

**M. PHARM. SEM-I (CHOICE BASED CREDIT &
GRADE SYSTEM) : WINTER - 2017**
SUBJECT: ADVANCED PHARMACEUTICAL CHEMISTRY-I

Day: **Monday**
Date: **08/01/2018**

W-2017-3859

Time: **10.00 AM to 01.00 PM**
Max Marks: 60

N.B:

- 1) Attempt **ANY THREE** questions from section- I and **ANY THREE** questions from section-II
 - 2) Answers to both the sections should be written in the **SEPARATE** answer books.
 - 3) Give reactions, structures, schemes **WHEREVER** necessary.
 - 4) Figures to the right indicate **FULL** marks.
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SECTION-I

- Q.1** Explain principle, mechanism and applications of claisen- Schmidt (10)
condensation, curtius rearrangement and Beckmann rearrangement.
- Q.2** Discuss in detail catalyzed reactions with its classification. Explain in detail
transition metal catalysis and catalysis by enzymes.
- Q.3** Explain nucleophilic and non- nucleophilic bases. Give the structures of any (10)
two strong non-nucleophilic bases used for the generation of enolate ion.
- Q.4** Write short notes on any **TWO** of the following: (10)
- a) Fluorinating agents
 - b) Protective groups for -OH
 - c) Metal ammonia reduction

SECTION-II

- Q.5** a) Classify pericyclic reactions and discuss cycloaddition reaction in detail. (05)
b) Discuss sigmatropic rearrangements with suitable examples. (05)
- Q.6** a) Write note on HOMO conservation of orbital symmetry. (05)
b) Describe Paal- Knorr Pyrrole synthesis and Fischer Indole synthesis. (05)
- Q.7** What are 'active methylene' compounds? Give an example and discuss its (10)
preparation.
- Q.8** Write short notes on any **TWO** of the following: (10)
- a) Stereochemistry of spiro compounds
 - b) Cram's rule and prelog modification
 - c) Woodward rules for allowed and disallowed motion

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