

Question Paper

Exam Date & Time: 18-May-2023 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

Manipal Academy of Higher Education, Manipal MPharm Theory End-Semester Examinations.

Pharmaceutical Process Chemistry [PCH-MPC204T-S3]

Marks: 75

Duration: 180 mins.

SECTION - A

Answer all the questions.

Answer the following (10 marks x 5 = 50 marks)

- 1) Explain on methods used for generation of salt forms and techniques for characterization of salts (10)
- 2) Discuss on OILING OUT, AGGLOMERATION and AGGREGATION issues in crystallization (5)
A)
B) Explain Cooling crystallization and Evaporative crystallization as crystallization process options (5)
- 3) What are the requirements for PPE? Add a note on types of PPE (5)
A)
B) Discuss the various stages in generating reproducible IPCs (5)
- 4) Explain in detail the techniques in oxidation process with examples. Explain the mechanism involved in oxidative cleavage of olefins (10)
- 5) What is RPKA? Discuss in detail the selection of reagents and route in RPKA. (10)

SECTION - B

Answer all the questions.

Answer the following (5 marks x 5 = 25 marks)

- 6) Explain the process chemistry considerations like yield and process excellence index in design of synthetic route for scale up (5)
- 7) Discuss solvation and its effect on solubility and reactivity and add a note on polarity and classification of solvents (5)
- 8) Explain the scope and benefits of ISO 14001. What is the importance and application of ISO 14001? (5)
- 9) How will you design an effluent treatment plant? Explain (5)
- 10) Explain homogeneous and heterogeneous catalysis. How this concept is applied in organic reactions? (5)

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