

SHREE H.N. SHUKLA GROUP OF COLLEGES

(AFFILIATED TO SAURASHTRA UNIVERSITY & GTU)



2-vaishali nagar, Near
Amrapali railway
crossing,
Raiya road, Rajkot-
360001. Ph.No.-
(0281)2440478, 2472590

3-vaishali nagar, Near
Amrapali railway
crossing,
Raiya road, Rajkot-
360001. Ph.No.-
(0281)2471645

Behind marketing yard,
Near Lalpari lake,
Between Amagadh-
Bhichri, Rajkot-360002.
Ph.No.-90990 63150

M.Sc. SEMESTER-I

C-102: ORGANIC CHEMISTRY

1. organic reactive intermediates and reaction mechanism

Generation, stability and reactivity of intermediates, addition, elimination and substitution reactions. Determination of reaction pathways. Hammett equation and LFER relationship.

2. Name reaction and its application in organic synthesis

Barbier–Wieland degradation, Prins, Barton, Vilsmer-Haack, Bouveault–Blanc reduction, Willgerodt-Kindler reaction, Biginelli reaction, Birch-reduction, HofmannLoffler, Freytag, Hantzsch, Elbs-persulphate, McMurry reaction, Noyori annulations reaction, Passerini, Reformatsky, Suzuki coupling, Stille coupling Sharpless asymmetric epoxidation, Stobbe condensation, and Ugi reaction.

3. Rearrangements

Advances in Fries rearrangement, Beckmann rearrangement, Benzilbenzilic acid, Favorskii, Neber, Sommelet Hauser, Curtius, Schmidt, BaeyerVilliger.

4. Important Reagents

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DCC, Gilman reagent, PTC and crown ethers, Merrifield resin, Woodward and Prevost hydroxylation, reagent for hydroboration, TMS-I, Wilkinson's catalyst, DDQ.

Reference Books

1. Organic Chemistry by G. Marc. Loudon, Oxford University Press (2002).
2. Organic Reaction Mechanism (2 edition) – V.K. Ahluwalia and R.K. Parasar.
3. Reaction Mechanism and Reagents in Organic Chemistry – Gurdeep R. Chatwal.
4. Organic Chemistry by Morrison and Boyd, Prentice Hall Pvt Ltd (6th edition), (2003)
5. A Text Book of Organic Chemistry-R.K.Bansal, New Age International Pvt.Ltd. (2003).
6. Advanced Organic Chemistry (4 edition) – Jerry March.
7. Reactive Intermediates in Organic Chemistry. J. P. Trivedi, University Granth Nirman Board.
8. Organic Chemistry by V.K.Ahluwalia, Madhuri Goyal, Narosa Publishing House, (2000).
9. Organic Synthesis (2th edition) by M.B. Smith, Mcgraw-Hill, Inc. (2001).
10. Some Modern Methods of Organic synthesis (4nd edition), W.Carruthers, Cambridge University Press (2004).

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11. Organic Chemistry by J.Clayden, N. Greeves, S. Warren, P. Wothers, Oxford University Press (2000).
12. Organic Chemistry by J. McMurry, Asian Books Pvt. Ltd., 5 edition (2001).
13. Name Reaction in Organic Synthesis, Foundation Books Pvt. Ltd. (2006)