

**S.D.Public School, Pitam Pura, New Delhi**  
**Academic Planner**  
**Session--(2023-24)**  
**Class-XI**  
**Subject--Chemistry**

Date/ Day	Content	Modes of Assesment	Assignment/ Class	Teaching Pedagogy	Interdiscipli nary Aspect	Lab. Activity/ Practical
<b>April(15-30)</b>	Recapitulation of General Basic concepts of X class	Recapitulation of previous concepts in the form of MCQ test		Students will be divided in pairs and assign a particular topic to explain in the class using previous knowledge.	Self Learning.	
<b>12 Days</b>	<b>Some Basic Concepts of Chemistry</b> :- Importance and scope of chemistry, Nature of matter, laws of chemical combinations, Dalton's atomic theory.	Class test.	Examples and Intext Questions discussion in the class.			
<b>May(1-15)</b>	Mole concept, Atomic and Molecular mass, Limiting Reagent					
<b>11 Days</b>	Empirical and Molecular formula, Stoichiometry and calculations based on Stoichiometry.	Class test from numericals based on Molecular formula.	Assignment based on Numericals.	Problem Based learning	Mathematical Learning.	
<b>July(1-15)</b>						
<b>12 Days</b>	<b>Structure of Atom:-</b> Discovery of electron, proton and neutron. Thomson's model , Rutherford's model and limitations,	Case Based Question from Models.	Examples and Intext Questions discussion in the class.			Weighing on the balance. (Skill Based learning)
	Bohr' s model, concept of shells and subshells.			Flipped Classroom to optimize time in the class.	Meeting the special needs of each individual student.	

<b>July (16-31)</b>	Dual nature of matter and light, De Broglie relationship, shapes of s, p and d orbitals, Quantum Mechanics, Electronic configuration.	Assessment in the form of Quiz	Assignment based on Conceptual questions.	Problem Based Learning	Creative thinking and critical skill	Weighing on the balance. (Skill Based learning)
<b>12 Days</b>	Stability of half filled and completely filled orbitals.					
<b>August (1-15)</b>	<b>Classification of elements:-</b> Significance of classification, brief history of development of periodic table.					
<b>11 Days</b>	Modern Periodic law, periodic trends in the properties of elements, Nomenclature of elements with atomic number greater than 100.	Small worksheet of five questions to assess the previous knowledge of students.	Assignment based on position of elements in the table.	Assigning the position of elements in the periodic table knowing their atomic number ( gaps will be there in the table)	Skill Based learning.	Acid- Base titration
<b>August (16-31)</b>	<b>Chemical Bonding and Molecular structure:-</b> Ionic bond, Covalent bond, Bond parameters, Lewis structures, polar nature of covalent bond.	Class test from Ionic and covalent bond..		Group Discussion Activity( Cooperative learning)		
<b>13 Days</b>	Valence bond theory, VSEPR theory.		NCERT Examples and Intext questions discussion.	Learning the geometry of molecules with the help of self made 3-D models	Skill Based Learning	Acid-Based titration
<b>September (1-15)</b>	Concept of hybridisation, shapes of some simple molecules, Molecular orbital theory, Hydrogen bond.	Q/A technique	Assignment based on hybridisation and configuration.			
<b>11 Days</b>	<b>Chemical Thermodynamics:-</b> Concept of system, surroundings, work, heat , energy			3-D models for hybridisation concept.	Concept based learning.	Acid-Base titration

<b>September (16-30)</b>	Extensive, Intensive properties, state functions, first law of thermodynamics, Internal energy, enthalpy, heat capacity.	Class Test based on Derivations.	Discussion of NCERT examples and Intext Que.	Problem Based learning	Mathematical Aspect.	Acid-Base titration
<b>12 Days</b>	Enthalpy of phase transition, combustion, atomization, formation, enthalpy of solution.		Assignment based on conceptual questions.			Acid-Base titration
<b>October (1-15)</b>	Second Law of thermodynamics, Entropy, Gibb's energy change, Brief idea of third law of thermodynamics.	MCQ test( On Kahoot)				
<b>10 Days</b>	<b>Equilibrium:-</b> In physical and chemical process, nature of dynamic equilibrium, law of mass action.	Class test( Chemical equilibrium)		Group Discussion Activity( Cooperative learning)	Learning Enhancement in group.	Preparation of Inorganic compound.( copper sulphate)
<b>October (16-31) 9 Days</b>	Equilibrium Constant, Le Chatelier's principle, Acid - Base concept, ionization of weak acid and base, degree of dissociation, acid strength, polyprotic acids, concept of pH, Hydrolysis of salt, buffer solution, solubility product, common ion effect.	Class test from numericals	Assignment based on Case based questions from Le Chatelier's principle and equilibrium constant.			Preparation of Inorganic compound.( copper sulphate)
<b>November (1-15)</b>	<b>Redox Reactions:-</b> Concept of oxidation, reduction, Oxidation number concept, Types of Redox reactions.	Class test based on oxidation number.	Assignment based on Balancing of redox reaction.	Relevance of Redox reactions in day to day life.	Chemistry in everyday life.	Qualitative analysis
<b>9 Days</b>	Balancing of Redox reactions, Applications of Redox reactions in chemistry.					
<b>November (16-30) No. of Days - 12</b>	<b>Organic Chemistry- Some Basic principles:-</b> Classification of organic compounds, IUPAC nomenclature, Isomerism,	Q/A to check previous knowledge of students	Assignment based on IUPAC nomenclature.			

<b>December (1-15) No. Of Days- 12</b>	Electron displacement effects, Homolytic and heterolytic cleavage. Method of Purification of Organic compounds, Qualitative and Quantitative analysis of organic compounds.	Class test from Numerical Problems based on Qualitative and Quantitative analysis.				Qualitative analysis
<b>December (16-31) NO. of Days- 13</b>	<b>Hydrocarbons:-</b> Classification, Alkanes- Nomenclature, isomerism, conformations of ethane					
<b>January 16-31) No. of Days-13</b>	Preparation, physical and chemical properties of Alkanes, Alkenes, Alkynes. Nomenclature and Isomerism	Class test from Conversion reactions.	Assignment based on Quantitative analysis.	Problem Based Learning	Mathematical aspect	Qualitative analysis
<b>February (1-15)</b>	<b>Benzene :-</b> Nomenclature, preparation, isomerism, physical and chemical properties.	Class test from Isomerism and nomenclature.	Assignment based on structure based problems.	Learning by doing.	Self learning	

### Examination Schedule

<b>Unit Test-1</b>	Some Basic concepts of chemistry
<b>Term-1 Examination</b>	Some basic concepts of chemistry , Structure of atom, Classification of elements (half)
<b>Unit Test-2</b>	Chemical Bonding, Thermodynamics
<b>Term-2 Examination</b>	Complete Syllabus