CHEMISTRY

Unit no.	Name of unit	Focus area
1	The solid state	1.2 Amorphous and crystalline solids 1.4.1 Primitive and Centred Unit Cells 1.5 Number of atoms in a unit cell 1.9.1 Types of point defects 1.10 Electrical properties 1.11 Magnetic properties
2	Solutions	2.3.2 solubility of gas in liquids 2.4.1 Vapour pressure of liquid-liquid solutions (Raoult's law) 2.5 Ideal and non ideal solutions 2.6 Colligative properties and determination of molar mass
3	Electrochemistry	3.3 Nernst equation 3.4.2. Variation of conductivity and molar conductivity with concentration 3.6.2 Secondary Batteries 3.7 Fuel cells
4	Chemical kinetics	4.2 Factors influencing rate of a reaction 4.3.2 First order reactions and its half life period 4.5 Temperature dependence of the rate of reaction- Arrhenius equation
5	Surface chemistry	5.1.3 Types of Adsorption 5.1.4 Adsorption isotherms 5.2.1 Homogeneous and Heterogeneous Catalysis 5.4 Classification of colloids (5.4.2 and 5.4.3) 5.4.6 Properties of Colloidal Solutions (Tyndall effect, Electrophoresis) 5.5 Emulsions
6	General principles and Process of Isolation of elements	6.2 Concentration of ores 6.3 Extraction of crude metal from concentrated ore (Calcination and Roasting) 6.4.1 Applications –Extraction of copper from cuprous oxide 6.5 Hall Heroult process (Extraction of Al) 6.7 Refining (Electrolytic refining and Vapour phase refining)
7	The P-block elements	7.3 Ammonia 7.5 Nitric acid 7.8 Phosphorus halides 7.17 Sulphuric acid 7.22 Inter halogen compounds
8	The d-and f-block elements	8.3 General properties of Transition Elements (Magnetic properties, formation coloured ions, formation complexes and catalytic property 8.4 Some important compounds of Transition elements (Potassium dichromate only) 8.5.2 Atomic and ionic sizes 8.7 Some applications of d- and f-block elements
9	Coordination compounds	9.3 Nomenclature of coordination compounds 9.4 Isomerism in coordination compounds

		9.5.2 Magnetic properties of coordination compounds 9.6 Bonding in metal carbonyls
10	Haloalkanes and haloarenes	10.4.1 Preparation from alcohols 10.4.3 Halogen exchange 10.5 Preparation of haloarenes (By Sandmeyer's reaction) 10.7.1 Reactions of haloalkanes (Nucleophilic substitiution) 10.7.2 Reactions of haloarenes (Electrophilic substitution)
11	Alcohols, phenols and ethers	11.4.1 Preparation of alcohols(from carbonyl compounds and Grignard reagent) 11.4.2 Preparation of phenol (from haloarenes and diazonium salts) 11.4.4 Chemical reactions (Lucas test, dehydration, nitration of phenol, Reimer Tiemann reaction) 11.5 Some Commercially important alcohols- ethanol 11.6.1 Preparation of ethers-Williamson synthesis
12	Aldehydes, ketones and carboxylic acids	12.2 Preparation of aldehydes and ketones (By oxidation of alcohols, by dehydrogenation of alcohols, Rosenmund reduction, Etard reaction, Gatterman-Koch reaction, Friedel Craft's reaction) 12.4 Chemical reactions (Reduction, Oxidation, Aldol reaction, Cannizzaro reaction) 12.7 Methods of Preparation of Carboxylic acid (from primary alcohols and aldehydes, from alkyl benzene) 12.9 Chemical reactions (acidity, Reduction, Hell-Volhard Zelinsky reaction, Ring substitution)
13	Amines	13.4 Preparation of amines (Reduction of nitriles, amides, Hoffmann Bromamide reaction) 13.6 Chemical reactions (carbylamine reaction, Hinsberg test) 13.9 Chemical reactions of diazonium salts- Sandmaeyer reaction, coupling reaction
14	Biomolecules	14.1.1 Classification of carbohydrates 14.1.2 Monosaccharides (Preparation of glucose from sucrose) 14.1.3 Disaccharides (glycosidic linkage, invert sugar) 14.1.4 Starch, glycogen 14.2.4 Denaturation of protein 14.5.3 Biological functions of nucleic acids
15	Polymers	15.1 Classification of polymers 15.2.1.2 Some important Addition polymers (Polythene, Teflon) 15.5.2.1 Some important condensation polymers (Nylon 6, 6 and Nylon 6) 15.2.4 Rubber (Natural rubber, vulcanisation)
16	Chemistry in Everyday life	16.3.1 Antacid 16.3.3 Neurologically active drugs 16.3.4 Anti microbials antiseptics, disinfectants)