Lesson Plan

Session 2021-2022

Class - B.Sc. 6th sem. (NM)

Subject - Organic, Inorganic, Physical chemistry

Name - Ms. Navita Yadav

week I (22nd - 26th March)	Heterocyclic compound I (Introduction and aromatic characteristic
week II (28th - 2nd April)	Synthesis and chemical reactions of pyrrole, furan, thiophene
week III (4th - 9th April)	Heterocyclic compound II (Introduction and preparation of Indole, quinoline and isoquinolene)
week IV (11th - 16th April)	Amino acid, Peptide and Protein (classification of amino acid and their preparation)
week V (18th - 23rd April)	(classification of protein and their preparation - classical, Solid-phase and structure of protein)
week VI (25th - 30th April)	Synthetic polymer Organosulphur compound
week VII (2nd - 7th May)	organometallic compound (classification, bonding of Li, Al, Hg, Sn and nature of bonding)
week VIII (9th - 14th May)	Acid and Bases (Arrhenius, Bronsted-Lowry Solvent system, lewis concept Relative strength, HSAB concept electronegativity)

Week 9th (16th – 21st May)	Bioinorganic chemistry (Haemoglobin, Myoglobin)
Week 10 (23rd – 28th May)	Silicones and phosphazenes
Week 11 (30th – 4th June)	Photochemistry Phase equilibrium
week 12 (6th – 11th June)	Solution and colligative properties
* (Revision and week 13 (13th June .. 18 June)	Problem Discussion) of various years papers and students. electronic spectrum
Week 14 (20th June – 25th June	
week 15 (27th ..... July)	Revision & Problem Solvin

Lesson Plan

Session 2021-2022

Class - B.Sc 4th sem (NM)
Subject - Organic chemistry
Name - Ms. Navita yadav

Week I (22 - 26th March	Amine Structure and nomenclature of amine preparation of amine
Week 2 (28th - 2nd April)	Seperation of 1°, 2°, 3° amine, Basicity of amines
Week 3 (4th - 9th April)	Preparation of aryl amine chemical reaction of amine
Week 4 (11th - 16th April)	Electrophilic substitution in aryl amine
Week 5 (18th - 23rd April)	Nitro Preparation of nitro compound & their chemical reaction
Week 6 (25th - 30th April	Electrophilic substitution reaction in nitro arene Reduction in acidic, neutral & alkaline medium
Week 7 (2nd - 7th May)	Diazonium Salt Mechⁿ of diazotisation & structure of benzene diazonium chloride Chemical reaction of diazo group.

Week 8 (9th - 14th May)	chemical reaction of diazonium salt, coupling reaction and its application.
Week 9 (16 - 21st May)	Infrared spectroscopy Introduction, molecular vibration, Hooke's law, selection rule
Week 10 (23rd - 28th May)	Intensity of IR band, fingerprint region, Interpretation of IR spectra of organic compounds
Week 11 (30th - 4th June)	Application of I.R spectroscopy in structure elucidation and various organic compounds.
Week 12 (6th - 11th June)	Aldehyde & ketone Nomenclature & Structure of carbonyl compound, synthesis of aldehyde
Week 13 (13th - 18th June)	comparision of reactivity of aldehyde & ketone, Mechanism of nucleophilic addition to carbonyl group.
Week 14 (20th - 25th June)	Wiltig reaction, Mannich rxn Baeyn - Villiger oxidation, Cannizzaro reaction
Week 15 (27 - 2nd July	MPV, Clemmenson, Wolff Kishner. $LiAlH_4$ & $NaBH_4$ redn
Week 16 (4th - ---)	Revision & Problem discussion

Lesson - Plan Session 2021 - 2022

Class - B.Sc IInd sem
Subject - Organic chemistry
Name - Ms. Navita yadav

Week I (22 - 26th March)	Alkene (Nomenclature and introductio
Week II (28th - 2nd April)	Methods of synthesis of alkene
Week 3 (4th - 9th April)	Properties and stabilities of alkene
Week 4 (11th - 16th April)	Chemical reactions of alkene
Week 5 (18th - 23rd April)	Arenes and aromaticity (Nomenclature and aromatici of benzene and its derivatives)
Week 6 (25th - 30th April)	Aromatic Electrophilic substitutio of benzene and its derivative
Week 7 (2nd - 7th May)	Energy profile diagram Activating, deactivating substituent and orientation
Week 8 (9th - 14th May)	Diene and Alkyne (classification of dienes) Structure of butadiene

Week 9 (16 – 21st May)	chemical reactions (1,2 & 1,4 addition), Diels Alder reaction
Week 10 (23rd – 28th May)	Nomenclature of alkynes, its structure and method of formation.
Week 11 (30th – 4th June)	chemical reaction of alkyne
Week 12 (6th – 11th June)	Mechanism of electrophilic and nucleophilic addition reaction.
Week 13 (13th – 18th June)	Alkyl and Aryl halide Nomenclature and method of formation of alkyl halides
Week 14 (20th – 25th June)	Mechanism of ES Reaction of alkyl halide, S_N1 and S_N2 reactions
Week 15 (27th – 2nd July	Method of formation of aryl halide and mechn of substitution reaction
Week 16 (4th July ----)	Reactivity of alkyl halide and Revision with problem discussion.

Lesson Plan Session 2021-2022

Class - B.Sc 4th Sem.
Subject - Inorganic chemistry
Name - Ms. Navita yadav.

Week 1 (22 - 26th March)	Lanthanide (General characteristic, physical constants of lanthanide)
Week 2 (28th - 2nd April)	(oxidation state, Magnetic, colour properties etc. of lanthanides)
Week 3 (4th - 9th April)	occurence and seperation of lanthanide
Week 4 (11th - 16th April)	compounds of lanthanide
Week 5 (18th - 23rd April)	General features of Actinides
Week 6 (25th - 30th April)	Seperation of Np, Pu and Am from uranium.
Week 7 (2nd - 7th May)	Comparision of properties of Lanthanide & Actinides
Week 8 (9 - 14th May)	Theory of Qualitative and Quantitative analysis I (Introduction)

week 9 (16 - 21st May)	chemistry of various acidic radicals
week 10 23rd - 28th May	chemistry of identification of acid radicals
week 11 (30th - 4th June)	Interfering Radicals and their Removal
week 12 (6th - 11th June)	chemistry of various basic radicals
week 13 (13th - 18th June)	chemistry of identification of basic radicals
week 14 (20th - 25th June)	Test of special combination of acids and basic radicals
week 15 (27 - 2nd July)	Theory of precipitation coprecipitation.
week 16 (4th July - ....)	Revision & Problem discussion