

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.

M.Sc. - END SEMESTER EXAMINATIONS APRIL - 2022

SEMESTER - IV

20PCHCT4010 - Organic Chemistry - IV

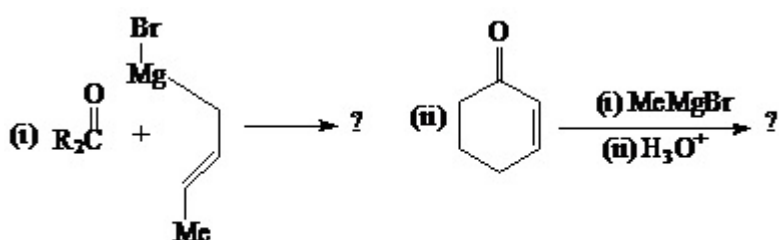
Total Duration : 3 Hrs.

Total Marks : 60

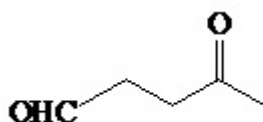
Section A

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

1. Explain the types of pericyclic reactions with any one example for each.
2. Sketch the mechanism of Merrified synthesis and explain.
3. Outline the application of synthetic methodology for the synthesis of cubane and onocerin.
4. Discuss two-group C-C disconnections in 1,5-difunctions in 1,5-difunctionalised compounds with reference to Robinson annelation.
5. Predict the product with mechanism.



6. How would you design the synthesis of the following 1,4-dicarbonyl compounds using reconnection?



7. Write down the Woodward-Hoffmann rules for electrocyclic and cycloaddition reactions.
8. Predict whether the following reactions are green reactions or not?
(i) Grignard reaction (ii) Claisen rearrangement

Contd...

Section B

Part A

Answer any **TWO** questions ($2 \times 10 = 20$ Marks)

9. Discuss the correlation diagram of butadiene-cyclobutene system.
10. Explain the methods of determining the structure of morphine.
11. Explain the concept of umpolung with a suitable example.
12. Discuss the important methods employed for protection and deprotection of alcohols.

Part B

Compulsory question ($1 \times 10 = 10$ Marks)

13. Predict the product and write the name of the following reaction.

