M.Sc. Semester-IV
Organic Chemistry Paper IV
Selected Topic In Chemistry
CHNN-704

Unit-1: Molecular Rearrangements-1 25% (15 Hours)

Rearrangement to electron deficient atoms,

(A) Rearrangement to electron deficient carbon

(1) Pinacol Pinacol rearrangement
(2) Wangermeerwin rearrangement
(3) Wolf rearrangement

(B) Rearrange to Electron Deficient Nitrogen

(4) Hofmann rearrangement
(5) Curtius rearrangement
(6) Beckmann rearrangement

(C) Rearrangement to Electron Deficient Oxygen

(7) Baeyervilliger Reaction,
(8) Dakin Reaction

Unit-2 Molecular Rearrangements-2 25% (15 Hours)

(A) Rearrangement to electron deficient carbon
Stevens rearrangement, Witting rearrangement, Favorskii rearrangement
(B) Aromatic Rearrangement
Hofmann Martius rearrangement, Claisen rearrangement, Cope rearrangement
Benzidine rearrangement, Fries rearrangement

Unit-3 Organo Metallic Compounds 25% (15 Hours)

Organo Magnesium Compounds, Organo Aluminum Compounds, Organo Cadmium Compounds, Organo Silicon Compounds, Organo Lithium Compounds,

Unit-4 Name Reactions 25% (15 Hours)

Cannizaro Reaction, Dieckman Reaction, Fischer Indole Reaction, Leuckart Reaction, Reformastky Reaction, Witting reaction, Pechmann Reaction, Dilesalder Reaction, Wolfkishner Reduction, Friedel-Crafts Reaction, Reimertiemann Reaction,

Basic Text & Reference Books:

1. Organic Chemistry Reaction and Reagents O. P. Agarwal
2. Organic Chemistry by J. Clayden, N. Greeves and S. Warren, 2nd edition, Oxford University Press, UK.
3. Modern Methods of Organic Synthesis; W. Carruthers and I. Coldham, 4th edition, Cambridge University Press, UK.
4. Name Reaction for Functional Group Transformation, E. J. Corey and Jie Jack Lie, John Wiley and Sons, New Jersey.
5. Name Reactions, Jie Jack Lie, 4th edition, Springer, New York.
6. Selected Organic Synthesis, Ian Fleming, John Wiley & Sons, New Jersey.