

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 - APRIL 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. Find the optical activity and give the conditions for optical activity.
2. Explain the mechanism of the following
(a) Aldol condensation (b) Perkin condensation
3. Predict the Birch reduction with a suitable example.
4. Differentiate between the inter and intra-molecular forces.
5. Describe the geometrical isomerism with an example.
6. Explain in detail about Dieckmann and Wittig reaction with the mechanism and examples.
7. Classify the Michael addition reaction with their mechanism and example.
8. Differentiate the Fries and photo rearrangements with their mechanism and examples.

Section C

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

9. Explain in detail about optical activity of biphenyl.
10. Predict the cyclohexane and mono- and disubstituted cyclohexanes.
11. Describe the Claisen-Schmidt condensation and the Wittig reaction with their mechanisms and suitable examples.
12. Classify the Paternò-Büchi reaction and the Diels-Alder reaction with their mechanisms and suitable examples.
13. Determine the Pinacol-Pinacolone rearrangements with their mechanisms and examples.
