

Question Paper

Exam Date & Time: 13-May-2023 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

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

Advanced Organic Chemistry II [PCH-MPC202T-S2]

Marks: 75

Duration: 180 mins.

SECTION - A

Answer all the questions.

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

- 1) Enlist the important catalyst and building blocks used in asymmetric epoxidation reactions and alpha alkylation reactions. (10)
- 2) **Comment on the following in brief:** (10)
 - a) merits and demerits of flow chemistry technology 5 marks
 - b) Microwave dielectric heating mechanism 5 marks
- 3)
 - a) Discuss the principle involved in solution phase peptide synthesis. 7 marks (10)
 - b) Write a note on N-protection groups in peptide synthesis. 3 marks
- 4)
 - a) Write the difference between thermal and photochemical reactions. 4 marks (10)
 - b) Explain the Frontier molecular orbital theory of 1,3-butadiene. 6 marks
- 5)
 - a) Explain about deactivation of catalysts. (10)
 - b) What are the applications of Phase transfer catalysis in enzyme catalyzed reactions?

SECTION - B

Answer all the questions.

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

- 6) Write a note on site-specific modifications of peptides. (5)
- 7) Define with examples the cycloaddition and electrocyclic reactions. (5)
- 8) What is resolution and explain dynamic kinetic resolution with an example (5)
- 9) Explain hetero and retro Diels- alder reactions with examples. (5)
- 10) What are the different types of aldol reactions and explain substrate controlled aldol reactions with an example. (5)

-----End-----