

Ref. No.: Ex/MPC202T/2024

**M.Pharm (Pharmaceutical Chemistry) 1st Year 2<sup>nd</sup> Semester Examination-2024**  
**Advanced Organic Chemistry-II (MPC-202T)**

**FM-75**

**Time-3hrs**

Answer any five questions taking at least one from each group

**Group-A**

1. a) What are the coupling reagents used in peptide synthesis?  
b) What are the principles of solid phase peptide synthesis? [10+5=15]
2. a) Discuss the Fmoc/t Bu and Boc/Bzl strategies in peptide chemistry. [15]

**Group-B**

- Q1. Discuss in detail about 12 principles of green chemistry. 15
- Q2. a) Discuss advantage and disadvantage of microwave assisted reactions. 4  
b) Write in detail about the principles of microwave activation. 7  
c) Discuss two major factors of microwave heating. 4
- Q3. a) Discuss in detail about the concept, principal and mechanisms of ultrasound processes in sonochemistry. 8  
b) Discuss in detail about the application of ultrasound in reactions with examples. 7

**Group-C**

- Q4. a) Write about different methods of asymmetry synthesis. 9+3×2=15  
b) Explain with suitable examples (Any three)  
i) Mesomer ii) Diastomer iii) Z notation iv) Specific rotation
- Q5. a) Classify symmetry with suitable example. 8+4+3=15  
b) What do you mean by pseudo-asymmetry center? Explain with suitable example.  
c) How will you separate enantiomers? Write in details.