Paper 502102 Organic chemistry 3 Credits,75 Marks(45hrs)

3 Hrs/Week

I) Synthetic Dyes and Drugs 16 Hrs.

Definition, colour and constitution (electronic concept) of dye, classification based on chemical constitution, synthesis of methyl orange, Congo red, malachite green, crystal violet, Alizarin and indigo dyes. Synthetic Drugs, Definition, introduction, classification of drugs.Properties of ideal drug.Synthesis of chloromycetien, paracetamol,phenacetien, sulphaguainidine.

II. Organometallic compounds 08 Hrs

Organomagnesiumcompounds:the Grignard reagent formation,structure and chemical reactions.organozinccompound,formation and chemical reactions,organolithium compound, formation and chemical reactions

III. Organic synthesis via enolates 13Hrs

Definition,active methylene compounds,preparation of acetoacetic ester,(Claisen condensation withmechanism),acidity of alpha hydrogen, properties and reactions involving formation ofmono,di and unsaturated carboxylic acids,synthesis of ketone,di-ketone,4-methyluracil from acetoacetic ester,keto-enoltautomerism. Preparation of diethyl malonate,properties and reactions involved in alkylation,formation of mono,di and unsaturated carboxylic acids,synthesis of glycine and barbutric acids from diethyl malonate.

IV. Fats,oils and detergents 08Hrs

Natural fats,edible and industrial oils of vegetable origin,manufacture of soyabean oil by solvent extraction method and isolation and uses of essential oils. Types of animal fats and oils and definition of saponification value, iodine value and acid value.Detergents:definition, introduction and preparation of sodium alkyl sulphonate,alkyl benzene sulphonate,and amide sulphonate,(one example each),cleansing action of detergent.