

QP CODE: 214331

Reg. No:.....

**Second Semester M. Pharm Degree Regular/Supplementary Examinations
November 2024**

**M.Pharm (Pharmaceutical Chemistry)
Paper IV - Pharmaceutical Process Chemistry (MPC 204T)
(Common for 2017 and 2019 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 reduction. Explain the types of reduction process.
2. Explain the types of impurities and their sources including genotoxic impurities.
3. Explain anaerobic fermentation process. Explain the production of vitamin B₁₂ through fermentation technique.

Short Notes

(9x5=45)

4. Counter current extraction.
5. Explain the kinetics and mechanism of aromatic nitration.
6. Explain the types of oxidative reaction.
7. Explain the production of streptomycin.
8. Write a note on streamlining reaction steps and route selection.
9. Explain the types of fire and fire extinguishers.
10. Explain personal protection equipments.
11. Explain the environmental management system.
12. Explain the type of crystallization and factors affecting crystallization.
