

QP CODE: 212331

Reg. No:.....

**Second Semester M. Pharm Degree Regular/Supplementary Examinations
November 2025**

M.Pharm (Pharmaceutical Chemistry)

Paper II - Advanced Organic Chemistry-II (MPC 202T)

(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. Explain stereo selective synthesis with examples. Write in detail about asymmetric synthesis using chiral pool taking suitable examples.
2. Discuss importance of peptide coupling reagents in amide bond formation with reactions. Enumerate N-terminal and side chain protecting groups used in peptide synthesis. Write note on t- BOC and FMOC. (3+3+4)
3. Discuss in detail about various type of pericyclic reactions with their mechanism. Add a note on photo- oxidation reaction

Short Notes

(9x5=45)

4. Write a note on catalyst deactivation and regeneration.
5. Write a short note on metal catalyzed reactions
6. Discuss Cahn Ingold Prelog sequence rule.
7. Discuss about high and low HF cleavage protocols.
8. Discuss about the sequential strategies for solution phase peptide synthesis.
9. Write a brief note on ultrasound assisted reactions.
10. Distinguish between microwave and conventional synthesis.
11. Explain the working principle and synthetic applications of continuous flow reactors.
12. Write note on theory of phase transfer catalysis and its application.
