

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 Amargadh-
Bhichri, Rajkot-360002.
Ph.No.-90990 63150

M. Sc. SEMESTER-III

ORGANIC-PHARMACEUTICAL CHEMISTRY

C(OP)-302: ORGANIC SYNTHESIS-A DISCONNECTION APPROACH

1. Disconnection fundamentals, explanation of synthons, synthetic equivalents considering various examples, concept and design of synthesis for molecules, criteria for good disconnection.
2. Explanation of one group disconnection and two group disconnection considering various examples.
3. Disconnections considering use of Diels-Alder reaction concept and its use in synthesizing organic molecules.
4. Reversal of polarity meaning, explanation (Unpolung) various examples in which polarity of carbon is reversed.
5. Protection and deprotection of various functional groups, various reagents for and examples.
6. Ring synthesis: three and four membered cyclic compounds.
7. Disconnection of acyclic and cyclic heterocompounds, synthesis of ethers, amines, nitrogen and oxygen containing five and six membered heterocyclic compounds.

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8. logical two disconnection and synthesis of 2-hydroxy carbonyl compounds, 1,2diols, 1,4-diols and 1,6-carbonyl compounds.

Reference Books

1. Designing Organic Synthesis – S. Warren, Wiley.
2. Some Modern Methods for Organic Synthesis – W. Carruthers.
3. Principles of Organic Synthesis – R. Norman and J. M. Coxon.
4. Advanced Organic Chemistry Part B – F. A. Carey and R. J. Sundberg.
5. Organic Synthesis – Concept, Methods, Starting Materials – J. Fuhrhop.
6. Modern Synthetic Reactions – H. O. House, W. A. Benjamin.
7. Disconnection Approach – Warren.