Class 10 - Science (Chapter 2)

Acids, Bases and Salts - Revision Notes

1. Acids

- **Definition:** Substances that are sour in taste and turn blue litmus red.
- **Chemical Property:** They produce H^+ ions in aqueous solutions.
- **Examples:** Hydrochloric acid (HCl), Sulphuric acid (H_2SO_4).

2. Bases

- **Definition:** Substances that are bitter in taste, soapy to touch, and turn red litmus blue.
- **Chemical Property:** They produce OH^- ions in aqueous solutions.
- **Examples:** Sodium hydroxide ($NaOH$), Calcium hydroxide ($Ca(OH)_2$).

3. Indicators

- **Natural:** Litmus, Turmeric.
- **Synthetic:** Phenolphthalein, Methyl Orange.
- **Olfactory:** Smell changes in acidic/basic media (e.g., Onion, Vanilla).

4. The pH Scale

- A scale for measuring hydrogen ion concentration in a solution.
- **pH < 7:** Acidic solution.
- **pH = 7:** Neutral solution.
- **pH > 7:** Basic solution.

5. Salts

- Formed by the reaction of acid and base (Neutralization Reaction).
- **Common Salt:** Sodium Chloride ($NaCl$).
- **Some Important Chemicals:**
  - Bleaching Powder: $CaOCl_2$
  - Baking Soda: $NaHCO_3$

- Washing Soda: $Na_2CO_3 \cdot 10H_2O$
- Plaster of Paris: $CaSO_4 \cdot 1/2H_2O$

Study Tip: Remember the chemical formulas and the color changes of indicators—these are frequently asked in exams!