

Chemistry Topic List

Chapter-wise topics for Class XI and Class XII, with book page references.

Class XI 13 chapters · book pages A1 – A194

No.	Chapter	Pages	Topics
1	Some Basic Concepts of Chemistry	A1 – A14	<ol style="list-style-type: none"> 1. Laws of Chemical Combinations and Mole Concept 2. Percent Composition and Empirical Formula 3. Stoichiometric Calculations
2	Structure of Atom	A15 – A34	<ol style="list-style-type: none"> 1. Dual Nature of Electromagnetic Radiation 2. Bohr's Model for Hydrogen Atom (Emission and Absorption Spectra) 3. Dual Behaviour of Matter and Heisenberg Uncertainty Principle 4. Quantum Mechanical Model of Atom
3	Classification of Elements and Periodicity in Properties	A35 – A46	<ol style="list-style-type: none"> 1. Modern Periodic Table 2. Periodic Trends in Properties of Elements
4	Chemical Bonding and Molecular Structure	A47 – A66	<ol style="list-style-type: none"> 1. Electrovalent, Covalent and Co-ordinate Bonding 2. Octet Rule, Resonance and Hydrogen Bonding 3. Dipole Moment and Bond Polarity 4. VSEPR Theory and Hybridisation 5. Valence Bond Theory and Molecular Orbital Theory
5	States of Matter	A67 – A74	<ol style="list-style-type: none"> 1. Intermolecular Forces, Gas Laws and Ideal Gas Equation 2. Kinetic Theory of Gases and Molecular Speeds 3. Deviation from Ideal Gas Behaviour, Liquefaction of Gases and Liquid State
6	Thermodynamics	A75 – A98	<ol style="list-style-type: none"> 1. First Law and Fundamentals of Thermodynamics 2. Law of Thermochemistry 3. Entropy and Second Law of Thermodynamics 4. Spontaneity and Gibb's Free Energy
7	Equilibrium	A99 – A125	<ol style="list-style-type: none"> 1. Law of Mass Action, Equilibrium Constant (K_c and K_p) and its Application 2. Relation between K, Q and G and Factors Effecting Equilibrium 3. Theories of Acids and Bases, Ionic Product of Water and pH Scale 4. Ionisation of Weak Acids and Bases and Relations between K_a and K_b 5. Common Ion Effect, Salt Hydrolysis, Buffer Solutions and Solubility Product
8	Redox Reaction	A126 – A130	<ol style="list-style-type: none"> 1. Oxidation and Reduction Reactions 2. Oxidation Number 3. Disproportionation and Balancing of Redox Reactions
9	Hydrogen	A131 – A132	<ol style="list-style-type: none"> 1. Preparation and Properties of Hydrogen and Hydrides 2. Preparation and Properties of H_2O and D_2O 3. Preparation and Properties of H_2O_2

No.	Chapter	Pages	Topics
10	The s-Block Elements	A133 – A134	<ol style="list-style-type: none"> Group-1 Elements (Alkali Metals) Group-2 Elements (Alkaline Earth Metals)
11	The p-Block Elements (Group 13 and 14)	A135 – A141	<ol style="list-style-type: none"> Boron Family Carbon Family
12	Organic Chemistry – Some Basic Principles and Techniques	A142 – A165	<ol style="list-style-type: none"> Classification and Nomenclature of Organic Compounds Isomerism in Organic Compounds Concept of Reaction Mechanism in Organic Compounds, Purification and Quantitative Analysis
13	Hydrocarbons	A166 – A194	<ol style="list-style-type: none"> Alkanes Alkenes Alkynes Aromatic Hydrocarbons

Class XII 17 chapters · book pages B1 – B318

No.	Chapter	Pages	Topics
1	The Solid State	B1 – B3	<ol style="list-style-type: none"> Different Types, Crystal Structure and Properties of Solids Cubic Systems, Bragg's Equation and Imperfection in Solids
2	Solutions	B4 – B23	<ol style="list-style-type: none"> Solubility and Concentration of Solutions Vapour Pressure, Laws of Solutions, Ideal and Non-ideal Solutions Colligative Properties and Abnormal Molecular Masses
3	Electrochemistry	B24 – B47	<ol style="list-style-type: none"> Conductance and Conductivity Electrolytic Cells and Types of Electrolysis Cells and Electrode Potential, Nernst Equations Commercial Cells and Corrosion
4	Chemical Kinetics and Nuclear Chemistry	B48 – B72	<ol style="list-style-type: none"> Rate of Reaction, Rate Laws and Rate Constant Order of Reaction and Half Life Period Theories of Rate of Reaction Nuclear Chemistry
5	Surface Chemistry	B73 – B75	<ol style="list-style-type: none"> Adsorption Catalysis and Theories of Catalysis Colloids and Emulsions
6	General Principles and Process of Isolation of Elements	B76 – B79	<ol style="list-style-type: none"> Occurrence of Metals and Metallurgical Processes Purification and Uses of Metals
7	The p-Block Elements (Group 15, 16, 17 & 18)	B80 – B92	<ol style="list-style-type: none"> Nitrogen Family Oxygen Family Halogen Family Noble Gases
8	The d- and f-Block Elements	B93 – B109	<ol style="list-style-type: none"> Characteristics of d-Block Elements Compounds of Transition Metals Lanthanoids and Actinoids

No.	Chapter	Pages	Topics
9	Co-ordination Compounds	B110 – B133	<ol style="list-style-type: none"> 1. Coordination Number, Nomenclature and Isomerism of Coordination Compounds 2. Magnetic Moment, Valence Bond Theory and Crystal Field Theory 3. Organometallic Compounds
10	Haloalkanes and Haloarenes	B134 – B160	<ol style="list-style-type: none"> 1. Preparation and Properties of Haloalkanes 2. Preparation and Properties of Haloarenes 3. Some Important Polyhalogen Compounds
11	Alcohols, Phenols and Ethers	B161 – B188	<ol style="list-style-type: none"> 1. Preparation and Properties of Alcohols 2. Preparation and Properties of Phenols 3. Preparation and Properties of Ethers
12	Aldehydes, Ketones and Carboxylic Acids	B189 – B243	<ol style="list-style-type: none"> 1. Methods of Preparation of Carbonyl Compounds 2. Properties of Carbonyl Compounds 3. Preparation and Properties of Carboxylic Acids and their Derivatives
13	Amines	B244 – B279	<ol style="list-style-type: none"> 1. Aliphatic and Aromatic Amines 2. Amides, Cyanides and Isocyanides 3. Nitrocompounds, Alkyl Nitrites and Diazonium Salts
14	Biomolecules	B280 – B297	<ol style="list-style-type: none"> 1. Carbohydrates and Lipids 2. Amino Acids and Proteins 3. Nucleic Acid and Enzymes 4. Vitamins and Hormones
15	Polymers	B298 – B299	<ol style="list-style-type: none"> 1. Classification of Polymers 2. Preparation, Properties and Uses of Polymers
16	Chemistry in Everyday Life	B300	<ol style="list-style-type: none"> 1. Drugs Classification, Therapeutic Action of Drugs and Chemicals in Food
17	Principles Related to Practical Chemistry	B301 – B318	<ol style="list-style-type: none"> 1. Detection of Extra Elements, Detection of Organic Functional Groups and Preparation of Organic Compounds 2. Qualitative Salt Analysis and Preparation of Inorganic Compounds 3. Principles Involved in Titrimetric Exercises, Calorimetry, Preparation of Colloidal Sols and Kinetic Study of Reaction Between I^- and H_2O_2