

M.Pharm (Pharmaceutical Chemistry) 1st Year 2nd Semester Examination-2024
Pharmaceutical Process Chemistry (MPC-204T)

FM-75

Time- 3hrs

Answer any five questions (At least one from each group)

Group-A

1. Explain steam distillation and vacuum filtration. [15]
2. a) Write in details about long tube vertical evaporator. Why it possesses added advantages over previous evaporators? [9+6=15]
b) Write a note on Soxhlet extraction.
3. Explain general methods of preparation of polymorphs. Briefly explain about hydrates, solvates and amorphous API. [15]

Group-B

4. Write short notes on the following (any five) [3 x 5]
(a) Differences between process chemistry and medicinal chemistry (b) Atom economy (c) steps in scale-up (d) Process adaptability (e) Major phases in validation (f) Environmental factor in process chemistry (g) Cost efficiency
5. Why is salt-screening exercise necessary for the synthesis of Sunitinib (API)? Discuss the synthesis strategies of sunitinib malate (API) via late amidation route. Highlight also the importance of late-stage amidation via activation using CDI. [3+8+4]

Group C

6. Discuss in detail about various aerobic and anaerobic formation processes. [15]
7. Write an account on microbial production of Vitamin B12. [15]
8. Discuss the structure, biosynthesis, process and uses of Streptomycin. [15]

[Turn over

Group D

1. a) What are the objectives of industrial safety?
b) What is MDDS?
c) What is fire hazard? **[5+5+5=15]**

2. a) What are the fire fighting measures?
b) What is the occupation health safety assessment specification?
c) Discuss the pharmaceutical wastes & their safety management? **[5+5+5=15]**