

QP CODE: 112331

Reg. No:.....

**First Semester M.Pharm Degree Regular/Supplementary Examinations
April 2025**

**M.Pharm (Pharmaceutical Chemistry)
Paper II: Advanced Organic Chemistry I (MPC 102T)
(Common for 2019 and 2024 Scheme)**

Time: 3 Hours

Total Marks: 75

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

Essays

(3x10=30)

1. Define free radicals. Explain briefly about the generation, stability and synthetic applications of free radicals.
2. Briefly explain about Doebner–Miller reaction and Sandmeyer reaction with their mechanism and synthetic application.
3. Describe the synthetic applications of Wilkinson reagent and Wittig reagent.

Short Notes

(9x5=45)

4. Give an account on acetals and ketals as protecting groups.
5. Brief out on Combes Quinoline synthesis and Traube purine synthesis.
6. Write the synthesis of metronidazole and miconazole.
7. Brief out on the generation and fate of nitrenes.
8. Give the mechanism and synthetic applications of sharpless asymmetric epoxidation.
9. Enumerate the strategies for synthesis of five membered rings.
10. Enlist the guidelines for dissection of molecules in retrosynthetic approach.
11. Give an account on C-X disconnection methods in synthon approaches.
12. Write a note on addition reactions.
