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# CLASS 12
# CHEMISTRY
# SYLLABUS
# 2022-23

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# SYLLABUS

# PART-I

## UNIT-1: THE SOLID STATE

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1.3 Classification of Crystalline Solids
- 1.3.1 Molecular Solids
- 1.3.2 Ionic Solids
- 1.3.3 Metallic Solids
- 1.3.4 Covalent or Network Solids

1.4 Crystal Lattices and Unit Cells
- 1.4.1 Primitive and Centred Unit Cells
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  - (b) Centred Unit Cells
    - (i) Body-Centred Unit Cells
    - (ii) Face-Centred Unit Cells
    - (iii) End-Centred Unit Cells

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- 1.5.1 Primitive Cubic Unit Cell
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- 1.6.1 Formula of a Compound and Number of Voids Filled

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- 1.7.1 Packing Efficiency in hcp and ccp Structures
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- 1.7.3 Packing Efficiency in Simple Cubic Lattice

1.8 Calculations Involving Unit Cell Dimensions
1.9 Imperfections in Solids
- 1.9.1 Types of Point Defects
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    - (i) Vacancy Defect
    - (ii) Interstitial Defect
    - (iii) Frenkel Defect
    - (iv) Schottky Defect
  - (b) Impurity Defects
  - (c) Non-Stoichiometric Defects

(i) Metal Excess Defect
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1.10 Electrical Properties
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1.10.2 Conduction of Electricity in Semiconductors
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(v) Ferrimagnetism

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2.1 Types of Solutions
2.2 Expressing Concentration of Solutions
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(ii) Volume percentage (V/V)
(iii) Mass by volume percentage (w/V)
(iv) Parts per million
(v) Mole fraction
(vi) Molarity
(vii) Molality
2.3 Solubility
2.3.1 Solubility of a Solid in a Liquid
2.3.2 Solubility of a Gas in a Liquid
2.4 Vapour Pressure of Liquid Solutions
2.4.1 Vapour Pressure of Liquid-Liquid Solutions
2.4.2 Raoult's Law as a Special Case of Henry's Law
2.4.3 Vapour Pressure of Solutions of Solids in Liquids
2.5 Ideal and Non-Ideal Solutions
2.5.1 Ideal Solutions
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2.6 Colligative Properties and Determination of Molar Mass
2.6.1 Relative Lowering of Vapour Pressure
2.6.2 Elevation of Boiling Point
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  3.3.1 Equilibrium Constant from Nernst Equation
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  3.6.1 Primary Batteries
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  4.2.2 Rate Expression and Rate Constant
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  4.2.4 Molecularity of a Reaction
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- 5.1.5 Adsorption from Solution Phase
- 5.1.6 Applications of Adsorption

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- 5.2.2 Adsorption Theory of Heterogeneous Catalysis
- 5.2.3 Shape-Selective Catalysis by Zeolites
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- 5.4.2 Classification Based on Nature of Interaction between Dispersed Phase and Dispersion Medium
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- 7.10.3 Atomic and Ionic Radii
- 7.10.4 Ionisation Enthalpy
- 7.10.5 Electron Gain Enthalpy
- 7.10.6 Electronegativity
- 7.10.7 Physical Properties
- 7.10.8 Chemical Properties

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8.6 The Actinoids
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# PART-II

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- 10.1.3 Compounds Containing $sp^2$ C—X Bond

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10.5 Preparation of Haloarenes
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