

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 - II

22UCHCT2003 - Basics of Organic Chemistry

Total Duration : 2 Hrs.30 Mins.

Total Marks : 60

Section B

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

- Describe the structure of ethylene using hybridization method.
- Give a brief account on formation and stability of 1° 2° and 3° carbocation.
- Write down the appropriate reactions for E1 and E2 reactions.
- Justify Hoffmann and Saytzeff rules using appropriate reactions.
- Prepare alkane by the following methods.
 - Wurtz reaction
 - Kolbe's electrolysis
 - Reduction of alkene
- Write down the reaction justifying Markownikoff's rule and Diels-Alder reaction.
- Explain the addition polymerization reaction with mechanism.
- Discuss about the aromaticity, anti-aromaticity and non-aromaticity with suitable examples.

Section C

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

- Define and explain the Inductive effect and resonance effect. (5)
 - Describe the homolytic and heterolytic fission reactions with suitable examples. (5)
- Explain S_N1 and S_N2 reactions with mechanism. (10)
- Write down the following reactions:
 - Corey House reaction. (2)
 - Dieckmann's ring closure reaction. (3)
 - Write a note on Baeyer's strain theory. (5)
- Prepare alkene by dehydrogenation and dehydrohalogenation methods. (5)
 - Explain Ziegler-Natta polymerization reaction with mechanism. (5)
- Explicate the following reactions with mechanism:
 - Nitration of Benzene. (5)
 - Friedel-Craft's alkylation. (5)
