



**CHEMISTRY SCHEME
SS2**

SN	TOPICS
1.	Periodic table – Periodic law, blocks and families of elements (group I-VIII) properties, diagonal relationship, ionization energy
2.	Chemical reaction-Basic concepts: reactants, products, reaction time and reaction rate, introduction to collision theory, factors affecting the rate of a reaction.
3.	Chemical reaction:- Types of reactions, chemical equilibrium, factors affecting chemical equilibrium
4.	Mass-Volume relationship:- mole, molar quantities, molality, standard temperature and pressure, calculations involving mass and volume, S.I unit of quantities like mass, volume and length
5.	Acid-base reactions:- Simple acid –base titrations, common indicators and their pH ranges, heat of neutralization
6.	Water:- Structure of water, solubility of different substances, factors that affect solubility, Hardness of water, removal of hardness in water, purification of water, municipal water supply, production of distilled water

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7.	Air:- constituents, percentage composition, properties of air and flame
8.	Hydrogen – Electronic configuration, possible oxidation state, isotopes of H ₂ , laboratory and industrial preparation, physical and chemical properties of H ₂ and uses of H ₂ .
9.	Oxygen :General properties of oxygen group, electronic structure, bonding capacity of oxygen, laboratory and industrial preparation, physical and chemical properties and uses of oxygen
10.	Halogen:- Electronic configuration, physical and chemical properties, gradation down the halogen group, compounds of halogens, uses of halogens and preparation of chlorine
11.	Nitrogen: General properties of the nitrogen family laboratory and industrial preparation of N from liquid air, properties of N, uses of N, Nitrogen cycle, compounds of N (oxides of N, ammonia) test for NH ₃
12.	Sulphur:- General properties of group 6, electronic structure of sulphur, allotropes of S, uses of S, compounds of S, industrial preparation of H ₂ SO ₄ , uses of H ₂ SO ₄

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13.	Oxidation-Reduction reactions: definitions of oxidation and reduction, oxidation numbers of central elements in some compounds, connection of oxidation numbers with IUPAC name, oxidizing and reducing agents, redox equations
14.	Ionic theory:- Electrovalent and covalent compounds, electrolytes and non-electrolytes, weak and strong electrolytes, electrochemical series; significance of the electrochemical series
15.	Electrolysis:- Meaning of electrolysis, terminologies-electrodes, electrolytes, electrolytic cells, electrochemical cells.
16.	Electrolysis: Electrolysis of acidified water, CuSO_4 and brine Faraday's laws of electrolysis and calculations in electrolysis, uses of electrolysis
17.	Hydrocarbon-Structure and valency of carbon, meaning and examples of hydrocarbons, homologous series (characteristics and IUPAC naming), Isomerism
18.	Hydrocarbons:- saturated hydrocarbons, unsaturated hydrocarbons, aromatic hydrocarbons (structure and composition)