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N – 7797

Reg. No. : .....

Name : .....

Fourth Semester B.Sc. Degree Examination, August 2022

First Degree Programme under CBCSS

Chemistry

Complementary Course for Botany

CH 1431.3 : ORGANIC CHEMISTRY

(2019 Admission)

Time : 3 Hours

Max. Marks : 80

SECTION – A

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

1. Represent the configurations of D and L Glyceraldehyde.
2. Define racemic mixture.
3. What are antipyretics?
4. What do you mean by denaturation of proteins?
5. Give two examples of essential amino acids.
6. Define iodine value.
7. State special isoprene rule.
8. What are the four bases of DNA?

P.T.O.

9. What do you mean by Rf value?

10. State the deficiency disease due to the lack of Vitamin C.

(10 × 1 = 10 Marks)

SECTION – B

(Short answer type. Answer any **eight** questions from the following. Each question carries **two** marks)

11. Give two differences between enantiomers and diastereoisomers.

12. Give the classification of vitamins.

13. What are meso compounds?

14. What is the principle of HPLC?

15. Explain saponification.

16. What are the conditions for a compound to be chiral?

17. Explain acid value.

18. What do you mean by transcription?

19. Explain zone electrophoresis.

20. What do you mean by primary structure of protein?

21. Explain how alkaloids are extracted from natural sources.

22. What are Zwitter ions?

23. What is iso electric point?

24. Write a short note an different types of RNA and its functions.

25. Give the structure of Vitamin A.

26. Discuss the importance of Morphine.

(8 × 2 = 16 Marks)

SECTION – C

(Short essay type. Answer any **six** questions from the following each question carries **4** marks)

27. Explain the classification of dyes.

28. Give a brief account adsorption chromatography.

29. Explain the synthesis Malachite green.

30. Explain the cleansing action of soap.

31. Explain the carboxy method for the synthesis of protein.

32. Explain genetic code.

33. Explain the isolation of Citral.

34. Write a note on DNA replication.

35. Explain ion exchange method.

36. Explain few methods for the preparation of amino acids

37. Give the synthesis of Tryptophan

38. Discuss the optical isomerism of tartaric acid.

(6 × 4 = 24 Marks)

SECTION – D

Answer any **two** questions. Each question carries **15** marks.

39. (a) Explain ion exchange chromatography.

    (b) Discuss the classification of dyes based on its applications.

40. (a) Discuss briefly the structure of protein.

    (b) Give the structure elucidation of conine.

41. Explain the isolation and structural elucidation of terpenes.

42. (a) Write a note on detergents.

    (b) Explain Sheehan's method.

43. Give the synthesis of :

    (a) Aspirin

    (b) sulphaguanidine

44. What are oils and fats? Discuss the various methods of extraction.

(2 × 15 = 30 Marks)
