

Unit VI : Haloalkanes and Haloarenes.
(Periods 12)

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

Haloarenes: Nature of C-X bond, substitution reactions (directive influence of halogen for mono-substituted compounds only) Uses and environmental effects of dichloromethane, trichloromethane, tetrachloromethane, iodoform, freons, DDT.

Unit VII : Alcohols, Phenols and Ethers
(Periods 12)

Alcohols: Nomenclature, methods of preparation, physical and chemical properties, (of primary alcohols; only); identification of dehydration, uses, some important compounds-methanol and ethanol. **Phenols:** Nomenclature, methods of preparation, physical and chemical properties, acidic nature of phenol, electrophilic substitution reactions, uses of phenols.

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

Unit VIII : Aldehydes, Ketones and carboxylic Acids (Periods 14)

Aldehydes and Ketones:
Nomenclature, nature of carbonyl group, methods of preparation, physical and chemical properties,

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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 IX : Amines (Periods 12)

Amines: Nomenclature, classification, structure, methods of preparation, physical and chemical properties, uses, identification of primary, secondary and tertiary amines.

Cyanides and Isocyanides: Will be mentioned at relevant places in context.

Diazonium salts: Preparation, chemical reaction and importance in synthetic organic chemistry.

Unit X : Biomolecules (Periods 12)

Carbohydrates: Classification (aldoses and ketoses), monosaccharides (glucose and fructose), oligosaccharides (sucrose, lactose, maltose), polysaccharides (starch, cellulose, glycogen); importance.

Proteins: Elementary idea of α - amino acids, peptide bond, polypeptides proteins, primary structure and quaternary structure (qualitative idea only), denaturation of proteins; enzymes.

Vitamins: Classification and functions.

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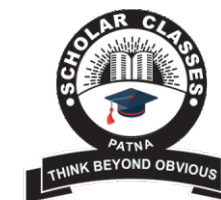
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CHEMISTRY

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SYLLABUS

XII C.B.S.E.

Theory :- 70 marks + Practical :- 30 marks = 100 marks

Question Pattern :-

Section	Type of Question	No. of Question	Marks
A	16 Multiple Choice	1 x 16	16
B	5 Short Answer	2 x 5	10
C	7 Short Answer	3 x 7	21
D	2 Case Based Q.	4 x 2	08
E	3 Long Answer	5 x 3	15
		33	70

**Syllabus [Class XII]
(C.B.S.E.)**

S. No.	Chapters	Marks
01.	Solutions	7
02.	Electrochemistry	9
03.	Chemical Kinetics	7
04.	d -and f -Block Elements	7
05.	Coordination Compounds	7
06.	Haloalkanes and Haloarenes	6
07.	Alcohols, Phenols and Ethers	6
08.	Aldehydes, Ketones and Carboxylic Acids	8
09.	Amines	6
10.	Biomolecules	7
	TOTAL	70

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Unit I : Solutions (Periods 10)

Types of solutions, expression of concentration of solutions of solids in liquids, solubility of gases in liquids, solid solutions, colligative properties- relative lowering of vapour pressure, elevation of B.P., depression of freezing point, osmotic pressure, determination of molecular masses using colligative properties, abnormal molecular mass.

Unit II : Electrochemistry (Periods 12)

Redox reactions, conductance in electrolytic solutions, specific and molar conductivity variations of conductivity with concentration, Kohlrausch's law, electrolysis and laws of electrolysis (elementary idea), dry cell, electrolytic cells and galvanic cells; lead accumulator, EMF of a cell, standard electrode potential, Nernst equation and its application to chemical cells, fuel cells; corrosion.

Unit III : Chemical Kinetics (Periods 10)

Rate of a reaction (average and instantaneous), factors affecting rates 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); concept of collision theory (elementary idea, no mathematical treatment)

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Unit IV : d and f Block Elements (Periods 12)

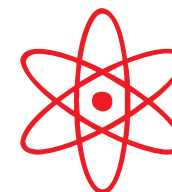
General introduction, electronic configuration, Occurrence, and characteristics of transition metals, general trends in properties of the first row transition metals-metallic character, ionization enthalpy, oxidation states, ionic radii colour catalytic property, magnetic properties, interstitial compounds, alloy formation. Preparation and properties of $K_2Cr_2O_7$ and $KMnO_4$

Lanthanoids-electronic configuration, oxidation states, chemical reactivity and lanthanoid contraction.

Actinoids-Electronic configuration, oxidation states.

Unit V : Coordination Compounds (Periods 12)

Coordination compounds-introduction, ligands, coordination number, colour, magnetic properties and shapes, IUPAC nomenclature of mononuclear coordination compounds. bonding; isomerism, importance of coordination compounds (in qualitative analysis, extraction of metals and biological systems).



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