

Learnwell science class 8

Chapter Metals and Non metal Questions answer

Very short answer questions

1. What is malleability?

Ans: Metal can be beaten into thin sheet. this properties oh metal is called malleability. Gold is the most malleable metal.

2. Name a metal exist in liquid state

Ans: Mercury is a metal that exist in liquid state at room temperature.

3. Which metal is the best conductor of electricity?

Ans: Silver

4. Name the metals ha highest melting pint.

Ans: Tungsten

5. Name the lightest metal

Ans: Lithium

6. Which is the only non metal that can conduct electricity?

Ans: Graphite

7. Name the two non metals that are lustrous

Ans: Graphite and iodine

8. What are allotropes?

Ans: Two or more form of same element which differ in properties. Diamond and graphite are two allotropes of carbon

Write true and false

1. Metals react with oxygen to form oxide: False

Metals react with oxygen to form metallic oxide

2. Magnesium and aluminium react quickly with oxygen: False

Sodium and potassium react quickly with oxygen so they are stored in kerosene oil

3. Metals react with water to form metal oxide: True

4. All metal react with bases: False

Most of the metals do not react with bases. Only Zinc, lead and aluminium only react with strong bases like NaOH and KOH

5. Non Metal react with air at room temperature: False

Non Metal reacts with air on heating

6. Non metal do not react with water: True

Name the metals and Non metal used for:

1. Filling electric bulb – Argon

2. Constructing bridge: - Iron

3. Making electric wire: - copper and aluminium

4. Making foil for wrapping food: - Aluminium

5. Making pencil leads: - Graphite

6. Making x-ray shield and bullets: - lead

7. Water purification: Chlorine

8. Filled in electric tube and glow sign: - Neon

9. Filled in gas balloon: - Helium

10. Preserve blood and other donated organ: - Nitrogen

Answer these questions:

1. Why are musical instrument and bell made up of metal?

Ans: Musical instrument and bell are made up of metal because metal produce ringing sound when stuck by something.

2. Why are electric wire made up of copper?

Ans: Electric wire is made up of copper because copper is good conductors of electricity.

3. Why sodium and potassium stored in kerosene?

Ans: Sodium and potassium react quickly with oxygen at room temperature so they are stored in kerosene oil

4. Why is phosphorous stored under water?

Ans: phosphorous rapidly burn in air at room temperature so it is stored under water for safety.

5. Why silver and gold do not react with hydrochloric acid?

Ans: This is because silver and gold are less reactive than hydrogen.

6. Why is graphite not used for making electric cable?

Ans: Graphite is a non metal that is brittle and cannot draw into wire. This is why graphite is not used for making electric cable

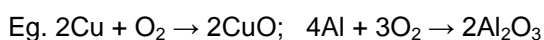
7. Could you store 500 ml Zinc sulphate solution in an aluminum vessel overnight? Give reason for your answer.

Ans: Aluminium is more reactive than zinc therefore displace zinc from Zinc sulphate solution and form salt with evolution of hydrogen gas. This is why we do not store Zinc sulphate solution in an aluminum vessel overnight.

8. Describe any three properties of metal with suitable example?

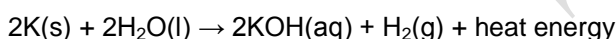
Ans:

(i) Metals combine with oxygen to form metal oxides.

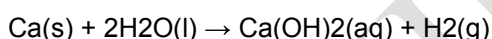


(ii) In general metals react with water to form a metal oxide or hydroxide and hydrogen gas. But all metals do not react in the same way with water.

Metals like K and Na react vigorously with cold water to form hydrogen gas.



The reaction of calcium with water is less violent. The heat evolved is not sufficient for the hydrogen to catch fire.



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

(iii) Metals react with dilute acid, like dilute HCl to give a metal salt and H₂ gas.



Hydrogen gas is not evolved when a metal reacts with nitric acid (HNO₃). As HNO₃ is a strong oxidizing agent, it oxidizes the H₂ to water and itself gets reduced to oxide of nitrogen (N₂O, NO, NO₂).

Magnesium and Manganese react with very dil. HNO₃ to give H₂ gas.



9. What is aqua regia?

Ans: Aqua regia, (Latin for 'royal water') is a mixture of concentrated hydrochloric acid and concentrated nitric acid in the ratio of 3:1. It can dissolve gold, even though neither of these acids can do so alone. Aqua regia is a highly corrosive, fuming liquid. It is one of the few reagents that is able to dissolve gold and platinum.