

Question Paper

Exam Date & Time: 29-Nov-2017 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

**MANIPAL COLLEGE OF PHARMACEUTICAL SCIENCES
END SEMESTER THEORY EXAMINATIONS - NOVEMBER 2017**

PROGRAM: MPHARM SEMESTER 1

DATE: 29/11/2017

TIME: 2:00PM - 5:00PM

Advanced Organic Chemistry I [PCH-MPC102T]

Marks: 50

Duration: 180 mins.

Answer all the questions.

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

- 1) Discuss with mechanism Wittig & Horner-Emmons reaction. (5)
- 2) Give any one method of synthesis for the following heterocycles: (5)
 - a) Isoquinoline
 - b) benzopyran
- 3) Give the structures for the following IUPAC names. (5)
 - a) azetidine
 - b) 1,2-oxazole
 - c) 2-pyrone
 - d) 1,4-dihydroazine
 - e) dibenzo[b,e]pyridine
- 4) What is Ugi? Explain with mechanism. (5)
- 5) Explain the chemistry of enolates. (5)
- 6) Explain the various methods for protection of amino group. (5)
- 7) What are the strategies in synthetic planning? Explain. (5)
- 8) Discuss the stability of carbocations. (5)

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

- 9) What is aromaticity? Give the criteria for a molecule to exhibit aromaticity. (2)
 - A)

- B) What is the role of sodium metal and ammonia in Birch reduction? (2)
- C) What is β -addition? Give an example. (2)
- D) What is Lawesson's reagent? Give its synthetic applications (2)
- E) Give two synthetic applications of Sodium hydride (2)

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