

**Multiple Choice Questions**

- Which of the following metals is the most malleable?**
 - Iron
 - Aluminium
 - Gold
 - Copper
- The property by which a metal can be drawn into thin wires is called**
 - Conduction
 - Hardness
 - Sonority
 - Ductility
- Which metal is found in liquid state at room temperature?**
 - Mercury
 - Aluminium
 - Iron
 - Silver
- The ringing sound produced by metals when struck is due to their property of**
 - Ductility
 - Sonority
 - Malleability
 - Strength
- Which of the following is a good conductor of heat?**
 - Plastic
 - Wood
 - Copper
 - Glass
- Rusting of iron takes place in the presence of**
 - Water only
 - Air only
 - Dry air
 - Both air and water
- Which of the following is a non-metal?**
 - Iron
 - Copper
 - Sulphur
 - Aluminium
- Magnesium burns in air to form**
 - Magnesium oxide
 - Magnesium hydroxide
 - Magnesium chloride
 - Magnesium sulphate
- Oxides of metals are generally**
 - Basic
 - Acidic
 - Neutral
 - Salty

10. Which non-metal is used in water purification?

- (a) Nitrogen
- (b) Carbon
- (c) Sulphur
- (d) Chlorine

Fill in the blanks :

11. The property of metals by which they can be beaten into thin sheets is called _____.
12. The brown deposit formed on iron is called _____.

True / False

13. Metals are generally good conductors of heat and electricity.
14. Non-metals are usually lustrous and shiny like metals.

Very Short Type Questions

15. What is rusting?
16. Name any one non-metal used in daily life.

Short Type Questions

17. What is malleability? Give one example.
18. Why are cooking vessels generally made of metals?

Essay Type Questions

19. Describe the main properties of metals.
20. Explain the process of rusting of iron and mention any two methods to prevent it.

HOTS

21. **Assertion (A):** Sodium is stored in kerosene.
Reason (R): Sodium reacts vigorously with air and water and may catch fire.
Choose the correct option:
- a) Both A and R are true and R is the correct explanation of A
 - b) Both A and R are true but R is not the correct explanation of A
 - c) A is true but R is false
 - d) A is false but R is true

Chapter-4 | The World of
Metals and Non-Metals

Worksheet-1

Answer & Solution

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1. (c) Gold
2. (d) Ductility
3. (a) Mercury
4. (b) Sonority
5. (c) Copper
6. (d) Both air and water
7. (c) Sulphur
8. (a) Magnesium oxide
9. (a) Basic
10. (d) Chlorine
11. Malleability
12. Rust
13. True
14. False
15. Rusting is the process of formation of a brown deposit on iron when it reacts with moist air.
16. Oxygen is a non-metal used in daily life for breathing.
17. Malleability is the property of metals by which they can be beaten into thin sheets. Gold and aluminium show this property.
18. Cooking vessels are made of metals because metals are good conductors of heat and allow quick and even heating of food.
19. The Properties of Metals are:
 1. Metals are generally lustrous, which means they have a shiny surface.
 2. Most metals are hard and strong, except a few like sodium and potassium which are soft.
 3. Metals are malleable, so they can be beaten into thin sheets.
 4. Metals are ductile, which means they can be drawn into thin wires.
 5. Metals are good conductors of heat and electricity therefore they are used in cooking utensils and electrical wires
 6. Metals are sonorous, so they produce a ringing sound when struck.
 7. Most metals are solid at room temperature, except mercury which is in liquid state.

20. Rusting is a slow chemical process in which iron reacts with oxygen and moisture (water) present in the air and forms a reddish-brown substance called rust. This rust is known as iron oxide. Rusting makes iron objects weak, flaky, and damaged over time. For rusting to occur, both air (oxygen) and water must be present. If any one of these is missing, rust will not form. This is why iron objects kept in dry places do not rust easily, but those kept in humid or rainy areas rust faster.

Methods to Prevent Rusting

1. Painting or Oiling:

A layer of paint or oil covers the iron surface and prevents air and moisture from coming in contact with the metal, thus stopping rusting.

2. Galvanization:

In this method, iron is coated with a thin layer of zinc. Zinc protects iron from reacting with air and water and prevents rusting for a long time.

21. Correct Answer: (a)

Explanation:

Both the assertion and the reason are true. Sodium is highly reactive and can react violently with air and water, producing heat and fire. Storing it in kerosene prevents its contact with air and moisture, so the reason correctly explains the assertion.

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