



Reg. No. :

Name :

Second Semester M.Sc. Degree Examination, August 2015
Branch : Chemistry
CH/CL/CA/CM 222 : ORGANIC CHEMISTRY – II
(2013 Admission)

Time : 3 Hours

Max. Marks : 75

SECTION – A

Answer **any two** among (a), (b) and (c) from **each** question. **Each** sub-question carries **2** marks.

1. a) Show how vicinal diols are converted to ketones by rearrangement.
b) Give the mechanism of Curtius rearrangement.
c) Briefly explain Fischer Hepp reaction.
2. a) Explain briefly cheletropic reaction with an example.
b) What are metallocenes ?
c) Explain briefly on one reaction.
3. a) Briefly discuss photo Fries rearrangement.
b) Differentiate singlet and triplet states in photochemistry.
c) Explain briefly on Barton reaction.
4. a) Describe supercritical fluid extraction.
b) Discuss briefly on the colour reactions used in the identification of alkaloids.
c) Draw the structure of ephedrine.
5. a) Explain F strain.
b) Explain microscopic reversibility.
c) Describe Taft equation. **(10×2=20 Marks)**

SECTION – B

Answer either (a) or (b) from **each** question. **Each** question carries **5** marks.

6. a) Discuss the mechanism of Wolff rearrangement.
b) Describe the mechanism and applications of Favorski reaction.



7. a) Discuss the stereochemical aspects of Cope rearrangement.
b) Give an account of Sigmatropic rearrangements.
8. a) Briefly explain di- π -methane rearrangement with examples.
b) Discuss briefly on Norrish type reactions.
9. a) Explain Von Braun degradation method.
b) Describe Hoffmann reaction.
10. Discuss briefly on :
 - a) Marcus theory.
 - b) Hammond postulate.

(5×5=25 Marks)

SECTION – C

Answer **any three** questions. **Each** question carries **10** marks.

11. Discuss the mechanism and applications of
 - i) Demjanov reaction.
 - ii) Fries rearrangement.
12. Discuss the following :
 - i) Electrocyclic reactions.
 - ii) Huckel-Mobius treatment of electrocyclic reactions.
13. Discuss the following :
 - i) Photochemistry of vision.
 - ii) Photo reactions of carbonyl compounds.
14. Discuss the following :
 - i) Structure elucidation of nicotine.
 - ii) Synthesis of Quercetin.
15. Discuss the following :
 - i) Phase transfer catalysis and its applications.
 - ii) Methods of determining reaction mechanism.

(3×10=30 Marks)
