

Roll.No.

22UCHCT5010

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN  
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)  
Chromepet, Chennai - 600 044.

B.Sc.Chemistry - END SEMESTER EXAMINATIONS - NOVEMBER 2025  
SEMESTER - V

**22UCHCT5010 - Stereo Chemistry, Reaction Mechanism and Rearrangement**

Total Duration : 2 Hrs.30 Mins.

Total Marks : 60

### Section B

Answer any **SIX** questions ( $6 \times 5 = 30$  Marks)

1. Discuss about the Walden inversion with suitable example.
2. What is atropisomerism? Explain the atropisomerism of biphenyls.
3. What is Geometric Isomerism? How will you assign E and Z Configuration with example.
4. Discuss about the Knoevenagel condensation with mechanism.
5. Give a note on Wittig reaction with mechanism.
6. Write a note on Meerwein-Ponndorf-Verley (MPV) reduction.
7. What is the difference between pinacol and semipinacol rearrangement?
8. Explain with suitable example of Cope and oxy-Cope rearrangement.

### Section C

Answer any **THREE** questions ( $3 \times 10 = 30$  Marks)

9. Explain with relative configuration D and L and absolute configuration of R and S with examples.
10. Discuss the stereochemistry of 1,3 and 1,5 diaxial interactions in mono substituted cyclohexane.
11. Explain mechanism of Aldol and Benzoin condensation.
12. Write a detailed note on Cope elimination and Diels-Alder reaction.
13. Discuss about the mechanism of Beckmann, benzil-benzilic acid rearrangement.

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