Lesson Plan

B. Sc. Ist Year (IInd Semester)

Paper-VI (CH-106) Organic Chemistry

Teacher name: Dr. Neha Aggarwal

April 2021

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| Nomenclature of alkenes, mechanisms of dehydration of alcohols and dehydrohalogenation of alkyl halide. The Saytzeff rule, Hofmann elimination, physical properties and relative stabilities of alkenes. mechanisms involved in⎯Chemical reactions of alkenes hydrogenation, electrophilic and free radical additions, Markownikoff’s rule, hydroboration–oxidation, oxymercurationreduction, ozonolysis, hydration, hydroxylation and oxidation with KMnO4 . Arenes and Aromaticity Nomenclature of benzene derivatives: Aromatic nucleus and side chain. Aromaticity: the Huckel rule, aromatic ions, annulenes up to 10 carbon atoms, aromatic, anti-aromatic and non-aromatic compounds.  |

May 2021

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| general pattern of the⎯Aromatic electrophilic substitution mechanism, mechansim of nitration, halogenation, sulphonation, and Friedel-Crafts reaction. Energy profile diagrams. Activating , deactivating substituents and orientation. Section-B (22 Periods) Dienes and Alkynes Nomenclature and classification of dienes: isolated, conjugated and ⎯cumulated dienes. Structure of butadiene. Chemical reactions 1,2 and 1,4 additions (Electrophilic & free radical mechanism), Diels-Alder reaction, Nomenclature, structure and bonding in alkynes. Methods of formation., |

June 2021

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| Chemical reactions of alkynes, acidity of alkynes. Mechanism of electrophilic and nucleophilic addition reactions, hydroboration-oxidation of alkynes. 12 Alkyl and Aryl Halides Nomenclature and classes of alkyl halides, methods of formation, chemical reactions. Mechanisms and stereochemistry of nucleophilic substitution reactions of alkyl halides, S N2 and S N1 reactions with energy profile diagrams. Methods of formation and reactions of a ryl halides |

July 2021

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| The additionelimination and the elimination-addition mechanisms of nucleophilic aromatic substitution reactions. Relative reactivities of alkyl halides vs allyl, vinyl and aryl halides. |