



केन्द्रीय जनजातीय विश्वविद्यालय आन्ध्रप्रदेश
Central Tribal University of Andhra Pradesh

(A Central University Established by an act of Parliament)

MID term Examinations-I

Name of the Programme : BSc 2nd SEM Chemistry

Name of the Subject: Organic Chemistry-1

Subject Code: CHE151

Part-A

Answer all the questions. Each Carries 1 mark 1M X 5=5M

1. Define Stereoisomers?
2. Syn and Anti configuration is generally used for which classes of compounds?
3. Among the following compound which compound is optically active? Why?
a) 1-butanol b) 2-butanol c) 3-butanol d) 4-heptanol
4. The optical rotatory powers of two enantiomers are equal in magnitude but ----- in sign.
5. What is plane polarized light? Give its importance.

Part-B

Answer either A or B short answer question. 5 M x 1=5M

6 A) Explain the concept of enantiomers and provide an example of a pair of enantiomers.

OR

B) Provide an example of a molecule exhibiting E/Z isomerism and describe how you would determine the E/Z configuration.

Part-C

Answer either A or B long answer questions. 10M x 1=10M

7 A) Discuss CIP rules used in R and S configuration. Take any four examples (as different as possible) and assign them the absolute R/S configurations.

or

B) A solution of pure L-glyceraldehyde has a specific rotation of +18.7°. If the concentration of the solution is 0.40 g/mL and the path length of the polarimeter tube is 2.5 dm, calculate the observed rotation.

$$(\alpha)_{\text{obs}}^{-1} \text{ dm}^{-1} = \frac{\alpha}{\text{g/mL} \times \text{dm}}$$