

(Pages : 3)

R – 3330

Reg. No. :

Name :

Second Semester B.Sc. Degree Examination, September 2023

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** the questions. Each question carries **1** mark.

1. What are the two epimers of glucose?
2. Name two reducing disaccharides.
3. Give two examples of saturated fatty acids.
4. What are phospholipids? Give examples.
5. Define aromatic amino acids.
6. Which are the amino acids that give yellow colour with ninhydrin reagent.
7. What are globular proteins? Give example.

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8. Mention the pyrimidine bases in DNA.
9. Write the reaction catalysed by hydrolases.
10. What happens to k_m and v_{max} in competitive inhibition.

(10 × 1 = 10 Marks)

SECTION – B

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

11. What is optical isomerism?
12. Define Deoxy sugars.
13. Write about the significance of Acrolein test.
14. Define essential fatty acids.
15. What are polar amino acids with negative R groups?
16. Why is Biuret test done?
17. Write the functions of haemoglobin.
18. What is Glutathione?
19. Write the structures of Adenine and Ribose.
20. What are the base composition of RNA?
21. Define enzyme specificity.
22. Write about k_m and its significance.

(8 × 2 = 16 Marks)

SECTION – C

(Short Essay not exceeding 120 words) Answer any **six** questions. Each question carries **4** marks.

23. Write about the classification of carbohydrates.
24. Discuss the structure and properties of disaccharides.
25. Write briefly about the structure and properties of Triglycerides.
26. Write short notes on phospholipids.
27. How are amino acids classified chemically?
28. Write about the secondary structure of proteins.
29. What are the different types of RNA?
30. Discuss the classification of enzymes.
31. Line weaver – Burk plot and its applications.

(6 × 4 = 24 Marks)

SECTION – D

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

32. Explain the chemical reactions of glucose.
33. Write in detail about the classification of lipids with suitable examples.
34. Discuss the Watson and Crick model of DNA.
35. Explain the precipitation reactions of proteins.

(2 × 15 = 30 Marks)