SUBJECT NO-CY20103, SUBJECT NAME- Organic Chemistry I

LTP- 2-0-0,CRD- 2

SYLLABUS :-

Prerequisite : CY11001

Brief discussion on the strengths of organic acids and bases.

Electrophilic & Nucleophilic substitution reactions in aromatic systems: Electrophilic attack on benzene and C6H5Y-nitration, halogenation, sulphonation, Friedel Crafts reactions, Electronic effect of Y, Kinetic vs. thermodynamic control, important reactions of phenols, aromatic amino compounds and naphthalene.

Nucleophilic attack on aromatic species: substitution of hydrogen, substitution of atoms other than hydrogen, substitution via aryne intermediates.

Synthesis and reaction of heteroaromatic compounds- furan, pyrrole, thiophen and pyridine.

Electrophilic and nucleophilic addition reaction to C=C: Electrophilic addition reactions via halonium & carbocation intermediate, hydroboration, regio- & stereochemistry, Oxidation reactions- hydroxylation, ozonolysis, electrophilic addition to conjugated dienes,

Elimination reaction: 1,2-elimination via E1, E1cB, E2 mechanism, stereoselectivity in E2 reaction, Saytzeff vs. Hoffmann elimination, elimination vs. substitution, other 1,2-elimination, 1,1-elimination, pyrolytic syn-elimination.

Books:

A Guidebook to Mechanism in Organic Chemistry by Peter Sykes

Organic Chemistry, Vol. 1 by I. L. Finar