SUBJECT NO-CY21006, SUBJECT NAME- Organic Chemistry II

LTP- 2-1-0,CRD- 3

SYLLABUS :-

Prerequisite: CY20103

Nucleophilic addition to C=X (X = O, NR):

Simple addition reactions: Structure and reactivity, addition of alcohols, thiols, hydrogen cyanide, bisulphite and other anions, hydride ions, complex metal hydride ions; Meerwein-Ponndorf âVerley reduction, Cannizzaro reaction, Clemmensen reduction, Beckmann rearrangement.

Carbon nucleophile addition: Grignard reagents, acetylide anions, other carbanions, stereoselectivity (Cramâs Rule); aldol reactions and its stereoselectivity (syn- & anti-aldol), Enamine Chemistry, Mannich reaction, Henry reaction, Perkin reaction, Knoevenagel and Stobbe reactions, Claisen ester condensation, Benzoin condensation, Benzilic acid rearrangement, Darzens glycidic ester condensation, Reformatsky reaction, Baeyer-Villiger oxidation, Favorski rearrangement, McMurry coupling, Michael reaction (1,4-conjugate addition) to C=C-C=O systems, Robinson annulation, Baylis-Hilmann reaction.

Active methylene compounds: alkylation, conjugate addition, synthesis of different structural unit using active methylene compounds.

Books:

A Guide book to Mechanism in Organic Chemistry by Peter Sykes

Organic Chemistry by Clayden, Greeves, Warren and Wothers