



BLOOM PUBLIC SCHOOL
C-8 Vasant Kunj New Delhi
SYLLABUS FOR THE SESSION 2021-22

Class: XII

Subject: Chemistry

MONTH	CHAPTERS (NCERT TEXT BOOK)	CONTENT (As per Rationalised Syllabus)
April	Unit 1: Solid State	Solid State: Classification of solids based on different binding forces: molecular, ionic, covalent and metallic solids, amorphous and crystalline solids (elementary idea). Unit cell in two dimensional and three dimensional lattices, calculation of density of unit cell, packing in solids, packing efficiency, voids, number of atoms per unit cell in a cubic unit cell, point defects.
June	Unit 1: Solid State(Cont'd) Unit 2: Solutions	Solid State: Classification of solids based on different binding forces: molecular, ionic, covalent and metallic solids, amorphous and crystalline solids (elementary idea). Unit cell in two dimensional and three dimensional lattices, calculation of density of unit cell, packing in solids, packing efficiency, voids, number of atoms per unit cell in a cubic unit cell, point defects. Solutions: 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 vapour pressure, elevation of boiling point, depression of freezing point, osmotic pressure, determination of molecular masses using colligative properties.

July	Unit 3: Electrochemistry	Electrochemistry: 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
	Unit 4: Chemical Kinetics (Done till Rate law and Specific rate constant)	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).
	Unit 14: Biomolecules	Biomolecules: Carbohydrates - Classification (aldoses and ketoses), monosaccharides (glucose and fructose), D-L configuration 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. Nucleic Acids: DNA and RNA
	Unit Test-1	
August	Unit 14: Biomolecules(Cont'd)	Biomolecules: Carbohydrates - Classification (aldoses and ketoses), monosaccharides (glucose and fructose), D-L configuration Proteins -Elementary idea of - amino acids, peptide bond, polypeptides, proteins, structure of proteins - primary, secondary, tertiary

	<p>Unit 10: Halo Alkanes & Halo Arenes</p> <p>Unit 11: Alcohols, phenols & Ethers</p>	<p>structure and quaternary structures (qualitative idea only), denaturation of proteins. Nucleic Acids: DNA and RNA</p> <p>Haloalkanes and Haloarenes: Haloalkanes: Nomenclature, nature of C–X bond, physical and chemical properties, optical rotation mechanism of substitution reactions. Haloarenes: Nature of C–X bond, substitution reactions (Directive influence of halogen in monosubstituted compounds only).</p> <p>Alcohols, Phenols and Ethers: Alcohols: Nomenclature, methods of preparation, physical and chemical properties (of primary alcohols only), identification of primary, secondary and tertiary alcohols, mechanism of dehydration. Phenols: Nomenclature, methods of preparation, physical and chemical properties, acidic nature of phenol, electrophilic substitution reactions, uses of phenols. Ethers: Nomenclature, methods of preparation, physical and chemical properties, uses.</p>
September	Unit 11: Alcohols, phenols & Ethers (cont'd)	Alcohols, Phenols and Ethers: Alcohols: Nomenclature, methods of preparation, physical and chemical properties (of primary alcohols only), identification of primary, secondary and tertiary alcohols, mechanism of dehydration. Phenols: Nomenclature, methods of preparation, physical and chemical properties, acidic nature of phenol, electrophilic substitution reactions, uses of phenols. Ethers: Nomenclature, methods of preparation, physical and chemical properties, uses.

	<p>Unit 7: p block elements</p> <p>Unit Test-2</p> <p>Term 1 Practical Exam</p>	<p>p Block Elements: Group -15 Elements: General introduction, electronic configuration, occurrence, oxidation states, trends in physical and chemical properties; Nitrogen preparation properties and uses; compounds of Nitrogen: preparation and properties of Ammonia and Nitric Acid. Group 16 Elements: General introduction, electronic configuration, oxidation states, occurrence, trends in physical and chemical properties, dioxygen: preparation, properties and uses, classification of Oxides, Ozone, Sulphur -allotropic forms; compounds of Sulphur: preparation properties and uses of Sulphur-dioxide, Sulphuric Acid: properties and uses; Oxoacids of Sulphur (Structures only). Group 17 Elements: General introduction, electronic configuration, oxidation states, occurrence, trends in physical and chemical properties; compounds of halogens, Preparation, properties and uses of Chlorine and Hydrochloric acid, interhalogen compounds, Oxoacids of halogens (structures only). Group 18 Elements: General introduction, electronic configuration, occurrence, trends in physical and chemical properties, uses.</p> <p>Unit-10,16,11(Done till date)</p>
<p>October</p>	<p>Unit 7: p block elements</p>	<p>p Block Elements: Group -15 Elements: General introduction, electronic configuration, occurrence, oxidation states, trends in physical and chemical properties; Nitrogen preparation properties and uses; compounds of Nitrogen: preparation and properties of Ammonia and Nitric Acid. Group 16 Elements: General introduction, electronic configuration, oxidation</p>

December	<p>Unit 13: Amines (cont'd)</p> <p>Unit 4: Chemical Kinetics</p> <p>Unit 5: Surface Chemistry</p>	<p>Amines: Amines: Nomenclature, classification, structure, methods of preparation, physical and chemical properties, uses, identification of primary, secondary and tertiary amines.</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).</p> <p>Surface Chemistry: Adsorption - physisorption and chemisorption, factors affecting adsorption of gases on solids, colloidal state: distinction between true solutions, colloids and suspension; lyophilic, lyophobic, multi-molecular and macromolecular colloids; properties of colloids; Tyndall effect, Brownian movement, electrophoresis, coagulation</p>
January	Unit 9: Coordination Compounds	Coordination Compounds: Coordination compounds - Introduction, ligands, coordination number, colour, magnetic properties and shapes, IUPAC nomenclature of mononuclear coordination compounds. Bonding, Werner's theory, VBT, and CFT.

	<p>Unit 8: d and f block elements</p> <p>Unit Test-3</p> <p>Term 2 Practical Exam</p>	<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. Lanthanoids - Electronic configuration, oxidation states and lanthanoid contraction and its consequences.</p> <p>UNIT-3,4,5(Done till date)</p>
February	<p>Pre-board Exam</p> <p>Term 2</p> <p>CBSE Board</p> <p>Practical Exam</p>	Units-3,4,5,8,9,12,13
March	CBSE Board Exam	

ASSESSMENTS SYLLABUS

1. Periodic Assessment-1 (July-August)

Unit 1 – Solid State

Unit 2- Solutions

Unit 3- Electrochemistry

2. Periodic Assessment-2

Unit 16- Biomolecules

Unit-10-Haloalkanes and Haloarenes

Unit-11-Alcohols, Phenols and Ethers

3. Pre-board Exam-1/Term 1 End Exam

Unit 1 – Solid State

Unit 2- Solutions

Unit 7 - p Block Elements

Unit 16- Biomolecules

Unit-10-Haloalkanes and Haloarenes

Unit-11-Alcohols, Phenols and Ethers

4. Periodic Assessment-3 (Dec-Jan)

Unit 12-Aldehydes, ketones and Carboxylic acids

Unit 13-Amines

Unit 4-Chemical Kinetics

5. Preboard Exam-2/ Term 2 End Exam

Unit 3-Electrochemistry

Unit 4-Chemical Kinetics

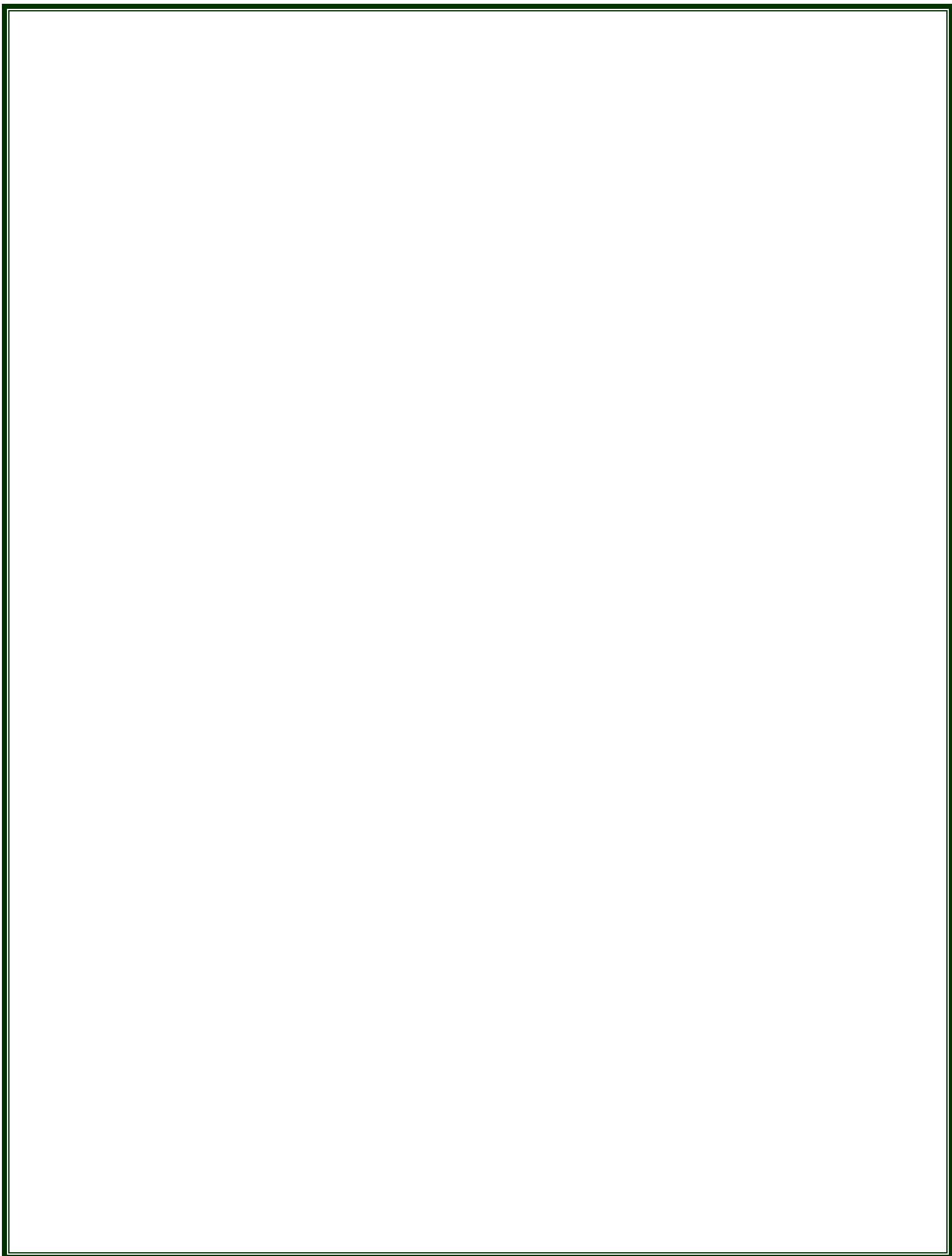
Unit 5-Surface Chemistry

Unit 8- d and f Block elements

Unit 9-Coordination Compounds

Unit 12 –Aldehydes, ketones and Carboxylic acids

Unit 13-Amines



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