

**QP CODE: 212331**

**Reg. No:.....**

**Second Semester M. Pharm Degree Supplementary Examinations  
February 2026**

**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. Discuss briefly on the preparation, characterization and kinetics with examples of heterogeneous catalysis used in synthesis of drugs
2. Explain various strategies for solution phase peptide synthesis with any two case studies
3. Elaborate on the types of sonochemical reactions, homogenous, heterogeneous liquid-liquid and liquid-solid reactions and its synthetic applications

**Short Notes**

**(9x5=45)**

4. Write a note on Wilkinson catalysts and Ziegler-Natta catalysts
5. Enumerate briefly on superheating effects of microwave and the effects of solvents in microwave assisted synthesis
6. Define photochemical reactions and brief on photo-fragmentation
7. Give an account on specific rotation, racemates and resolution of racemates
8. Write a note on t-BOC and Fmoc protocols
9. Brief on the theory and applications of phase transfer catalysis
10. Write a note on purification of peptide products and one case study on peptide synthesis
11. Brief on Fischer's D and L notation and E and Z notation
12. Give account on side reactions in peptide synthesis

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