

Topics: Metals and Non-Metals**Subtopics: Physical Properties of Metals and Non-metals****Chemical Properties of Metals and Non-metals****Questions**

Q1. Name a non-metal which is lustrous and a metal which is non-lustrous.

Q2. Give an example of a metal which :

- (i) is a liquid at room temperature.
- (ii) can be easily cut with a knife.
- (iii) is the best conductor of heat.
- (iv) is a poor conductor of heat.

Q3. Name two metals which are found in nature in the free state.

Q4. Explain the meanings of malleable and ductile.

Q5. Why is sodium kept immersed in kerosene oil ?

Q6. Write equations for the reactions of

- (i) iron with steam.
- (ii) calcium and potassium with water.

Q7. Which gas is produced when dilute hydrochloric acid is added to a reactive metal ? Write the chemical reaction when iron reacts with dilute H_2SO_4 .

Q8. What would you observe when zinc is added to a solution of iron (II) sulphate ? Write the chemical reaction that takes place.

Q9. Explain why calcium metal after reacting with water starts floating on its surface.

Write the chemical equation for the reaction. Name one more metal that starts floating after some time when immersed in water.

Q10. Aluminium oxide is considered as an amphoteric oxide. Give reason

Answers

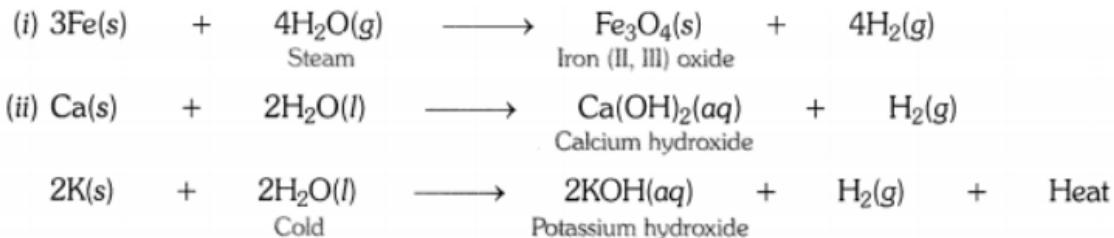
1. Iodine is a non-metal which is lustrous, lead is a non-lustrous metal.

2. (i) Mercury
(ii) Sodium
(iii) Silver
(iv) Lead

3. (i) Gold (ii) Silver

4. **Malleable** : A metal that can be beaten into thin sheets on hammering is called malleable.
Ductile : A metal which can be drawn into thin wires is called a ductile metal.

5. Sodium is highly reactive. So it is kept immersed in kerosene oil to prevent its reaction with oxygen, moisture and carbon dioxide of air to prevent accidental fires.



6.

7. Hydrogen gas is produced when dilute hydrochloric acid is added to a reactive metal.



8. Zinc is more reactive than iron. Therefore, when zinc is added to a solution of iron (II) sulphate, then the greenish colour of iron (II) sulphate solution fades gradually due to the formation of colourless zinc sulphate solution and iron metal is deposited on zinc.

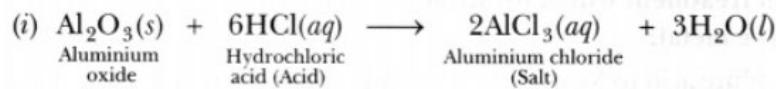


9. Calcium starts floating because the bubbles of hydrogen gas formed stick to the surface of metal.



Magnesium reacts with hot water and starts floating due to the bubbles of hydrogen gas sticking to its surface.

10. It is because it reacts with acids as well as bases to produce salts and water.



In this reaction, Al_2O_3 behaves as a basic oxide because it reacts with an acid to form salt and water.

