K25FY3219 Pages: 2 Reg No:.....
Name:.....

Third Semester FYUGP Degree (Reg) Examination November 2025

KU3DSCCHE202 - ORGANIC CHEMISTRY-I

2024 Admission onwards

Time : 2 hours Maximum Marks : 70

Section A

Answer any 6 questions. Each carry 3 marks.

1. Write the chemical equation for the preparation of glycerol from propene.
2. Write the equation for acetylation of glycerol. What type of compound is formed?
3. Discuss the directive influence of the $-NO_2$ group in monosubstituted benzene
4. Which type of elimination (syn/anti) occurs in Cope elimination?
5. State the condition under which Chugaev elimination takes place
6. Meso-tartaric acid is optically inactive even though it contains two chiral centres. Justify
7. Define enantiomers and diastereomers.
8. Define axial and equatorial bonds in cyclohexane.

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Section B

Answer any 4 questions. Each carry 6 marks.

9. Compare the SN1 and SN2 mechanism with energy profile diagram
10. What is an SN1 reaction? Discuss the factors affecting the rate of an SN1 reaction
11. How does stereochemical evidence support the study of reaction mechanisms
12. State and explain in detail, the Can-Ingold-Prelog rule.
13. Discuss how intramolecular hydrogen bonding affects the conformational analysis of 2-chloroethanol.
14. Explain the conformational analysis of 1,2-dichloroethane and its stability.

Section C

Answer any 2 questions. Each carry 14 marks.

15. Write a note on the oxidation reactions of alkenes and alkynes.

16. (a) Discuss the Haworth synthesis of Naphthalene .
    (b) What is Baeyers strain theory? illustrate with suitable examples.

17. (a) What are naphthols? Give the preparation of different types of naphthols.
    (b) Explain the isolation of glycerols from fats and oils

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