Class- XII
Subject : Chemistry(Revised)
Syllabus

Month	Name of Book	Chapter & Topics	Teaching Periods	Revision Period	Practical
April	Chemistry Class 12th	Unit-1 : Solid State Unit-2 : Solution	10 10	2 2	A (8)
May	do	Unit-3 : Electro Chemistry Unit-4 : Chemical Kinetics	10 8	3 2	B (8) C (6)
June	Summer Vacation				
July	do	Unit-5 : Surface Chemistry	9 9	2 2	D (7) E (7)
August	do	Unit-7 : p-Block Elements Unit-8 : d & f Block Elements	16 08	6	F (4) G (4)
September	do	Unit-9 : Co-ordination compounds	09	2	H (8)
October	do	Unit-10 : Halo Alkanes And Halo Arenes Unit-11 : Alcohols, Phenols and Ethers	9 12	1 2	I (10)
November	do	Unit-12 : Aldehydes, Ketones and Carboxylic Acids	16	4	J (10)
December	do	Unit-13 : Amines and Diazonium Salts Unit-14 : Biomolecules	8 10	1 2	K (8)
January	do				
February		Revision			
March		Exam			

Class 12th
Subject-Chemistry
Syllabus

Unit-1: Solid State: **April** Periods-10 Revision-2 Marks-4

Classification of solids based on different binding forces: molecular, ionic, covalent and metallic solids, Amorphous and crystalline solids (only 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 cells, Points defects,

Unit-2: Solution: **April** Periods-10 Revision-2 Marks-4

Types of solutions, expression of concentration of solution of solid in liquids, solubility of gases in liquids, (Henry's law) solid solutions, colligative properties- relative lowering of vapour pressure, Raoults's law, ideal and non Ideal solutions, osmotic pressure, osmosis and it's applications, depression of freezing point, elevation of boiling point, determination of molecular masses using colligative properties,

Unit-3: Electrochemistry: **May** Periods-10 Revision-3 Marks-4

Redox reactions, conductance in electrolytic solutions, specific and molar conductivity, variation of conductivity with concentration, Kohlrausch's law, electrolysis (only elementary Idea), Electrochemical cell, (construction, representation and working), Ni-cd cell, EMF of a cell, standard electrode potential, Nernst equation and it's application to chemical cells, reference electrode (NHE) Relation between Gibb's free energy change and EMF of a cell, Electrochemical series and it's applications,

Unit-4: Chemical Kinetics: **May** Periods-8 Revision-2 Marks-4

Rate of reaction (Average and instantaneous), factors affecting on the 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),

June Summer Vacation 1st june to 30th june.

Unit-5: Surface Chemistry: **July** Periods-9 Revision-2 Marks-3

Adsorption- Physisorption and chemisorptions, distinction between adsorption and absorption, Mechanism of adsorption, characteristics of adsorption, adsorption Isotherm, (Freundlich's Isothem), Application of adsorption, Factors affecting adsorption of gases on solids.

Colloidal state, colloids and crystalloids, true solution, colloidal solution and suspension. Lyophillic and Lyophobic colloids, multimolecular colloids, macromolecular and associated colloids, properties of colloids, Tyndall effect, Brownian movement, electrophoresis, coagulation, dialysis, electro dialysis, ultracentrifugation, methods of Preparation of colloids.

Unit-7: p-Block Elements:

Aug. Periods-16 Revision-6 Marks-6

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: General Introduction, electronic configuration, oxidation state, 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, oxoacids of sulphur (structure only)

Group 17: 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 (structure only)

Group 18: General introduction, electronic configuration, occurrence, trends in physical and chemical properties, uses.

Unit-8: d and f block elements:

August. Periods-08 Marks-5

General introduction, electronic configuration, occurrence and characteristics of transition metals, general trends in properties of the First row transition metals- metallic character, atomic size, ionic radii, melting & boiling point, Ionization enthalpy, oxidation state, colour, formation of complex compounds, catalytic properties, interstitial compounds, alloy formation,.

Unit-9: Coordination compounds:

September. Periods-9 Revision-2 Marks-3

Coordination compounds- Introduction, difference between Coordination compounds and double salts, liagands, coordination number, colour, magnetic properties and shapes, IUPAC nomenclature of mono nuclear Coordination compounds, bonding in complex compounds, Werner's theory,VBT and CFT.

Unit-10: Haloalkanes and Haloarenes:

October Periods-9 Revision- Marks-4

Haloalkanes: Nomenclature, nature of C-X bond physical and chemical properties, mechanism of substitution reaction, optical rotation.

Haloarenes: Nature of C-X bond, substitution reaction (Directive Influence of halogen in monosubstituted compounds only)

Unit-11: Alcohols, Phenols and Ethers:

October Periods-12 Revision-2 Marks-4

Alcohols: Nomenclature, methods of preparation, physical and chemical properties (Primary alcohols only), Identification of Primary, Secondary and Tertiary alcohols, Mechanism of dehydration of alcohols.

Phenols: Nomenclature, methods of preparation, physical and chemical properties, acidic nature of phenol, electrophilic substitution reactions, uses of phenol.

Ethers: Nomenclature, methods of preparation, physical and chemical properties, uses.

Unit-12: Aldehydes, Ketones and Carboxylic acids:

November Periods-16 Revision-4 Marks-6

Aldehydes and Ketones: Nomenclature, nature of corbonyl group, methods of preparation of aldehyde & ketones, physical and chemical properties and mechanism of nucleophilic addition, reactivity of alpha hydrogen in aldehydes; uses.

Carboxylic acids: Nomenclature, acidic nature, methods of preparation, physical and chemical properties; uses.

Unit-13: Organic compounds containing Nitrogen:

December Periods-8 Revision-1 Marks-3

Amines: Nomenclature, classification, structure, methods of preparation, Physical and chemical properties, basic nature of amines.

Identification of primary, secondary and tertiary amines and uses of amines.

Unit-14: Biomolecules:

Decemberr Periods-10 Revision-2 Marks-3

Carbohydrate: Classification (aldoses and ketoses) monosaccahrides (glucose and fructose), D-L configuration,

Proteins: structure of proteins. (qualitative Idea only) denaturation of proteins: enzymes.

Vitamins: deficiency diseases.

Nucleic acids: DNA and RNA.