

GUJARAT TECHNOLOGICAL UNIVERSITY

B.E Semester: 3 Textile Production

Subject Code 132805
Subject Name Organic Chemistry

Sr.No	Course contents
1.	Structure & Properties : Basic concepts - Atomic orbitals, covalent bond, Polarity of bonds, Solubility - non ionic solutes, protic & aprotic solvents. Application of electronic theory of valency : Factor which affect reaction - electromeric effects, Inductives, Mesomeries effect, Hemolytic & Heterolitic fission - Types of organic reaction, some important mechanisms like Electrophilic substitution and addition, Nucleophilic Addition & Substitution
2.	Organic Chemistry based on functional groups. C - X bonded compounds - Alkyl halides & arylhalides C - O bonded compounds - Alcohols & Phenols C = O bonded compounds - Aldehydes, Ketones, Esters, Carboxylic Acids, Amides C - N bonded compounds
3.	Preparation & important reaction of polynuclear hydrocarbons with specific reference to Naphthalene & Anthracene. Heterocyclic compounds - Five & Six membering compounds, Aromaticity & Hiickel Rule preparation properties & reactions of pyrrole, furan, thiophene, Pyridine.
4.	Stereo Chemistry : Stereo isomerism, Optical activity, Plane Polarised light, Specific rotation, Polarimeter, Enantiomerism, Chirality, Optical resolution. Principles of laboratory methods including introduction to process of separation, purification & identification.

Reference Books:

1. A Text Book Of Organic Chemistry - L. Soni
2. Advanced Organic Chemistry - Fischer & Fischer
3. Advanced Organic Chemistry – Robert & Cassero
4. Organic Chemistry, Vol. I & II ELBS & Longmans, Green - L. Finar