

Reg. No. :

Name :

Fourth Semester B.Sc. Degree Examination, May 2021

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. Give example for two mobile phases used in gas chromatography.
2. Give example for an acidic amino acid.
3. _____ is a base present in DNA but not in RNA.
4. The RNA generated during transcription is _____
5. Give examples for two fatty acids from which bathing soap is prepared.
6. The heterocyclic ring present in cochine is _____
7. _____ is called sunshine vitamin.
8. Draw the structure of malachite green.

P.T.O.

9. Give example for an antimalarial drug.
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 basic principle of paper chromatography.
12. Give two applications of HPLC.
13. Describe the term retention time in gas chromatography.
14. Explain the importance of isoelectric point.
15. Why oils are liquids and fats are solids?
16. Draw the structure of purine bases present in DNA.
17. Draw the stereochemical structures of tartaric acid and identify the meso isomer.
18. Identify two differences between enantiomers and diastereomers.
19. Give two important applications of morphine.
20. Draw the structure of vitamin B1.
21. Give the basic requirements of dyes.
22. Identify the required characteristics of drug molecules.

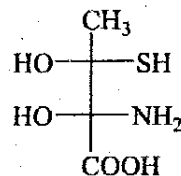
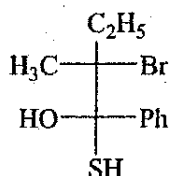
(8 × 2 = 16 Marks)

SECTION – C

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

23. Write a note on capillary electrophoresis.
24. Explain the merits of gas chromatography.
25. Describe the 1° and 2° structure of proteins.

26. Draw the erythro and threo enantiomers of 3-chloro-2-butanol.
27. Identify the R and S for the following compounds.



28. Illustrate the carbobenzoxy method for peptide synthesis.
29. Describe a method for extraction of alkaloids.
30. Explain a method for preparation of congo red.
31. Describe a method for the preparation of sulphaguanidine.

(6 × 4 = 24 Marks)

SECTION – D

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

32. (a) Describe the process of DNA replication; 10+5
 (b) Explain one method for synthesis of α -amino acids.
33. (a) Describe the term elements of symmetry. 8+7
 (b) Name major vitamins and their deficiency diseases.
34. Explain the theories for colour of dyeing compounds.
35. Give a detailed classification of drugs.

(2 × 15 = 30 Marks)