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Class 11 Chemistry

Physical, Inorganic & Organic

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Physical Chemistry

- Mole concept: 1 mole = 6.022×10^{23} particles (Avogadro's number).
- Molar mass is the mass of one mole of a substance in grams.
- Ideal gas equation: $PV = nRT$.
- First law of thermodynamics: $\Delta U = q + w$.
- $pH = -\log[H^+]$; $pH + pOH = 14$ at 25°C .

Atomic Structure & Bonding

- Quantum numbers: principal (n), azimuthal (l), magnetic (m) and spin (s).
- Aufbau, Pauli's exclusion and Hund's rule govern electron filling.
- Ionic bonds form by transfer of electrons; covalent bonds by sharing.
- VSEPR theory predicts molecular shapes from electron-pair repulsion.

Inorganic & Periodicity

- Across a period, atomic size decreases and electronegativity increases.
- Down a group, atomic size increases and ionisation energy decreases.
- s-block: alkali and alkaline earth metals; p-block includes non-metals.
- Hydrogen shows properties of both group 1 and group 17.

Organic Chemistry Basics

- IUPAC nomenclature names carbon compounds systematically.
- Isomerism: same molecular formula, different structures.
- Inductive, resonance and hyperconjugation effects influence stability.
- Electrophiles accept electron pairs; nucleophiles donate them.

Want the full Class 11 Chemistry PDF with reactions and numericals?

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