(Pages : 3) **N – 7796**

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

(2017 – 2018 Admission)

Time : 3 Hours Max. Marks : 80

SECTION – A

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

1. ———————— is a chromatographic method for the separation of lanthanides.
2. Give examples for two essential amino acids.
3. The number of hydrogen bonds between adenine and thymine in DNA is ————————
4. Draw the structure of D-glucose.
5. The deficiency disease of vitamin B1 is called.
6. Give two important applications of essential oils.
7. The visible range is from ———————— to ———————— nm.
8. Give examples for an *azo* dye.

P.T.O.

9. ———————— is example of an anticancer drug of plant origin.

10. Give the structure of chloramphenicol.

(10 × 1 = 10 Marks)

SECTION – B

(Short answer type. Answer **any eight** questions. Each question carries **2** marks)

11. Describe the importance of R_f in chromatography.

12. Give four applications of gas chromatography.

13. Describe a method for the synthesis of aspirin.

14. Illustrate one colour reaction to identify proteins.

15. Draw the basic structure of nucleoside and nucleotide.

16. Differentiate between plane of symmetry and rotation axis.

17. Identify the isoprene units in citral.

18. Draw the structure of vitamin C.

19. Give two important applications of opium alkaloids.

20. Give the structure of indigo dye.

21. Distinguish between chromophore and auxochrome.

22. What are antacids? Give two examples.

(8 × 2 = 16 Marks)

SECTION – C

(Short essay type. Answer **any six** questions. Each question carries **4** marks).

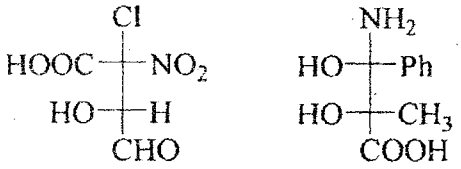
23. Discuss the basic principle of capillary electrophoresis.

24. Identify the major differences between DNA and RNA.

25. Write a note on transcription in protein synthesis.

26. Identify the stereoisomers of tartaric acid.

27. Assign *R* and *S* for the following chiral carbons.



28. Explain the importance of acid value and iodine value of oils.

29. Describe the structure of Nicotine and Coniine.

30. Explain the synthesis of Methyl Orange.

31. Describe the Sheehan method for peptide synthesis.

(6 × 4 = 24 Marks)

SECTION – D

(Essay type. Answer **any two** questions. Each question carries **15** marks)

32. (a) TLC will provide important information about a chemical reaction. Justify;

    (b) Write note on the instrumentation of gas chromatography. **8+7**

33. (a) Describe the erythro and threo representations;

    (b) Explain a chemical method for separation of enantiomers. **8+7**

34. Give a detailed classification of dyes.

35. Write note on.
    (a) Analgesics,
    (b) Antibiotics,
    (c) Sulpha drugs.

(2 × 15 = 30 Marks)