

**M.Sc. Semester-IV**  
**Organic Chemistry Paper-V**  
**Disconnection Approach**  
**CHNN-705 (A)**  
**Subject Elective**

**Unit-1: Disconnection Approach** **50% (15 Hours)**

Introduction and definition of disconnection, Synthons, Synthetic equivalents, Disconnection Approach, Functional Group Inter Conversion, used in disconnection. The importance of order of events in organic synthesis, One and two C-X group disconnection, and Synthesis of Amine, Reversal of Polarity.

**Unit-2: Protecting Groups & Reactions:** **50% (15 Hours)**

Protection of organic functional groups, Protecting Reagents and Removal of Protecting. Protection of Amine, Alcohol, Carbonyl and Carboxylic Acid Groups. Suzuki Reaction, Smith Reaction, Sharpless Epoxidation Reaction, Heck Reaction Michael addition and Robinson Annulation.

**Basic Text & Reference Books:-**

1. Designing Organic Synthesis – A Programmed Introduction to the Synthons Approach, Stuart Warren, John Wiley & Sons (1994).
2. Organic Synthesis: The disconnection approach, Stuart Warren, John Wiley & Sons (1994).
3. Selected Organic Synthesis, Ian Fleming, John Wiley & Sons (1977).
4. Organic Chemistry, 2<sup>nd</sup> edition by Jonathan Clayden, Nick Greeves & Stuart Warren, Oxford University Press.
5. Modern Methods of Organic Synthesis, 4<sup>th</sup> edition by W. Carruthers & Iain Coldham, Cambridge University Press.
6. Modern Organic Synthesis: An introduction by George S. Zweifel & Michael H. Nantz, W. H. Freeman & Company.
7. Greene's Protective Groups in Organic Synthesis, 4th edition, by P. G. M. Wuts and T.W. Greene, Wiley Interscience.
8. Organic Chemistry by J. Clayden, N. Greeves and S. Warren, 2<sup>nd</sup> edition, Oxford University Press, UK.
9. Modern Methods of Organic Synthesis; W. Carruthers and I. Coldham, 4<sup>th</sup> edition, Cambridge University Press, UK.
10. Name Reactions, Jie Jack Lie, 4<sup>th</sup> edition, Springer, New York.