

QP CODE: 214331

Reg. No:.....

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

M.Pharm (Pharmaceutical Chemistry)

Paper IV - Pharmaceutical Process Chemistry (MPC 204T)

(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. Elaborate on principle and general methods of preparation of polymorphs, hydrates, solvates and amorphous APIs.
2. Discuss about the principle and stages of extraction and on various types of extraction process
3. Describe briefly on the kinetics and types of halogenations. Also explain about any one case study on industrial halogenation process

Short Notes

(9x5=45)

4. Write a note on effluents and its management
5. Give an account on the reagent selection, families of reagents useful for scale-up
6. Brief on the production of simvastatin
7. Describe briefly ozonolysis and its applications
8. Brief out on bench, pilot and large scale up process
9. Material Safety Data Sheet
10. Elaborate on metal hydride reduction
11. Write a note on pressure and vacuum filtration
12. Describe the mechanism of aromatic nitration and process equipment for technical nitration
