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.(Chemisrty) END SEMESTER EXAMINATIONS APRIL-2023
SEMESTER - V
20UCHCT5010 - Organic Chemistry - I

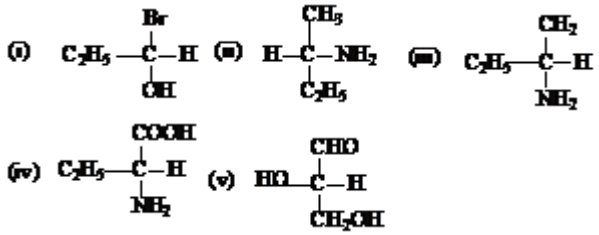
Total Duration : 2 Hrs 30 Mins. Total Marks : 60

Section B

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

1. Explain the mechanism of the following reactions.
   (i) Wolff Kishner reduction
   (ii) MPV reduction
2. Write the preparation and any five synthetic applications of malonic ester.
3. Illustrate the conformational analysis of ethane with potential energy diagram.
4. Explain Walden inversion with suitable example?
5. Compare the aromaticity and reactivity of pyrrole, furan, thiophene and pyridine.
6. Discuss the synthetic applications of diazomethane with any one method of synthesis.
7. Assign R and S configuration of the following:

EXAM APRIL 2023 LATEX/SCIENCE/B.Sc Chemistry/image 5.png EXAM APRIL 2023



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8. "$NaBH_4$ is a more selective reducing agent than $LiAlH_4$". Justify with examples.

Section C

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

9. Explain the mechanism of the following reactions:
   (i) Aldol condensation (ii) Wittig reaction
   (iii) Reformatsky reaction. (4+3+4)

Contd...

10. Discuss the characteristic reactions and synthetic applications of acetoacetic ester.
11. Illustrate the conformational analysis of cyclohexane with potential energy diagram and explain 1,3-diaxial interactions with an example.
12. Discuss the optical activity of (i) biphenyls (ii) allenes and (iii) spirans.
13. Deduce the mechanism for diazotization and write any five synthetic applications of diazonium salts.

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