



Pimpri Chinchwad Education Trust's
S. B. Patil College of Science and Commerce



ACA/DI/37	Teaching Plan (Academic year 25-26)
Date : 15/09/ 2025	Subject : Chemistry
	XI- Science

Month	Lesson No	Lesson's Name	Date	Day	Topic no.	Topic/ Content
Aug-25	1	Some basic concepts of Chemistry	12-Aug-25	Tue	1	Introduction, Nature of Chemistry
			13-Aug-25	Wed	2	Properties of matter and their measurement
			14-Aug-25	Thur	3	Laws Of Chemical Combination, Law of conservation of mass, Law of Definite Proportions, Law of Multiple proportion, Gay Lussac law, Avagadro's law.
			18-Aug-25	Mon	4	Dalton Atomic Theory, Atomic & Molecular masses, Formula mass
			19-Aug-25	Tue	5	Mole Concept, Molar Masses
			20-Aug-25	Wed	6	Moles and Gases
			21-Aug-25	Thur	7	Numericals
	3	Some Analytical Techniques	22-Aug-25	Fri	1	Introduction
			23-Aug-25	Sat	2	Purification of solids: Crystallization, Fractional Crystallization
			25-Aug-25	Mon	3	Simple Distillation, Fractional distillation, Distillation under reduced pressure
			26-Aug-25	Tue	4	Solvent extraction, Chromatography Techniques: Adsorption Chromatography
			26-Aug-25	Tue	5	Column chromatography, Thin layer chromatography, Retention factor
	2	Introduction to Analytical Chemistry	28-Aug-25	Thur	1	Introduction, Analysis, Chemical methods of Qualitative and quantitative analysis
			29-Aug-25	Fri	2	Mathematical operation and error analysis , Scientific notation, Numericals
			30-Aug-25	Sat	3	Precision & accuracy of Measurement,
			2-Sep-25	Tue	4	Significant figures, Rules for deciding Significant figures, Calculations with Significant figures
			3-Sep-25	Wed	5	Determination of molecular formula, Percentage composition & empirical formula
			4-Sep-25	Thur	6	Chemical reactions and stoichiometric calculations , Problems
			12-Sep-25	Fri	7	Limiting reagents, Concentration of solution : Mass percent(w/w%)
			13-Sep-25	Sat	8	Mole fraction(x), Molarity(M), Molality (m)

Sep-25			13-Sep-25	Sat	9	Use of graph in analysis
	4	Structure of atom	15-Sep-25	Mon	1	Subatomic particles: Discovery of Proton,electron and Neutron
			15-Sep-25	Mon	2	Atomic number and atomic mass number
			16-Sep-25	Tue	3	Isotopes, Isobars & Isotones
			17-Sep-25	Wed	4	Drawbacks of Rutherford atomic model, Wave particle duality, Characteristic of electromagnetic wave
			18-Sep-25	Thur	5	Bohr's model of Hydrogen atom: Postulates of Bohr atomic theory, Results of Bohr's theory,
			19-Sep-25	Fri	6	Explanation of the line spectrum of hydrogen using Bohr theory, Limitations of Bohr model, Reasons for failure of the Bohr model
			23-Sep-25	Tue	7	Quantum mechanical model of atom: Schrodinger equation
			23-Sep-25	Tue	8	Atomic orbitals and quantum numbers,
			24-Sep-25	Wed	9	Shapes of atomic orbitals
			25-Sep-25	Thur	10	Energies of orbitals, Aufbau principle
			26-Sep-25	Fri	11	Electronic configuration of atoms and its representation
			27-Sep-25	Sat	12	Condensed orbital notation of electronic configuration, Isoelectronic species
Oct-25	7	Modern Periodic table	29-Sep-25	Mon	1	Introduction, Development of periodic table, Structure of modern periodic table
			29-Sep-25	Mon	2	Electronic configuration in periods and groups
			30-Sep-25	Tue	3	Blockwise characteristics of elements
			1-Oct-25	Wed	4	Periodic trends in elemental properties :Effective nuclear charge & screening effect
			3-Oct-25	Fri	5	Periodic trends in physical properties : Atomic radius, Ionic radius, Ionization enthalpy, Electron gain enthalpy, Electronegativity.
			6-Oct-25	Mon	6	Periodic trends in chemical properties : Valency, Metallic-nonmetallic character, chemical reactivity
	16	Chemistry in Everyday Life	7-Oct-25	Tue	1	Basics of food chemistry
			7-Oct-25	Tue	2	Compounds with medicinal properties : Analgesics, Antipyretics, Antimicrobials
			8-Oct-25	Wed	3	Cleansing agents
			9-Oct-25	Thur		Revision
		Adsorption and	3-Nov-25	Mon	1	Introduction, Adsorption , Desorption, sorption, Physisorption, Chemisorption
			4-Nov-25	Tue	2	Factors affecting adsorption of gases on solids
			6-Nov-25	Thur	3	Applications of adsorption, Catalysis

Nov-25	11	colloids	7-Nov-25	Fri	4	Colloids- introduction, colloidal state, classification of colloids, Preparation & Purification of colloids
			8-Nov-25	Sat	5	Properties of colloidal dispersion
			10-Nov-25	Mon	6	Emulsions , Types & properties of emulsions, Applications of colloids
	5	Chemical Bonding	11-Nov-25	Tue	1	Introduction, octet rule, Ionic bond
			12-Nov-25	Wed	2	Ionic solids and lattice enthalpy, Covalent bond, , Resonance
			13-Nov-25	Thur	3	Lewis structure, Formal charge, Limitations of octet rule
			14-Nov-25	Fri	4	VSEPR Theory
			17-Nov-25	Mon	5	VB Theory : Postulates, Interacting forces during covalent bond formation, Overlap of atomic orbitals
			18-Nov-25	Tue	6	Hybridisation, Types of hybridisation and geometry of molecules,
			19-Nov-25	Wed	7	Importance of V.B.T., limitations of V.B.T.
			20-Nov-25	Thur	8	Molecular orbital theory, Hydrogen bonding
			21-Nov-25	Fri	9	Polar character of covalent bond, Covalent character of ionic bond, Valence bond Theory,
			22-Nov-25	Sat	10	Formal charge, Limitations of octet rule, Valence bond theory: Postulates of valence bond theory,
			24-Nov-25	Mon	11	Interacting forces during covalent bond formation, Overlap of atomic orbitals,
			25-Nov-25	Tue	12	Valence shell electron pair repulsion theory, Hybridisation, Geometry of molecules
			26-Nov-25	Wed	13	Valence shell electron pair repulsion theory
			27-Nov-25	Thur	14	parameters of covalent bond, Polarity of a covalent bond
			28-Nov-25	Fri	15	Dipole moment, Covalent character of ionic bond, Resonance
	13	Nuclear Chemistry and Radioactivity	29-Nov-24	Sat	1	Introduction to nuclear chemistry, Classification of nuclides
			1-Dec-25	Mon	2	Nuclear binding energy and mass defect
			2-Dec-25	Tue	3	Radioactivity, Radioactive decay, Rate of decay, Rate law, Expression for decay constant
			3-Dec-25	Wed	4	Half life of radioactive element, Graphical representation, Numericals
			4-Dec-25	Thur	5	Units of radioactivity, Modes of decay , Nuclear reactions, Artificial radioactivity
			5-Dec-25	Fri	6	Nuclear fission, Nuclear fusion, Applications of Radio isotopes
			5-Dec-25	Fri	7	Electrical energy from Nuclear fission, Applications in medicine, Other applications of radioisotopes
			8-Dec-25	Mon	1	Introduction, Structural representation of organic compounds, Condensed formula, Bond line formula or zig-zag formula

Dec-25	14	Basic principles of organic chemistry	9-Dec-25	Tue	2	Drawing the molecules in the three dimensions, Wedge formula, Fischer projection formula, Newman projection formula, Sawhorse or andiron or perspective formula
			10-Dec-25	Wed	3	Classification of organic compounds
			11-Dec-25	Thur	4	classification based on carbon skeleton, classification based on functional group
			15-Dec-25	Mon	5	Homologous series, Nomenclature of organic compounds, common /trival names, IUPAC nomenclature, IUPAC names of straight chain alkanes
			16-Dec-25	Tue	6	IUPAC names of branched saturated hydrocarbons
			17-Dec-25	Wed	7	IUPAC nomenclature of unsaturated hydrocarbons, IUPAC names of simple monocyclic hydrocarbons,
			18-Dec-25	Thur	8	Naming monofunctional compounds
			19-Dec-25	Fri	9	IUPAC nomenclature of compounds containing one or more functional group,
			22-Dec-25	Mon	10	IUPAC nomenclature of substituted benzene
			23-Dec-25	Tue	11	Isomerism
			24-Dec-25	Wed	12	structural isomerism
			29-Dec-25	Mon	13	Theoretical basis of organic reactions, Types of cleavage of covalent bond,
			30-Dec-25	Tue	14	Types of reagent, Electronic effects in organic reaction , inductive effect
			31-Dec-25	Wed	15	Resonance, Resonance structures
			31-Dec-25	Wed	16	Resonance effect, Hyperconjugation
Jan-26	9	Elements of Group 13,14 and 15	1-Jan-26	Thur	1	Introduction, Electronic configuration of elements of groups 13,14 & 15
			2-Jan-26	Fri	2	Trends in atomic & physical properties of elements of group 13,14 & 15
			5-Jan-26	Mon		Revision
			10-Jan-26	Sat	3	Chemical properties of elements of group 13,14 & 15 : Reaction towards air, water and halogens
			12-Jan-26	Mon	4	Catenation, Allotropy, Allotropes of carbon
			13-Jan-26	Tue	5	Allotropes of phosphorus
			15-Jan-26	Thur	6	Molecular structures of some important compounds of the group 13,14 and 15 elements
			16-Jan-26	Fri	7	Chemistry of notable compounds of elements of group 13,14 and 15 : Borax, silicones
			19-Jan-26	Mon	8	Ammonia : Preparation and chemical properties
			20-Jan-26	Tue	1	Introduction, position of hydrogen in periodic table, Occurrence of hydrogen (Dihydrogen)

	8	Elements of Group 1 and 2	21-Jan-26	Wed	2	Isotopes of hydrogen, preparation of dihydrogen, properties of dihydrogen, Uses of dihydrogen
			22-Jan-26	Thur	3	Alkali metals & elements of group 2: Electronic configuration, trends in atomic & physical properties
			23-Jan-26	Fri	4	Chemical properties of elements of group 1 & group 2
			24-Jan-26	Sat	5	Uses of elements of group 1 & group 2 Biological importance of Na, K, Mg & Ca
			27-Jan-26	Tue	6	Some important compounds of elements of s-block : Sodium carbonate, Sodium hydroxide
			28-Jan-26	Wed	7	Some important compounds of elements of s-block : Calcium carbonate, hydrogen peroxide
			29-Jan-26	Thur	8	Lithium aluminium hydride
Feb-26	10	States of matter	30-Jan-26	Fri	1	Introduction, Intermolecular Forces : Dipole dipole, Ion dipole, Dipole-Induced dipole Interactions
			31-Jan-26	Sat	2	London Dispersion Force, Hydrogen Bonding
			2-Feb-26	Mon	3	Intermolecular forces and thermal energy, Characteristic properties of Gases
			3-Feb-26	Tue	4	The Gas Law- Boyle's law (P & V relationship), Numericals
			4-Feb-26	Wed	5	The Gas Law- Charles's law (T & V relationship) , Numericals
			5-Feb-26	Thur	6	The Gas Law-Gay Lussac's law (P & T relationship), Numericals
			6-Feb-26	Fri	7	Avogadro law, Ideal gas equation, Values of 'R' in different Units, Numericals
			9-Feb-26	Mon	8	Combined gas law, Relation between Density , Molar mass & pressure of a gaseous substance, Numericals
			10-Feb-26	Tue	9	Dalton's law of Partial Pressure , Kinetic Molecular Theory of gases : Assumptions
	6	Redox reaction	11-Feb-26	Wed	1	Introduction, Oxidizing & reducing Agents, Redox reactions in terms of electron transfer
			12-Feb-26	Thur	2	Oxidation number, Rules to assign oxidation number, Stock notation,
			13-Feb-26	Fri	3	Redox reactions in terms of oxidation number, Identify Oxidant & Reductant From Redox reaction
			14-Feb-26	Sat	4	Balancing of redox reactions by oxidation number method
			16-Feb-26	Mon	5	Balancing Chemical equations by Ion electron Method Method,
			17-Feb-26	Tue	6	Redox Reaction and electrode potential, standard electrode potential
			18-Feb-26	Wed	1	Introduction- Allkane- Structural formula, Isomerism, Conformations of ethane
			20-Feb-26	Fri	2	Nomenclature
			23-Feb-26	Mon	3	Methods of preparation
			24-Feb-26	Tue	4	Chemical Properties of alkanes, Uses of alkanes

Mar-25	15	Hydrocarbons	25-Feb-26	Wed	5	Introduction, Electronic Structure of ethene, Isomerism in alkenes
			26-Feb-26	Thur	6	Nomenclature of alkenes, Methods of preparation of alkenes
			27-Feb-26	Fri	7	Chemical properties of alkenes, Uses of alkenes
			28-Feb-26	Sat	8	Introduction of alkynes, electronic structure of ethyne, Nomenclature of alkynes,
			2-Mar-26	Mon	9	Methods of preparation, Physical properties
			3-Mar-26	Tue	10	Chemical Properties of alkynes, Uses of alkynes
			5-Mar-26	Thur	11	Introduction to Aromatic hydrocarbons, Benzene : structure, Stability of benzene
			6-Mar-26	Fri	12	Aromatic character, Huckel Rule ,Methods of preparation of benzene, Chemical properties of benzene
			9-Mar-26	Mon	13	Revision

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