

MPY-202(Pch)
M. Pharm. (Pharmaceutical Chemistry)
(Second Semester) EXAMINATION, June, 2012
(Grading/Non-Grading)
ADVANCED ORGANIC: CHEMISTRY
(MPY-202(Pch))

Time : Three Hours

Maximum Marks : 70

Attempt any five questions. All questions carry equal marks.

1. Discuss any two of the following in detail :

- (a) Stereochemical aspects of stability and ease of ring formation.
- (b) Effects of conformation on reactivity of cyclohexanes.
- (c) Racemic modification and resolution criteria of optical purity.

2. Give a detailed account of any two of the following :

- (a) Generation and Fate of carbenes
- (b) Mechanism of oxidation
- (c) Anchimeric assistance and neighbouring group mechanism

3. Discuss any two of the following in detail

- (a) Stereochemistry of Electrocyclic reactions
- (b) E₁ vs E₂ mechanisms
- (c) Quantitative treatments of the effect of structure on reactivity

4. Give a detailed account of any two of the following :

- (a) Hydrogenation of triple bond compounds
- (b) Benzyne mechanism and methods to determine it
- (c) Newer methods of enzymatic asymmetric synthesis

5. Write the composition, preparation and uses of any four of the following reagents

- (a) Ruthenium tetroxide
- (b) Jones reagent
- (c) Borane in THF
- (d) Ziegler-Natta catalyst
- (e) Phase transfer catalysts

6. Discuss any four of the following rearrangements with mechanism :

- a) Fries
- b) Pinacol-Pinacolone
- c) Hoffmann
- d) Beckmann
- e) Schmidt

7. Discuss any four of the following reactions with mechanism :

- (a) Birch reduction
- (b) Oppenauer oxidation
- (c) Jourdan-Ullmann reaction
- (d) Barton reaction
- (e) Ozonolysis