

Reasoning Questions Metals Nonmetals



Here are 15 reasoning-based questions from the **Metals and Non-Metals** section of the textbook:

1. **Why is sodium kept immersed in kerosene oil?**
2. **Write equations for the reactions of:**
 - (i) iron with steam,
 - (ii) calcium and potassium with water.
3. **Which gas is produced when dilute hydrochloric acid is added to a reactive metal? Write the chemical reaction when iron reacts with dilute sulfuric acid (H_2SO_4).**
4. **What would you observe when zinc is added to a solution of iron(II) sulfate? Write the chemical reaction that takes place.**
5. **Which metals will displace hydrogen from dilute acids?**
6. **Explain why platinum, gold, and silver are used to make jewelry.**
7. **Why are sodium, potassium, and lithium stored under oil?**
8. **Aluminum is a highly reactive metal, yet it is used to make utensils for cooking. Give reasons.**
9. **Why are carbonate and sulfide ores usually converted into oxides during the process of extraction?**
10. **Explain why some metals, such as iron, corrode when exposed to moist air.**
11. **Why are metals generally good conductors of electricity?**
12. **What type of oxides are formed when non-metals combine with oxygen? Give examples.**
13. **What are amphoteric oxides? Provide two examples.**
14. **Differentiate between metals and non-metals on the basis of their chemical properties.**
15. **Explain why copper is used to make hot water tanks instead of steel (an alloy of iron).**

These questions focus on reasoning about the properties, reactions, and uses of metals and non-metals.