Metals

Here is the topic tree for "Metals and Nonmetals" based on the provided PDF:

Metals and Nonmetals Topic Tree

1. **Introduction to Metals and Nonmetals**
    - Definition and Classification
    - Physical Properties
        - Lustre
        - Malleability
        - Ductility
        - Conductivity
        - State at Room Temperature
    - Chemical Properties
        - Formation of Positive Ions
        - Reaction with Oxygen
        - Reaction with Water
        - Reaction with Acids
    - Reactivity Series
    - Alloys

2. **Extraction of Metals**
    - Methods of Extraction
        - Metals of Low Reactivity
            - Heating Alone
            - Examples: Mercury, Copper
        - Metals of Medium Reactivity
            - Roasting
            - Calcination
            - Reduction
            - Examples: Zinc, Iron, Lead
        - Metals of High Reactivity
            - Electrolytic Reduction
            - Examples: Sodium, Magnesium, Calcium, Aluminium

3. **Properties of Metals**

- Physical Properties
  - Hardness
  - Melting and Boiling Points
  - Density
  - Conductivity
  - Sonority
- Chemical Properties
  - Reaction with Water
  - Reaction with Acids
  - Displacement Reactions

4. **Properties of Nonmetals**

- Physical Properties
  - States at Room Temperature
  - Appearance
  - Conductivity
- Chemical Properties
  - Reaction with Metals
  - Formation of Acidic Oxides
  - Formation of Hydrides

5. **Metallurgy**

- Definition
- Steps Involved
  - Concentration of Ores
  - Reduction of Ores
  - Refining of Metals
- Techniques
  - Electrolytic Refining
  - Distillation
  - Zone Refining

6. **Corrosion**

- Definition
- Examples
  - Rusting of Iron
  - Tarnishing of Silver
- Prevention Methods
  - Coating
  - Alloying
  - Galvanization

7. **Exercises and Questions**

- Multiple Choice Questions
- Short Answer Questions
- Long Answer Questions