

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 - NOV'2024

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. Sketch the mechanism of the following reactions:
 - (i) Wolff Kishner reduction
 - (ii) Wittig reaction (3+2)
2. How is ethyl acetoacetate prepared ?
Give its keto-enol tautomeric structure. (3+2)
3. Explain the conformational analysis of n-butane and compare their stability.
4. Illustrate any two methods of resolution.
5. Compare the basicity of pyrrole pyridine and piperidine with aliphatic amines.
6. Explain the Haworth synthesis of quinoline.
7. Compare 1,2- and 1,3-interactions with suitable examples.
8. Differentiate the synthetic use of LiAlH_4 and NaBH_4 with examples.

Section C

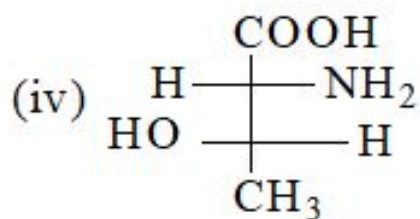
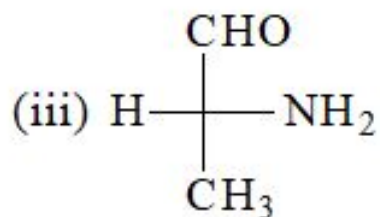
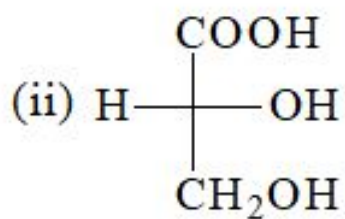
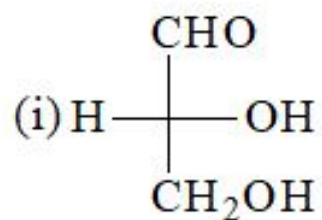
Answer any **THREE** questions ($3 \times 10 = 30$ Marks)

9. Explain the mechanism of the following reactions.
 - (i) Aldol Condensation
 - (ii) Benzoin condensation
 - (iii) Cannizaro reaction (3+4+3)
10. Discuss any five synthetic applications of malonic ester.

Contd...

11. a) Assign 'R' & 'S' notation to the following molecules.

(6)



b) Show the *erythro*– and *threo*– representations with example.

(4)

12. Discuss the optical activity of biphenyls, allenes and spirans.

13. Write any five synthetic applications of Diazonium salts.
