

Total No. of printed pages = 2

MPC 202 T ✓

Roll No. of candidate

--	--	--	--	--	--	--	--	--	--

23/09/22

BINA CHOWDHURY CENTRAL LIBRARY  
K31MT & 7IPS)  
Hatkrumapara,  
Wahel 75017

2022

M.Pharm. 2<sup>nd</sup> Semester End-Term Examination

ADVANCED ORGANIC CHEMISTRY - II

Full Marks – 75

Time – Three hours

The figures in the margin indicate full marks for the questions.

SECTION – A

(Marks - 25)

Answer any *five* from the following questions : (5 × 5 = 25)

1. Discuss the working principle and synthetic applications of continuous flow reactors.
2. Name the different types of pericyclic reactions and discuss any one in detail.
3. Define optical activity, specific rotation, meso compounds with suitable diagram and example.
4. What are photochemical reactions? Explain the basic principles of photochemical reactions.
5. Explain the methods of asymmetric synthesis using chiral pools.
6. State the advantages and disadvantages of heterogenous and homogenous catalysis. Write the role of enzyme in organic synthesis.

SECTION – B (Descriptive)

(Marks - 50)

Answer any *four* from the following questions: (4 × 12.5 = 50)

7. What is Green Chemistry? Explain the twelve principles of Green Chemistry with suitable examples.
8. What is solid phase synthesis? State the mechanism of protection and deprotection and coupling reaction in solid phase chemistry.

[Turn over

9. What is R and S configuration? Write a note on the Cahn, Ingold, Prelog (CIP) sequence rule.
10. Write about ultrasound assisted reaction. State the various types of sonochemical reactions.
11. Write a note on:
  - (a) Methods of enzyme immobilization
  - (b) Ziegler-Natta catalyst

Time - Three hours

Full Marks - 75

The marks in the margin indicate full marks for the questions.

### SECTION - A

(Marks - 25)

1. Discuss the working principle and explain applications of continuous flow reactors. (10 x 2 = 20)
2. Define the different types of catalytic reactions and discuss any one in detail.
3. Define optical activity, specific rotation, meso compounds with suitable diagram and example.
4. Write an appropriate reaction. Explain the basic principles of photochemical reactions.
5. Explain the methods of asymmetric synthesis using chiral pools.
6. State the advantages and disadvantages of heterogeneous and homogeneous catalysts. Write the total synthesis of aspirin.

### SECTION - B

(Marks - 50)

1. Write a note on the following question. (10 x 5 = 50)
2. What is Green Chemistry? Explain the twelve principles of Green Chemistry with suitable examples.
3. What is solid phase synthesis? Give the mechanism of protection and deprotection and coupling reaction in solid phase chemistry.