

**M. PHARM**  
**(SEM II) THEORY EXAMINATION 2017-18**  
**ADVANCED ORGANIC CHEMISTRY-II**

*Time: 3 Hours**Total Marks: 75***Note:** 1. Attempt all Sections. If require any missing data; then choose suitably.

**SECTION A**

- 1. Attempt all questions in brief.** **10 x 2 = 20**
- “Green chemistry is sustainable chemistry” Explain.
  - Define heterogenous catalyts with examples.
  - Explain Enantiopure separation.
  - What are cis-trans isomerism and E and Z rotation?
  - Explain Fmoc protocol.
  - Define Chiral pool and Chiral auxiliaries.
  - Write principles of photochemical reactions.
  - Write synthetic applications of ultrasound assisted reactions.
  - Name solid supports and linkers used in peptide synthesis.
  - Write types of pericyclic reactions.

**SECTION B**

- 2. Attempt any two parts of the following:** **2 x 10 = 20**
- Write principles of solid phase peptide synthesis. Explain with a case study.
  - Write twelve principles of Green Chemistry with explanation.
  - Write preparation and characterization of heterogenous catalyst with examples.

**SECTION C**

- 3. Attempt any five parts of the following:** **7 x 5 = 35**
- Write a note on Ziegler-Natta catalyst.
  - Write working principle and advantages of Continuous flow reactors.
  - Explain stereoselective synthesis with examples.
  - Explain sigmatropic rearrangement with examples.
  - Write theory and applications of phase transfer catalysis.
  - Explain solution phase peptide synthesis with any one case study.
  - Explain microwave assisted reactions, solvents used and applications.