



INDIAN SCHOOL AL WADI AL KABIR



CLASS: VIII	DEPARTMENT: SCIENCE 2022 -2023	DATE OF COMPLETION: 13.10.2022
TEXTBOOK Q &A	CHAPTER: MATERIALS: METALS AND NON-METALS	NOTE: A4 FILE FORMAT
NAME OF THE STUDENT	CLASS & SEC:	ROLL NO.

1. Which of the following can be beaten into thin sheets?

- (a) Zinc
- (b) Phosphorus
- (c) Sulphur
- (d) Oxygen

Answer is a) Zinc

Explanation:

Here, Zinc is a metal with malleability and ductility whereas Phosphorus, Sulphur and Oxygen are nonmetals which lack malleability and ductility.

2. Which of the following statements is correct?

- (a) All metals are ductile.
- (b) All non-metals are ductile.
- (c) Generally, metals are ductile.
- (d) Some non-metals are ductile.

Answer is (c) Generally, metals are ductile.

Explanation:

Ductility is a property where a substance can be drawn into thin wires, generally metals are ductile with mercury as the exception.

3. Fill in the blanks.

- (a) Phosphorus is a very reactive non-metal.
- (b) Metals are good conductors of heat and electricity .
- (c) Iron is more reactive than copper.
- (d) Metals react with acids to produce hydrogen .

4. Mark 'T' if the statement is true and 'F' if it is false.

- (a) Generally, non-metals react with acids. (**False**)
- (b) Sodium is a very reactive metal. (**True**)
- (c) Copper displaces zinc from zinc sulphate solution. (**False**)
- (d) Coal can be drawn into wires. (**False**)

5. Some properties are listed in the following table. Distinguish between metals and non-metals on the basis of these properties.

Properties	Metals	Non-metals
1. Appearance	Lustrous	Dull
2. Hardness	Hard	Soft
3. Malleability	Have property of Malleability	Do not have a property of Malleability
4. Ductility	Have property of Ductility	Do not have the property of Ductility
5. Heat Conduction	Good conductor of Heat	Bad Conductor of Heat
6. Conduction of Electricity	Good conductor of Electricity	The bad conductor of Electricity

6. Give reasons for the following.

(a) Aluminium foils are used to wrap food items.

Ans) Aluminium is malleable and can be beaten into thin sheets hence Aluminium foils are used to wrap food items.

(b) Immersion rods for heating liquids are made up of metallic substances.

Ans) Immersion rods for heating liquids are made up of metallic substances because metals are good conductors of heat and electricity.

(c) Copper cannot displace zinc from its salt solution.

Ans) Copper cannot displace zinc from its salt solution because Zinc is more reactive than copper.

(d) Sodium and potassium are stored in kerosene.

Ans) Sodium and Potassium are highly reactive metals which readily reacts with atmospheric Oxygen and water hence Sodium and Potassium are stored in kerosene.

7. Can you store the lemon pickle in an aluminium utensil? Explain.

Lemon pickle consists of acids which react with Aluminium metal to produce salt and Hydrogen. Hence pickle is not stored in aluminium utensil.

8. Match the substances given in Column A with their uses given in Column B.

A	B
(i) Gold	(a) Thermometers
(ii) Iron	(b) Electric wire
(iii) Aluminium	(c) Wrapping food
(iv) Carbon	(d) Jewellery
(v) Copper	(e) Machinery
(vi) Mercury	(f) Fuel
Ans: A	B
(i) Gold	(d) Jewellery
(ii) Iron	(e) Machinery
(iii) Aluminium	(c) Wrapping food
(iv) Carbon	(f) Fuel
(v) Copper	(b) Electric wire
(vi) Mercury	(a) Thermometers

9. What happens when

(a) Dilute sulphuric acid is poured on a copper plate?

Ans) No reaction occurs when dilute sulphuric acid is poured on a copper plate. However, copper will react with hot concentrated sulphuric acid.

(b) Iron nails are placed in a copper sulphate solution

Write word equations of the reactions involved.

Ans) Iron being more reactive displaces copper from copper sulphate. In this reaction, the blue colour of copper sulphate fades and there is a deposition of copper on the iron nail.

Iron + Copper Sulphate → Iron sulphate + Copper

10. Saloni took a piece of burning charcoal and collected the gas evolved in a test tube.

(a) How will she find the nature of the gas?

(b) Write down word equations of all the reactions taking place in this process.

a) In the test tube containing gas, add a few drops of water. Now cover the test tube and shake well. After shaking, test the solution with blue litmus. It will change from blue to red. Thus, gas is acidic in nature.

b) Charcoal (a form of carbon) reacts with oxygen to form carbon dioxide gas.

Carbon + Oxygen → Carbon dioxide

Carbon dioxide + Water → Carbonic acid

11. One day Reeta went to a jeweller's shop with her mother. Her mother gave old gold jewellery to the goldsmith to polish. The next day when they brought the jewellery back, they found that there was a slight loss in its weight. Can you suggest a reason for the loss in weight?

In order to polish the gold ornament, it is to be dipped into a liquid called aqua regia (a mixture of Con. hydrochloric acid and nitric acid). On getting dissolved in the environment of aqua regia, the outer layer of gold dissolves and an inner shiny layer appears. The dissolving of the layer causes a reduction in the weight of the jewellery.

Prepared by: Ms. Suma Senu	Checked by: HOD - SCIENCE
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