

**THIRD SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION
NOVEMBER 2020**

Chemistry

CHE 3C 03—ORGANIC CHEMISTRY

Time : Three Hours

Maximum : 64 Marks

Section A (One Word)*Answer all the questions.**Each question carries 1 mark.*

1. The isomerism exhibited by alkanes is _____.
2. The hybridization of carbon atoms in ethyne is _____.
3. CH_3 group exhibits _____ inductive effect.
4. The number of possible conformations of ethane is _____.
5. The reagents used for nitration of benzene are _____.
6. The product of Wurtz reaction of bromoethane is _____.
7. The reagent used for iodoform test is _____.
8. Lucas reagent is _____.
9. Urotropine is prepared from _____.
10. IUPAC name of picric acid is _____.

(10 × 1 = 10 marks)

Section B (Short Answer)*Answer any seven questions.**Each question carries 2 marks.*

11. What is Hyperconjugation ?
12. Draw Newman projection formula of eclipsed and **staggered conformations of ethane.**
13. What is racemic mixture ?
14. Write Huckels rule.

15. Write two examples of non benzenoid aromatic compounds.
16. What is Denatured spirit ?
17. How will you prepare anisole by Williamsons synthesis.
18. Suggest a method to convert propanoic acid to 2-Bromopropanoic acid.
19. Aniline is less basic than ammonia Why ?
20. Write two examples of essential amino acids.

(7 × 2 = 14 marks)

Section C (Paragraph)

*Answer any four questions.
Each question carries 5 marks.*

21. Explain Saponification ? How is it important industrially.
22. Write four differences between DNA and RNA.
23. What is Mutarotation ?
24. Write any *five* reactions of Benzene diazonium chloride with equations.
25. How will you convert ethanol to propanoic acid ?
26. Explain nucleophilic addition reactions with any *four* examples.

(4 × 5 = 20 marks)

Section D (Essay)

*Answer any two questions.
Each question carries 10 marks.*

27. Explain the formation, stability and reactions of carbocations, carbanions and free radicals
28. Write an essay on a) optical isomerism of lactic acid and tartaric acid.
29. Explain the reaction and mechanism of any four electrophilic aromatic substitution.
30. Explain the effect of substrate structure and stereochemistry of S_N1 and S_N2 reactions.

(2 × 10 = 20 marks)