

# Question Paper

Exam Date & Time: 05-May-2018 (02:00 PM - 05:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

### MANIPAL COLLEGE OF PHARMACEUTICAL SCIENCES

#### END SEMESTER THEORY EXAMINATIONS - MAY 2018

#### PROGRAM: MPHARM SEMESTER 2 (PHARMACEUTICAL CHEMISTRY)

DATE: 05/05/2018

TIME: 02:00 PM - 5:00 PM

#### Advanced Organic Chemistry II [PCH-MPC202T]

Marks: 50

Duration: 180 mins.

**a**

#### Answer all the questions.

Answer the following (5 marks x 8 = 40 marks)

- 1) Discuss in detail the principle, mechanism and applications of microwave synthesis. (5)
- 2) Write a note on broad perspectives of peptide synthesis. (5)
- 3) Define pericyclic reactions. Mention the types with examples. (5)
- 4) Give the working principle and synthetic applications of continuous flow reactors. (5)
- 5) What are the different types of chirality transfer and discuss intramolecular chirality transfer with an example. (5)
- 6) Enlist the important catalyst and building blocks used in asymmetric aldol reactions. (5)
- 7) Explain chiral separation by column chromatographic method. (5)
- 8) Discuss in detail asymmetric hydrogenation of alkenes. (5)

**b**

#### Answer all the questions.

Answer the following with specific answers (2 marks x 5 = 10 marks)

- 9) Mention applications of ultrasound assisted reactions. (2)
  - A)
  - B) What is meant by side reactions in peptide synthesis? (2)
  - C) Write the significance of bio catalyst. (2)

- D) Write two examples for metal catalyzed organic synthesis. (2)
- E) Write the importance of Wilkinson's catalyst and Ziegler-Natta catalyst. (2)

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