

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 - 2024

SEMESTER -III

22UCHCT3005-Organic Functional Groups And Heterocyclic Compounds

Total Duration : 2 Hrs. 30 Mins.

Total Marks : 60

Section B

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

1. Describe the mechanism of aldol and Knoevenegal reactions.
2. Illustrate the action of heat and stereospecific addition of maleic and fumaric acids.
3. Predict the acidic character of phenol and substituted phenols.
4. Explain the Hinsberg test of primary, secondary and tertiary amines.
5. Illustrate the aromaticity of heterocyclic compounds.
6. Solve the preparation of lactic acid and pyruvic acid.
7. Describe the synthetic applications of diazonium salts.
8. Determine the products of hydroboration-oxidation and oxymercuration and demercuration reactions of propene.

Section C

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

9. Explain the mechanism of Wolf-Kishner and MPV reductions.
10. Prepare an acid chloride and acid anhydride. Mention their chemical reactions.
11. Ascertain the reduction reaction of nitrobenzene in neutral, acidic and alkaline medium.
12. Evaluate the preparation, chemical properties and uses of pyridine.
13. Recommend suitable mechanism for the following reactions
(i)Houben-Hoesch (ii)Riemer-Tiemann
