

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 -2023

SEMESTER - V

20UCHCT5010 - Organic Chemistry - I

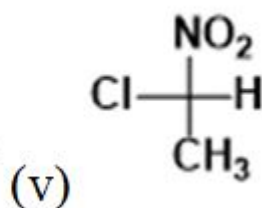
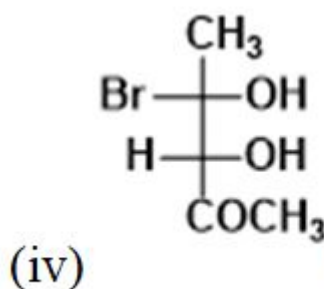
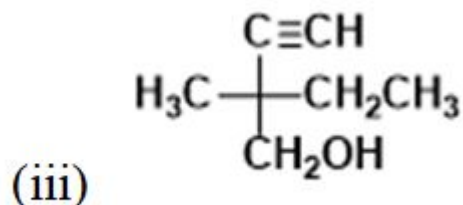
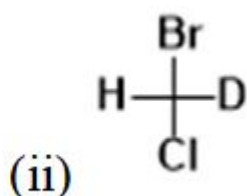
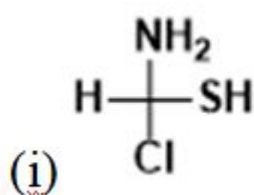
Total Duration : 2 Hrs 30 Mins.

Total Marks : 60

Section B

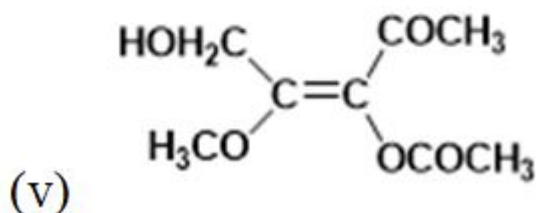
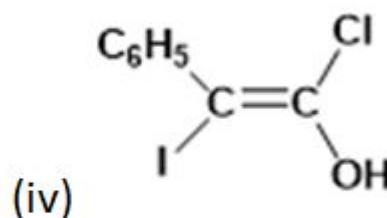
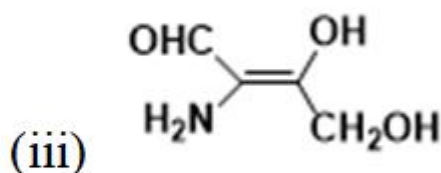
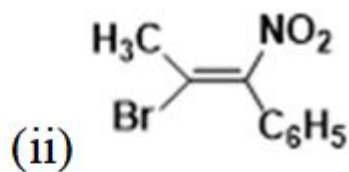
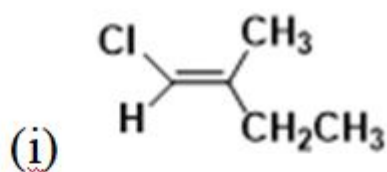
Answer any **SIX** questions ($6 \times 5 = 30$ Marks)

- Suggest mechanism for the following reactions :
(i) Perkin reaction (ii) Benzoin condensation.
- Differentiate between configuration and conformation. Give examples.
- Discuss the geometrical isomerism exhibited by Maleic and Fumaric acid.
- Write about the Reduction reactions of nitro compounds under different medium.
- How will you prepare the following from acetoacetic ester?
(i) 4- methyl uracil (ii) Crotonic acid (iii) acetone (iv) Succinic acid
(v) Butanone
- Assign R or S configuration:



Contd...

7. Assign E or Z notation :



8. Explain the mechanism of diazotisation. Write any five synthetic applications of diazotization of aniline.

Section C

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

9. Illustrate with example the following reaction mechanism
 - (i) Cannizaroreaction
 - (ii) Knoevenagel reaction
 - (iii) MPV reduction. (4+4+2)
10. (a) Write any three synthetic applications of malonic ester
 (b) Explain in detail about keto-enol tautomerism. (3+7)
11. (a) Discuss the conformational analysis of n-butane.
 (b) Cis-1,3-dimethylcyclohexane is more stable than the trans isomer. Why? (7+3)
12. (a) What is resolution? Illustrate the chemical methods of resolution of racemic mixture.
 (b) Discuss the optical isomerism of any two types of compounds which do not contain asymmetric centres. (5+5)
13. (a) Compare the basicity of pyridine with pyrrole.
 (b) Outline the synthesis of quinolone by Skraup's synthesis. (5+5)
