INDIAN SCHOOL AL WADI AL KABIR		
Class: VIII	**Department: SCIENCE 2020 -2021**	**Date of completion : 30.06.2020**
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

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.

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	They are malleable	They are non- malleable or brittle
4. Ductility	They are ductile	They are non- ductile
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. This can lead to the spoiling of pickle. 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 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 than copper, displaces copper from copper sulphate. In this reaction, the blue colour of copper sulphate fades and turns green in colour due to the formation of Iron sulphate, there is a deposition of reddish brown mass of copper on the iron nail.

Iron + Copper sulphate → Iron sulphate + Copper

(Blue) (Green) (Reddish brown mass)

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 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. 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 Conc.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.

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