

QP CODE: 214331

Reg. No:.....

**Second Semester M. Pharm Degree Regular/Supplementary Examinations  
October 2023**

**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. Define crystallization. How it is attempted from aqueous and non-aqueous solutions
2. Discuss fermentation process in the production of penicillin and statins
3. Discuss the basic description of the occupational health and safety assessment series (OHSAS 1800)

**Short Notes**

**(9x5=45)**

4. Give a note on the impurities in API with its types
5. Define nucleation. Add a note on factors affecting nucleation
6. Process equipment for technical nitration
7. Discuss the significance of large scale process
8. Discuss the types of fire and fire extinguishers
9. Explain the types of oxidation reactions and liquid phase oxidation
10. Characteristics of cost effective routes
11. Hazard labels of chemicals
12. Discuss the theory of filtration

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