

CLASS -XII

| S No | Unit | Portion to be Reduced |
|------|---|--|
| 1 | Solid State | Electrical and magnetic properties. Band theory of metals, conductors, semiconductors and insulators and n and p type semi conductors. |
| 2 | Solutions | Abnormal molecular mass, Van't Hoff factor |
| 3 | Electrochemistry | Lead accumulator, fuel cells, corrosion, law of electrolysis (elementary idea), dry cell- electrolytic cells and Galvanic cells, |
| 4 | Chemical Kinetics | Concept of collision theory (elementary idea, no mathematical treatment), activation energy, Arrhenius equation. |
| 5 | Surface Chemistry | emulsion - types of emulsions, catalysis: homogenous and heterogeneous, activity and selectivity of solid catalysts; enzyme catalysis, |
| 6 | General Principles and Processes of Isolation of Elements | Entire unit |
| 7 | p-Block Elements | Preparation and properties of Phosphine, Sulphuric Acid: industrial process of manufacture, Oxides of Nitrogen (Structure only); Phosphorus - allotropic forms, compounds of Phosphorus: Preparation and properties of Halides and Oxo acids (elementary idea only). |
| 8 | d and f Block Elements | Chemical reactivity of lanthanoids, Actinoids -Electronic configuration, oxidation states and comparison with lanthanoids. Preparation and properties of KMnO_4 and $\text{K}_2\text{Cr}_2\text{O}_7$ |
| 9 | Coordination Compounds | Structure and stereoisomerism, importance of coordination compounds (in qualitative analysis, extraction of metals and biological system). |
| 10 | Haloalkanes and Haloarenes | Uses and environmental effects of -dichloromethane, trichloromethane, tetrachloromethane, iodoform, freons, DDT. |
| 11 | Alcohols, Phenols and Ethers | uses with special reference to methanol and ethanol. |
| 12 | Aldehydes, Ketones and Carboxylic Acid | --- |
| 13 | Amines | Diazonium salts: Preparation, chemical reactions and importance in synthetic organic chemistry. |

| | | |
|----|----------------------------|--|
| 14 | Biomolecules | Oligosaccharides (sucrose, lactose, maltose), polysaccharides (starch, cellulose, glycogen), importance of carbohydrates. Vitamins– classification and functions. Enzymes. Hormones - Elementary idea excluding structure. |
| 15 | Polymers | entire chapter |
| 16 | Chemistry in Everyday life | entire chapter |

Practical

Following portions should be considered deleted.

A. Surface Chemistry

- a. Preparation of one lyophilic and one lyophobic sol Lyophilic sol - starch, egg albumin and gum Lyophobic sol - aluminium hydroxide, ferric hydroxide, arsenous sulphide.
- b. Dialysis of sol-prepared in (a) above.
- c. Study of the role of emulsifying agents in stabilizing the emulsion of different oils.

B. Chemical Kinetics

- a. Effect of concentration and temperature on the rate of reaction between Sodium Thiosulphate and Hydrochloric acid.
- b. Study of reaction rates of any one of the following:
 - i) Reaction of Iodide ion with Hydrogen Peroxide at room temperature using different concentration of Iodide ions.
 - ii) Reaction between Potassium Iodate, (KIO₃) and Sodium Sulphite: (Na₂SO₃) using starch solution as indicator (clock reaction).

C. Thermo chemistry Any one of the following experiments

- i) Enthalpy of dissolution of Copper Sulphate or Potassium Nitrate.
- ii) Enthalpy of neutralization of strong acid (HCl) and strong base (NaOH).
- iii) Determination of enthalpy change during interaction (Hydrogen bond formation) between Acetone and Chloroform.

D. Electrochemistry Variation of cell potential in Zn/Zn²⁺ || Cu²⁺/Cu with change in concentration of electrolytes (CuSO₄ or ZnSO₄) at room temperature.

G. Preparation of Organic Compounds Preparation of any one of the following compounds

- i) Acetanilide
- ii) Di-benzal Acetone
- iii) p-Nitroacetanilide

Aniline yellow or 2 - Naphthol Aniline dye