

SUBJECT- CHEMISTRY

BLOCK1- Matter - Nature and Behaviour

Topic - Definition of matter; solid, liquid and gas; characteristics - shape, volume, density; change of state-melting (absorption of heat), freezing, evaporation (cooling by evaporation), condensation, sublimation.

BLOCK 2- Elements, Compounds & Solutions

Topic- Elements, compounds and mixtures. Heterogenous and homogenous mixtures, colloids and suspensions.

Block 3- Atoms and Molecules

Topic- Particle nature, basic units: Atoms and molecules, Law of constant proportions, Atomic and molecular masses. Mole concept : Relationship of mole to mass of the particles and numbers, Structure of atoms, Electrons, protons and neutrons, valency, chemical formula of common compounds. Isotopes and Isobars.

BLOCK 4- Chemical Substances - Nature and Behaviour

TOPIC- Chemical reactions: Chemical equation, Balanced chemical equation, implications of a balanced chemical equation, types of chemical reactions: combination, decomposition, displacement, double displacement, precipitation, neutralization, oxidation and reduction

BLOCK 5- Acids, bases and salts

TOPIC- Their definitions in terms of furnishing of H^+ and OH^- ions, General properties, examples and uses, concept of pH scale(Definition relating to logarithm not required), importance of pH in everyday life; preparation and uses of sodium hydroxide, Bleaching powder, Baking soda, Washing soda and Plaster of Paris

BLOCK 6- Metals and non metals

TOPIC- Properties of metals and non-metals, reactivity series, formation and properties of ionic compounds, basic metallurgical processes, corrosion and its prevention

BLOCK 7- Carbon compounds

TOPIC - Covalent bonding in carbon compounds. Versatile nature of carbon. Homologous series Nomenclature of carbon compounds containing functional groups (halogens, alcohol, ketones, aldehydes, alkanes and alkynes), difference between saturated hydrocarbons and unsaturated hydrocarbons. Chemical properties of carbon compounds (combustion, oxidation, addition and substitution reaction). Ethanol and Ethanoic acid (only properties and uses), soaps and detergents

BLOCK 8 - Periodic classification of elements

TOPIC - Need for classification, Modern periodic table, gradation in properties, valency, atomic number, metallic and non-metallic properties