How to answer Chemistry application-based questions

Step 1 Master the "Sensory" Details (The Cheat Sheet): Observation is king. You need to memorize the specific colors, smells, and sounds associated with key chemicals.

Category	Item	Key Observation to Memorize
Colours of Salts	Ferrous Sulphate ($FeSO_4$)	**Pale Green**
	Copper Sulphate ($CuSO_4$)	**Blue**
	Ferric Oxide (Fe_2O_3)	**Reddish Brown**
Gases	Hydrogen (H_2)	Burns with a **"Pop" sound**
	Carbon Dioxide (CO_2)	Turns **Lime Water Milky**
	Sulphur Dioxide (SO_2)	Smell of **burning sulphur**
Precipitates	Barium Sulphate ($BaSO_4$)	**White** precipitate (insoluble in acid)
Acids/Bases	Univ. Indicator in Acid	**Red/Orange**
	Univ. Indicator in Base	**Purple/Violet**

Step 2: Use Visual Mnemonics for Reactivity
For displacement reactions (e.g., "Will Zinc displace Copper?"), you must know the Reactivity Series by heart. If you don't know the order, you cannot answer the question.

- **The Mnemonic:** *Please Stop Calling Me A Careless Zebra Instead Try Learning How Copper Saves Gold. (Potassium, Sodium, Calcium, Magnesium, Aluminium, Carbon, Zinc, Iron, Tin, Lead, Hydrogen, Copper, Silver, Gold).*
- **The Rule:** A metal higher up can "kick out" (displace) a metal lower down.

Step 3: Understand the "Setup" Diagrams
CBSE often gives you a diagram with a missing label or asks you to draw a specific setup. Focus on practicing these three diagrams:

1. **Testing for CO_2:** Delivery tube going into a test tube with lime water.
2. **Heating of Crystals:** Heating Ferrous Sulphate in a boiling tube (tube mouth pointed away from face).
3. **Reaction of Zinc with Acid:** The test tube with the delivery tube and soap solution (showing bubbles of H_2).

Step 4: The "ORE" Method for Answering
When writing answers for subjective practical questions, use the **ORE** method to ensure you don't lose marks:

- **O - Observation:** What do you see? (e.g., "The blue solution turned pale green.")
- **R - Reason:** Why did it happen? (e.g., "Because Iron is more reactive than Copper.")
- **E - Equation:** Support with a balanced chemical equation.