

Lesson Plan For B.Sc-2nd Sem, (Chemistry)
Session - 2021-2022 (April to June 2022)

April 2022	First week	Unit 1 - Alkenes → Saytzeff's rule, Hofmann Elimina ⁿ , Oxymurca ⁿ -dehydrat ⁿ , Hydrobora ⁿ etc.
	Second week	Unit 2 - Arenes and Aromaticity - Huckel's rule, Annulenes, Aromatic Electrophilic sub ⁿ - examples
	Third week	Unit 3 - Dienes and Alkynes - 1,2 & 1,4-add ⁿ , Diels Alder Rxn
	Fourth week	Unit 4 - Alkyl and Aryl Halides - S _N ² & S _N ¹ mechanism, Add ⁿ -Elimina ⁿ & Elimina ⁿ -Add ⁿ mechanisms, Prop ⁿ Chemical Rxns
May 2022	First week	Unit I - Kinetics - I - Order of rxn, Half life Period, Methods of determina ⁿ of order
	Second week	Unit II - Kinetics - II Arrhenius eq ⁿ Simple Collision Theory for unimolecular and Bimolecular Rxns, T.S. Theory
	Third week	Unit III - Electrochemistry - I DHO eq ⁿ , Transport Number, factors affecting electrolytic Conduc ⁿ
	Fourth week	Unit IV - Electrochemistry - II - Kohlrausch's law, Its applications, Degree of dissociat ⁿ , Titrations pH, pKa, Buffer action, Henderson - Haezel eq ⁿ
June 2022	First week	Unit I - Hydrogen Bonding & Vander waal forces, Unit II - Metallic Bond and Semiconductors
	Second week	Unit III - s-block elements, Noble Gases Unit IV - p-block - 13 th , 14 th , 15 th p elements
	Third week	Unit V - p-block - 16 th , 17 th p elements Revision of Electrochemistry Part I
	Fourth week	Revision of Electrochemistry part II, Kinetics I & II.

Akhil

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Lesson Plan For B.Sc. 4th Sem (Chemistry)
Session - 2021-2022 (April to June 2022)

April 2022	First week	Amines - Structure, Properties, 1 ^o , 2 ^o & 3 ^o amines, Prop ⁿ , Gabrielphthalimide, Hofmann Bromamide rxn, Rn E HNO ₂ , Diazonium salts
	Second week	Nitro compounds - Prop ⁿ , Chemical reactions, Mechanisms, red ⁿ in acidic, basic & neutral medium
	Third week	Aldehydes & ketones - named reactions, Wittig, Mannich, MPV, Wolff-Kishner
	Fourth week	IR spectroscopy - Molecular vibrations, Hook's law, selection rules, Intensity, Pos ⁿ of IR bands, Fingerprint & Functional group region
May 2022	First week	Thermodynamics III - Carnot's cycle, Theorem Entropy
	Second week	Thermodynamics IV - 3 rd law of Thermodynamics, Nernst heat theorem, Gibbs Helmholtz eqn
	Third week	Electrochemistry III - Electrolytic & Galvanic cells, Reversible & Irreversible electrodes
	Fourth week	Electrochemistry IV - Conc ⁿ cells conc ⁿ & with transference, liquid junction potential, Potentiometric titration
June 2022	First week	Chemistry of f-block elements Lanthanides
	Second week	Chemistry of f-block elements Actinides
	Third week	Qualitative analysis - I, II
	Fourth week	Qualitative analysis - II (Revision)

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Lesson Plan For B.Sc-6th Sem (Chemistry)
Session - 2021-2022 (April to June 2022)

April 2022	First week	Heterocyclic Compounds - I - Pyridine, furan, Thiophene, Reaction Mechanism of electrophiles and nucleophilic substitution. Pyridine, Thiophene, furan.
	Second week	Heterocyclic Compounds II - Imidazole, Oxindole, Indole, Isoindole, Furan, Pyrrole, Thiophene, Pyridine.
	Third week	Organometallic compounds and their uses. The Cyclic synthesis via endo transition state.
	Fourth week	Organic synthesis via imidates, hydrolysis, synthesis - Taylor Nitro, Gomberg's solution & Anionic, free radical polymerisation, Condensation polymerisation.
May 2022	First week	Photochemistry - Grotthius Draper law, Stark's law, Franck-Condon law.
	Second week	Solutions - Colligative properties, osmotic pressure, elevation of b.p. & depression in freezing point, Abnormal Molar Mass.
	Third week	Phase Equilibrium & Raoult's law, Relative lowering of Vapour Pressure.
	Fourth week	Spectroscopy III - Electronic spectrum, Bonding & Antibonding MO, Franck-Condon principle.
June 2022	First week	Acid and bases, HSAB concept - Arrhenius, Brønsted Lowry, Lewis concept, Symbiosis.
	Second week	Bioinorganic Chemistry - H ₂ & H ₂ O clusters, Nitrogen fixation, alkali & alkaline earth metals.
	Third week	Silicones & Phosphoranes, Organometallic Chemistry - Li, Al, Mg & Sn compounds.
	Fourth week	Revision of important concepts.


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