K25U 0119

Reg. No. : .....

Name : .....

Sixth Semester B.Sc. Degree (C.B.C.S.S.-OBE – Regular/Supplementary/ Improvement) Examination, April 2025
(2019 to 2022 Admissions)
CORE COURSE IN CHEMISTRY/POLYMER CHEMISTRY
6B14CHE/PCH : Organic Chemistry – III

Time : 3 Hours Max. Marks : 40

SECTION – A

Very short answer type. **Each** question carries **1** mark. Answer **all** 4 questions. **(4×1=4)**

1. Draw the structure of citric acid.
2. Nitration of nitrobenzene gives _____
3. Draw the structure of quinine.
4. What is isoprene rule ?

SECTION – B

Short answer type. **Each** question carries **2** marks. Answer 7 out of 10. **(7×2=14)**

5. What are anomers ? Give examples.
6. Illustrate the preparation of crotonic acid.
7. What is Curtius reaction ?
8. Distinguish between nucleoside and nucleotide.
9. Give one method of synthesis of Quinoline.
10. What are antihistamines ? Give example.
11. What are tranquillizers ? Give example.
12. Illustrate the synthesis of Aspirin.

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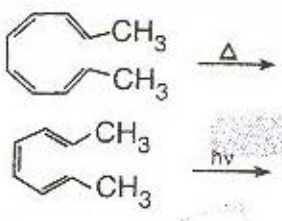
13. What is atom economy ?
14. Write any six green chemistry principles.

SECTION – C

Short essay/problem type. **Each** question carries **3** marks. Answer **4** questions out of 6. **(4×3=12)**

15. Discuss the structure of i) Sucrose and ii) Lactose.
16. Write a note on the preparation and reactions of Anthranilinic acid.
17. Discuss the structure of DNA.
18. What is i) Saponification value ii) Iodine value and iii) Acid value ?
19. Compare the basic character of Pyrrole and Pyridine.
20. Predict the products in the following and explain.



SECTION – D

Long essay type. **Each** question carries **5** marks. Answer **2** questions out of 4. **(2×5=10)**

21. Illustrate i) Killiani Fischer Synthesis and ii) Ruff Degradation.
22. Explain i) The Hinsberg method for the separation of amines and ii) Preparation and reactions of benzene diazonium chloride.
23. Discuss i) Merrifield peptide synthesis and ii) Structure of proteins.
24. Draw the molecular orbitals of ethylene and 1,3 butadiene. Identify the HOMO and LUMO under thermal and photochemical conditions.
