

Code: 9S02103

M.Pharm I Semester Regular & Supplementary Examinations January 2017  
**ADVANCED PHARMACEUTICAL ORGANIC CHEMISTRY - I**  
(Pharmaceutical Chemistry)

Time: 3 hours

Max. Marks: 60

Answer any FIVE questions  
All questions carry equal marks

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- 1 (a) Describe the mechanism of elimination reactions. Add a note on factors affecting elimination reactions.  
(b) Explain the addition reactions involving carbon-hetero multiple bonds.
- 2 (a) How will you determine the configuration of geometrical isomers?  
(b) Give a detailed account on nitrenes and free radicals.
- 3 With suitable examples, explain the mechanism and applications of:  
(a) Hoffmann rearrangement.  
(b) Beckmann rearrangement.
- 4 Write short notes on:  
(a) Stereo selective synthesis.  
(b) Stability of carbanions.  
(c) Asymmetric synthesis.
- 5 Illustrate with examples:  
(a) Carbon to oxygen migration.  
(b) Stereochemical aspects of fused, ring systems.
- 6 Discuss in detail:  
(a) Mechanism and stereochemistry of  $SN_1$  reactions.  
(b) Stereochemistry of spiranes.  
(c) Electrophilic additions involving in carbon-carbon double bonds.
- 7 (a) Discuss the concept of aromaticity and antiaromaticity. Add a note on mechanism, orientation and reactivity of electrophilic aromatic reactions.  
(b) With suitable examples, explain the mechanisms of free radical substitution reactions.
- 8 What do you mean by:  
(a) Modern theory of nature of double bonds.  
(b) Elements of symmetry.  
(c) Sigmatropic reactions.

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