

YELLOW PAGES

MINIMUM MARKS TO SCORE	CHAPTER NAME	WEIGHT AGE	IMPORTANT TOPICS/ QUESTIONS
23	SURFACE CHEMISTRY	4	<p>Definition: Lyophilic, Lyophobic, Electrophoresis, Adsorption, sorption, Shape Selective Catalysis, Emulsion, Peptization, Coagulation, Tyndall Effect, Brownian Movement, Zeta Potential</p> <p>Difference B/w Lyophilic-Lyophobic, Physical-Chemical Adsorption, Multi-Macro-Associated-Micelles colloids, Homogeneous-Heterogeneous Catalysis.</p> <p>Hardy-schuzule law and application questions. Adsorption Isotherm. Application of Colloids, catalysis and adsorption. Mechanism of Heterogeneous and Enzymatic catalysis. Cleansing action of soap. Adsorption theory of development of Charge on Colloidal solution.</p> <p style="text-align: center;">Text Book Question: 5.15, 5.22</p>
	BIOMOLECULES	4	<p>Classification of Carbohydrate on basis of saccharide units, Reaction of Glucose with HI, Br₂ water, Nitric Acid, Define: anomers, epimers, mutarotation, inversion of sugar, Amylose & amylopectin, Expected product on Hydrolysis of Lactose & Sucrose, Classification of Protein, Define Peptide Linkage, Fibrous & Globular Protein, α Helix and β pleated structure, denaturation of protein, Vitamins: Sources and deficiency diseases, Difference b/w DNA and RNA, DNA finger printing</p> <p style="text-align: center;">Text Book Question: 14.19, 14.20, 14.21, 14.22</p>
	POLYMERS	3	<p>Define: Monomer, Polymer, Macromolecule, Natural & Synthetic Polymers, Thermosetting, Thermoplastic, Fibre and Elastomers, Addition and Condensation Polymerization, Free Radical Polymerization with mechanism, Polyamides, Vulcanization of rubber, Natural and Synthetic Rubber, Polyester, Co polymer, Homopolymer</p> <p>Write the monomer unit and application of following polymers: Nylon 66, Nylon 6, Bakelite, Novalac, Buna S, Buna N, Teflon, PVC, Polythene, Dacron, Polyester, Neoprene, Chloroprene, Glyptal, Polystyrene, Polypropene, Nylon 2-Nylon-6, Poly β Hydroxy Butarate, Biodegradable & Non Biodegradable polymers.</p> <p style="text-align: center;">Text Book Question: 15.6, 15.18</p>
	CHEMISTRY IN ACTION	3	<p>Define Drugs, chemotherapy, Enzymes, Catalytic action of enzymes, Receptors as drug targets, Antacids, Antihistamines, Tranquilizers, Analgesics, Antibiotics (Broad Spectrum and Narrow Spectrum) Antiseptics and disinfectants, Artificial Sweetning agents, Food preservatives, Soaps & detergents.</p>

			Text Book Questions: 16.13, 16.14, 16.16, 16.21, 16.27
	GENERAL PRINCIPLES OF EXTRACTION	3	Define the following term with example: Ores, Gangue, Metallurgy, Froth Floatation Method, Leaching, Zone Refining, Electrolytic Refining, Vapour Phase or Mond Process or Van Arkel Method General Principle of Extraction of Copper, Zinc, Iron and Aluminium Text Book Question: 6.5, 6.9, 6.14, 6.17, 6.20, 6.21
	D & F BLOCK ELEMENT	5	Explain the transition element on the basis of following heads: Variation in atomic size, Ionization Enthalpy, Variable Oxidation State, Magnetic Properties, Formation of coloured complex, Catalytic Properties, Interstitial Compounds, Alloy Formation. Preparation, Properties, structure and use of $K_2Cr_2O_7$ and $KMnO_4$ Balancing of equation of oxidation reaction of $K_2Cr_2O_7$ and $KMnO_4$ with H_2S , KI , $FeSO_4$ Lanthanide Contraction and Oxidation state of Lanthanide and Actinoids. Intext Question: 8.2, 8.5, 8.8, 8.9, 8.10 Examples: 8.2, 8.4, 8.5, 8.8, 8.9 Text Book Question: 8.2, 8.10, 8.11, 8.12, 8.14, 8.15, 8.16, 8.21, 8.25, 8.27, 8.33, 8.35
	COORDINATION CHEMISTRY	3	Nomenclature of Coordination Compound, Isomerism Intext Question: 9.1, 9.2, 9.3, 9.5, 9.6, 9.7, 9.8, 9.9, 9.10 Example : 9.2, 9.3, 9.4, 9.5, 9.7 Text Book Question: 9.3, 9.4, 9.13, 9.15, 9.16, 9.17, 9.18, 9.19, 9.20, 9.21, 9.22, 9.25, 9.26, 9.27
UPTO 33	P BLOCK ELEMENT	8	Text Book Question: 7.2, 7.4, 7.6, 7.8, 7.10, 7.11, 7.12, 7.14, 7.15, 7.16, 7.18, 7.21, 7.23, 7.27, 7.31, 7.32, 7.33, 7.35, 7.36, 7.39 Intext Question: 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 7.10, 7.11, 7.12, 7.15, 7.17, 7.18, 7.19, 7.20, 7.22, 7.24, 7.25, 7.27, 7.29, 7.31, 7.32, 7.33, 7.34 Example: 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 7.10, 7.11, 7.12, 7.13, 7.14, 7.15, 7.16, 7.17, 7.18, 7.19, 7.21, 7.22 Important Reactions: Hydrolysis and Preparation of Xenon Compounds, Hydrolysis of Ca_3P_2 , White P_4 with $NaOH$ Oxyacids of Nitrogen, Sulphur, Phosphorous and Halogen Structures: Xenon Compounds, Interhalogen Compounds.
UPTO 42	SOLID STATE	5	Define Amorphous & Crystalline Solid, Ionic Solid and Covalent Solid, Octahedral Void and Tetrahedral Void (relation with R_{atom} and R_{void}) Frenkel, Schottky and F Centre Defects,

			<p>Calculation of Rank and packing fraction of SC, FCC and BCC Intext Question: 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 1.12, 1.15, 1.16, 1.19, 1.20, 1.24 Examples: 1.1, 1.2, 1.3 Text Book Question: 1.4, 1.7, 1.9, 1.10, 1.11, 1.13, 1.15, 1.16, 1.17, 1.19, 1.20, 1.21, 1.24, 1.25, 1.26</p>
	SOLUTION	5	<p>Henry Law (application and numerical) Roul't's law (Ideal and Non Ideal Solution) Roul't's Law as a special case of Henry Law, Positive and Negative Deviation, Azeotropes (Minimum and Maximum Boiling) Colligative Properties (Explanation and Calculations) Vont Hoff Factor, Reverse Osmosis (example) Intext Question: 2.2, 2.4, 2.6 Example: 2.1, 2.2, 2.3, 2.6,2.7, 2.8, 2.9, 2.10 (with calculation of atomicity of S), 2.12, 2.13 Text Book Questions: 2.3, 2.6, 2.10, 2.11, 2.14, 2.15, 2.16, 2.18, 2.21, 2,23, 2,24, 2.26, 2.28, 2.33, 2.38, 2.40, 2.41</p>
UPTO 52	ELECTROCHEMISTRY	5	<p>Galvanic and Electrolytic Cell, Conductivity and Molar Conductivity (with units) Faraday Law of Electrolysis, Kholorousch Law, Limiting molar conductivity, SHE, Salt Bridge, Conductance on Dilution (weak and strong electrolyte) Factors affecting conductance, Fuel Cell, Primary and Secondary Cell, Lead Storage Battery, Corrosion and its prevention, Mercury Cell. Intext Questions: 3.1, 3.2, 3.4, 3.6, 3.7, 3.8, 3.10, 3.12, 3.13, 3.14, 3.15 Examples: 3.1, 3.2, 3.3, 3.4, 3.5, 3.7, 3.8, 3.9, 3.10 Text Book Question: 3.2, 3.3, 3.5, 3.7, 3.8, 3.11, 3.12, 3.13, 3.14, 3.15, 3.16, 3.17, 3.18</p>
	CHEMICAL KINETICS	5	<p>Average and instantaneous rate of reaction, Law of mass action and Rate law. Order and Molecularity of reaction. Temperature dependence of the rate of reaction. Collision theory ,Arrhenius equation(Activation energy, Factor affecting rate of reaction, Derivation of integral equation for Ist Order Intext Questions: 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9. Examples: 4.4, 4.5, 4.6, 4.7, 4.10, 4.11. Text Book Question: 4.2, 4.3, 4.5, 4.6, 4.7, 4.9, 4.13, 4.14, 4.16, 4.17,4.18, 4.19, 4.25, 4.26, 4.27, 4.28, 4.29,4.30.</p>
UPTO 60	ORGANIC GR I	4	<p>Nomenclature, Classification of Halo alkanes and haloarenes.(Allylic halides , Benzylic halides , Vinylic halides , Aryl halides). Reactions of halo arenes (Nucleophilic substitution ,Elimination reactions and reaction with metals) Chirality, optical activity ,retention ,inversion and racemisation</p>

			<p>Poly halogen compounds (Chloroform , Iodoform ,Carbon tetrachloride, Freon ,DDT)</p> <p>Intext Questions : 10.2, 10.3, 10.4, 10.5,10.6,10.9, Examples: 10.2, 10.3,10.5,10.6,10.8,10.9.</p> <p>Text Questions: 10.4, 10.5, 10.7, 10.8, 10.10, 10.11, 10.12, 10.14, 10.15, 10.17,10.18, 10.19, 10.20, 10.21 ,10.22.</p>
	ORGANIC GR II	4	<p>Nomenclature , Prepration .Chemical reactions of Alcohols (involving cleavage of O-H ,C-O bond).</p> <p>Ethers.Prepration and chemical properties. Esterification reaction. Dehydration of ethanol.</p> <p>Name reactions : Kolbe's reaction, Rimer-Tiemen reaction , Williamson synthesis.</p> <p>Intext :11.2 ,11.3 ,11.6 ,11.7,11.8,11.9,11.11</p> <p>Examples : 11.2 ,11.3, 11.6.</p> <p>Text book Questions : 11.3 ,11.4, 11.5, 11.6, 11.8, 11.9,11.11, 11.13, 11.14, 11.15, 11.16, 11.18, 11.20, 11.22,11.24, 11.25, 11.28,11.29, 11.31,</p>
UPTO 70	ORGANIC GR III	6	<p>Structure of Carbonyl group.Prepration of Aldehydes (Rosenmund reaction ,Stephen Reaction ,Etard reaction ,Gatterman Koch reaction) Prepration of ketones.</p> <p>Chemical reactions of Aldehydes and ketones (Nucleophilic addition reaction-Aldol ,cross aldol and cannizzaro reaction.</p> <p>Carboxylic acids ,Prepration and Chemical reactions.</p> <p>Intext :12.2 , 12.5, 12.6, 12.7, 12.8</p> <p>Examples: 12.2, 12.4</p> <p>Text Book Questions: 12.1, 12.6, 12.7, 12.8, 12.10, 12.11, 12.12, 12.13, 12.14, 12.15, 12.6, 12.17, 12.18, 12.19, 12.20</p>
	ORGANIC GR IV	4	<p>Name Reaction: Gabriel pthalamide synthesis, Hoffman Bromammide. Chemical Reaction: Alkylation, Acylation, Electrophilic Substitution Reaction. Prepration and Properties of Diazonium Salts. Comparison of basic nature of amines</p> <p>Intext Questions: 13.2, 13.3, 13.4, 13.5, 13.6, 13.7</p> <p>Example: 13.1, 13.2, 13.4, 13.5</p> <p>Text Book Questions: 13.3, 13.4, 13.5, 13.6, 13.7, 13.8, 13.9, 13.10, 13.11, 13.12, 13.13, 13.14</p>