

BAGARIA BAL VIDYA NIKETAN

LAXMANGARH-SIKAR

SYLLABUS & LESSON PLANNER-2025-26

Class:-	XII
Subject:-	Chemistry
Teacher Name:-	Dr. Ashish K. Awasthi

SYLLABUS

Ch.No	Name of Chapter	working day	Period	Topic	Month	WEAK
Chapter-6	Haloalkanes and Haloarenes	23	38	<p>Haloalkanes: Nomenclature, nature of C–X bond, physical and chemical properties, optical rotation mechanism of substitution reactions.</p> <p>Haloarenes: Nature of C–X bond, substitution reactions (Directive influence of halogen in monosubstituted compounds only).</p> <p>Uses and environmental effects of - dichloromethane, trichloromethane, tetrachloromethane, iodoform, freons, DDT.</p>	APRIL	1,2,3,4
Chapter-7	Alcohols, Phenols and Ethers	13	21	<p>Alcohols: Nomenclature, methods of preparation, physical and chemical properties (of primary alcohols only), identification of primary, secondary and tertiary alcohols, mechanism of dehydration, uses with special reference to methanol and ethanol.</p> <p>Phenols: Nomenclature, methods of preparation, physical and chemical properties</p> <p>Ethers: Nomenclature, methods of preparation, physical and chemical properties, uses</p>	MAY	1,2
	Aldehydes, Ketones and Carboxylic Acids			<p>Aldehydes and Ketones: Nomenclature, nature of carbonyl group, methods of preparation, physical and chemical properties, mechanism of nucleophilic addition, reactivity of alpha hydrogen in aldehydes, uses.</p> <p>Carboxylic Acids: Nomenclature, acidic nature, methods of</p>	JUNE	

Chapter-8		11	18	preparation, physical and chemical properties; uses.	JUN	1,2
Chapter-9 and 10	Amines and Biomolecules	27	45	<p>Amines: Nomenclature, classification, structure, methods of preparation, physical and chemical properties, uses, identification of primary, secondary and tertiary amines.</p> <p>Diazonium salts: Preparation, chemical reactions and importance in synthetic organic chemistry.</p> <p>Carbohydrates - Classification (aldoses and ketoses), monosaccharides (glucose and fructose), D-L configuration oligosaccharides (sucrose, lactose, maltose), polysaccharides (starch, cellulose, glycogen); Importance of carbohydrates.</p> <p>Proteins -Elementary idea of - amino acids, peptide bond, polypeptides, proteins, structure of proteins - primary, secondary, tertiary structure and quaternary structures (qualitative idea only), denaturation of proteins; enzymes. Hormones - Elementary idea excluding structure.</p> <p>Vitamins - Classification and functions.</p> <p>Nucleic Acids: DNA and RNA.</p>	JULY	1,2,3,4
				<p>Types of solutions, expression of concentration of solutions of solids in liquids, solubility of gases in liquids, solid solutions, Raoult's law, colligative properties - relative lowering of vapor pressure, elevation of boiling point, depression of freezing point, osmotic pressure, determination of molecular masses using colligative properties, abnormal molecular mass, Van't Hoff factor</p> <p>Electrochemistry</p> <p>Redox reactions, EMF of cell, standard electrode</p>		

Chapter-1,2 and 3	Solutions, Electrochemistry and Chemical Kinetics	24	40	<p>Redox reactions, EMF of a cell, standard electrode potential, Nernst equation and its application to chemical cells, Relation between Gibbs energy change and EMF of a cell, conductance in electrolytic solutions, specific and molar conductivity, variations of conductivity with concentration, Kohlrausch's Law, electrolysis and law of electrolysis (elementary idea), dry cell-electrolytic cells and Galvanic cells, lead accumulator, fuel cells, corrosion</p> <p>Chemical Kinetics Rate of a reaction (Average and instantaneous), factors affecting rate of reaction: concentration, temperature, catalyst; order and molecularity of a reaction, rate law and specific rate constant, integrated rate equations and half-life (only for zero and first order reactions), concept of collision theory (elementary idea, no mathematical treatment), activation energy, Arrhenius equation..</p>	AUGUST	1,2,3,4
Chapter-2 and 3	d -and f-Block Elements and Coordination Compounds	22	40	<p>d and f Block Elements General introduction, electronic configuration, occurrence and characteristics of transition metals, general trends in properties of the first row transition metals – metallic character, ionization enthalpy, oxidation states, ionic radii, colour, catalytic property, magnetic properties, interstitial compounds, alloy formation, preparation and properties of $K_2Cr_2O_7$ and $KMnO_4$. Lanthanides - Electronic configuration, oxidation states, chemical reactivity and lanthanide contraction and its consequences. Actinides - Electronic configuration, oxidation states and comparison with lanthanides</p> <p>Coordination Compounds</p>	PTEMBER	1,2,3,4

				<p>Coordination compounds - Introduction, ligands, coordination number, colour, magnetic properties and shapes, IUPAC nomenclature of mononuclear coordination compounds.</p> <p>Bonding, Werner's theory, VBT, and CFT; structure and stereoisomerism, importance of coordination compounds (in qualitative analysis, extraction of metals and biological system)</p>	SE	
--	--	--	--	--	----	--