sucrose and maltose.
28. Explain the structure of chitin.
29. Draw the structure of triglycerides and its properties.
30. What are steroids? Explain with example.
31. What is the use of Edman's reagent? Give example.
32. Explain the conformation test for aromatic amino acids.
33. Elucidate the structure and functions of haemoglobin.
34. What is the difference between a globular and fibrous protein give examples?
35. Draw the structure and functions of tRNA.
36. Differentiate the purine and pyrimidines.
37. Explain the enzyme specificity and their types.
38. Give a note on coenzymes and its significance.

(6 × 4 = 24 Marks)

SECTION – D

Answer any **two** questions, Long Essay type. Each question carries **15** marks.

39. (a) Write in detail about the classifications of carbohydrates? 7
- (b) Explain the structure and functions of starch. 8
40. (a) Draw the structure and functions of phospholids. 8
- (b) Write the important properties of lipids. 7

41. Describe the classification of amino acids with examples.
42. Discuss in detail about various levels of structural organisation of proteins.
43. Give a detailed account on Watson and Crick model of DNA.
44. Describe the detailed classification of enzymes with suitable examples.

(2 × 15 = 30 Marks)
