SUBJECT NO-CY31003, SUBJECT NAME- ORGANIC CHEMISTRY III

LTP- 3-0-0,CRD- 3

SYLLABUS :-

Prerequisite : CY21006Addition/elimination reactions of carboxylic acid derivatives: Grignard reagents and related nucleophiles, base- and acid-catalyzed reactions (different types of saponification mechanism), Lossen-, Curtius- and Wolff rearrangement.Other reactive intermediates, their reactivity and reactions: Generation, addition- and insertion reactions of carbenes and nitrenes, generation and Wittig reactions of phosphorous ylides, generation and reactions with carbonyl and Ã¯ÂÂ¡,Ã¯ÂÂ¢-unsaturated carbonyl compounds of sulfur ylides, generation of radicals and different types of reactions.Synthesis and reactions of quinolines and indoles.Important oxidative and reductive reactions: Alkenes to epoxides and dihydroxy compounds; Alcohols to carbonyl compounds (e.g. K2Cr2O7, PCC, PDC, Jones-, Swern-, Dess-Martin oxidation); Carbonyls to alcohols,; Issue of chemoselectivityPericyclic reactions (10 lectures): Theory and applications of electrocyclic reactions (4n and 4n 2 electrons systems), Woodward-Hoffman rules, FMO mechanism, Diels-Alder reactions- FMO mechanism for endo- and exo-selectivity, stereochemistry, inter- and intramolecular reactions. Sigmatropic rearrangement- types of reactions, Claisen- and Cope rearrangements, FMO mechanism, stereochemical implications, [2 2]-cycloadditions and 1,3-dipolar cycloadditions.BooksOrganic Chemistry by Clayden, Greeves, Warren and WothersName Reactions by Jie Jack Li