

LESSON PLAN

Name of Assistant/Associate Professor: SEENU KUMARI

Class: B.A (2nd Sem)

Introduction Chemistry II

Lesson Plan : Week (From JAN 2025 to Apr 2025)

Month	Day & Date	Topic
Jan	03 Jan 25 Friday	Introduction of Renowned Indian Scientists
	04 Jan 25 Saturday	Brief Biography of renowned Indian Scientist (Hargobind Khurana, Dr P.C. Ray)
	10 Jan 25 Friday	Brief Biography of renowned Indian Scientist (Sir CV Raman, Dr APJ Abdul Kalam)
	11 Jan 25 Saturday	CN Rao
	17 Jan 25 Friday	Dr Vikram Sara Bhai
	18 Jan 25 Saturday	Dr Homi Jahangir Bhaba
	24 Jan 25 Friday	Dr JC Bose
	25 Jan 25 Saturday	Dr SN Bose
	31 Jan 25 Friday	Revision of Whole Chapter
Feb	01 Feb 25 Saturday	Introduction of Metal and Non-Metal
	07 Feb 25 Friday	Periodic table
	08 Feb 25 Saturday	Classification of Elements
	14 Feb 25 Friday	Physical and Chemical Aspects of metals and Non-Metals
	15 Feb 25 Saturday	Ore and Mineral of Irons
	21 Feb 25 Friday	Ore and Mineral of Copper
	22 Feb 25 Saturday	Ore and Mineral of Aluminum & Alloys
	28 Feb 25 Friday	Revision
Mar	01 Mar 25 Saturday	Introduction of Physical properties of Matter
	07 Mar 25 Friday	Classification Matters
	08 Mar 25	Properties, Uses and Ideal Equations

	Saturday	
	21 Mar 25 Friday	Real Gas Equation Of Matter
	22 Mar 25 Saturday	Important Compounds Like Baking Soda, Washing Soda
	28 Mar 25 Friday	Plaster of Paris, Gypsum, Glass
	29 Mar 25 Saturday	Revision
Apr	04 Apr 25 Friday	Introduction of soil and Fertilizers
	05 Apr 25 Saturday	Green revolution
	11 Apr 25 Friday	Soil: Types of soil and their components for fertility
	12 Apr 25 Saturday	Grow Condition, pH
	18 Apr 25 Friday	Irrigation, Bio Fertilizers
	19 Apr 25 Saturday	Chemical fertilizers and their uses
	25 Apr 25 Friday	Acid Rain
	26 Apr 25 Saturday	Revision

Seenu

Seenu Kumari
Extension Lect.
Chemistry

Lesson Plan

Name of Assistant/Associate Professor: SeenuKumari

Class: B.Sc (2nd Sem) Physical science

Chemistry Lesson Plan: From JAN 2025 to Apr 2025

Date & Day	Topic Name
1- 2 Jan	Introduction of Covalent Bond, VSEPR theory and hybridization with suitable examples of Linear, trigonal planar, square planar, tetrahedral, trigonal bipyramidal and octahedral arrangements.
15-16 Jan	Molecular orbital theory of homonuclear N ₂ , O ₂ and heteronuclear (CO & NO) diatomic molecules, dipole moment and percentage ionic character in covalent bond.
20-23 Jan	Introduction of Ionic solids Ionic structures (NaCl, CsCl, ZnS, CaF ₂) size effects, radius ratio rule and its limitation.
27-30 Jan	Concept of Lattice energy, Born – Haber Cycle, Solvation energy and its relationship with solubility of ionic solids, Polarising power and Polarisability of ions, Fajan's rule.
3-6 Feb	Introduction of Chemical Kinetics, Concept of reaction rates, rate equation, factors influencing the rate of reaction. Order and molecularity of a reaction.
10-13 Feb	Integration rate expression for zero, first, Half-life period of a reaction, Arrhenius equation.
17-20 Feb	Introduction of Distribution Law, Nernst distribution law – its thermodynamic derivation, Nernst distribution law after association and dissociation of solute in one of the phases. Of distribution law.
24-27 Feb	Determination of degree of hydrolysis constant of aniline hydrochloride.
3-6 Mar	Introduction of Alkanes and Cycloalkanes Nomenclature, Classification of carbon atoms in alkanes and its structure, Isomerism in alkanes, sources. Methods of formation: Wurtz reaction, Kolbe reaction, Corey – House reaction and decarboxylation of carboxylic acids. Physical properties, Mechanism of free radical halogenation of alkanes: reactivity and selectivity. Nomenclature of Cycloalkanes, Baeyer's strain theory and its limitations, theory of strain less rings.
17-20 Mar	Introduction of Alkenes Nomenclature of alkenes and its structure. Methods of formation: dehydration of alcohols, dehydrohalogenation of alkyl halide, Hofmann elimination and their mechanism.
24-27 Mar	The Saytzeff rule and relative stabilities of alkenes, Chemical reactions: electrophilic and free radical additions, addition of halogens, halogen acids, hydroboration- oxidation, oxymercuration –reduction, ozonolysis and hydration. Markownikoff's rule of addition.
1-3 Apr	Introduction of Hydrogen Bonding and Van der Waals forces Hydrogen Bonding – Definition, types, effects of hydrogen bonding on properties of substances, application.
7-10 Apr	Brief discussion of various types of Van der Waals forces.
14-17 Apr	Introduction to Metallic Bond and Semiconductors. Metallic bond – Qualitative idea of valence bond and Band theories of metallic bond (conductors, semiconductors, insulators).
21-24 Apr	Semiconductors – Introduction, types and application.
28-30 Apr	Revision.

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Chemistry

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