

(Q.) Give one example of each: metals and non-metals. (1 Mark)

(Ans) Metals: Copper.

Non-Metals: Sulphur.

(Q.) Name the metal, which is the best conductor of heat and electricity. (1 Mark)

(Ans) Copper.

(Q.) Name the property by virtue of which metals can be drawn into thin wires. (1 Mark)

(Ans) Ductility.

(Q.) Name the gas produced, when metals reacts with acids. (1 Mark)

(Ans) Hydrogen gas.

(Q.) What is the color of the copper sulphate solution? (1 Mark)

(Ans) Blue.

(Q.) State the nature of oxides of non-metals. (1 Mark)

(Ans) The oxides of non-metals are generally, basic in nature.

(Q.) Which metal is stored in kerosene? (1 Mark)

(Ans) Sodium.

(Q.) Name the property of the metal by which it can be drawn into thin sheets. (1 Mark)

(Ans) Malleability.

(Q.) What happens when sulphur reacts with oxygen? (1 Mark)

(Ans) Sulphur di oxide is formed.



(Q.) Which non-metal catches fire, if exposed to air? (1 Mark)

(Ans) Phosphorus.

(Q.) Name the gas that burns with a POP sound. (1 Mark)

(Ans) Hydrogen gas.

(Q.) What are displacement reactions? (1 Mark)

(Ans) The reactions in which more reactive metals displace less reactive metals from their compounds in aqueous solution are called displacement reaction.

(Q.) Give one use of non-metal in our daily life. (1 Mark)

(Ans) Chlorine gas is used in purification of water.

(Q.) Which metal is used to wrap food items? (1 Mark)

(Ans) Aluminium.

(Q.) What happens when sulphur dioxide reacts with water? Give the chemical reaction involved. (2 Marks)

(Ans) When sulphur dioxide reacts with water, sulphurous acid is formed.



(Q.) Why lemon pickle cannot be stored in an aluminium foil? (2 Marks)

(Ans) Aluminium reacts with the citric acid present in the lemon. Hence, lemon pickles can't be stored in aluminium vessels.

(Q.) Write two important properties of metals. (2 Marks)

(Ans) Properties of metals:

- (a) Good conductors of heat and electricity.
- (b) Lustrous, i.e., they have shiny appearance.

(Q.) Why copper cannot displace zinc from zinc sulphate solution? (2 Marks)

(Ans) Copper is less reactive than zinc. Hence, copper cannot displace zinc from zinc sulphate solution.

(Q.) Why copper cannot displace zinc from zinc sulphate solution? (2 Marks)

(Ans) Copper is less reactive than zinc. Hence, copper cannot displace zinc from zinc sulphate solution.

(Q.) Why immersion rods for heating liquids are made up of metallic substances? (2 Marks)

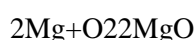
(Ans) Metals are good conductors of heat. Hence, immersion rods for heating liquids are made up of metallic substances.

(Q.) What happens when iron nails are dipped in water in a test tube for a week? (2 Marks)

(Ans) When iron nails are dipped in water in a test tube for a week, a brown layer gets deposited on the iron nails, which is known as rust.

(Q.) What happens when magnesium ribbon is burnt in air? (2 Marks)

(Ans) When metals burn in air, the formation of their oxide takes place. Hence, when Magnesium reacts with air, magnesium oxide is formed.



(Q.) In a chemistry experiment, a student by mistake put some magnesium strips in blue coloured copper sulphate solution. What change will he observe in the colour of the solution? Write the reaction also. (2 Marks)

(Ans) When magnesium strips are added to the blue coloured copper sulphate solution, the colour of the solution disappears because magnesium is more reactive than copper. It displaces copper from copper sulphate solution.



(Q.) (a) You must have seen in the laboratory that sodium metal is always stored in kerosene oil. Why is it so?

(b) Name a non-metal that is very reactive and is stored in water. (2 Marks)

(Ans) (a) Sodium metal is very reactive. It reacts vigorously with air and water and a lot of heat is generated. Therefore, it is kept in kerosene.

(b) Phosphorous

(Q.) What happens when iron reacts with oxygen and water? Give the chemical reaction involved.

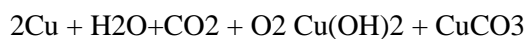
(3 Marks)

(Ans) Iron oxide is formed and hydrogen gas is produced. The chemical reaction that takes place is:



(Q.) What happens when copper vessel is exposed to moist air for a long time? Give the chemical reaction that takes place. (3 Marks)

(Ans) When copper vessel is exposed to moist air for a long time, it acquires a dull green coating. The green material is a mixture of copper hydroxide and copper carbonate. The following chemical reaction takes place:



(Q.) Why gold is preferred in making jewellery?

(3 Marks)

(Ans) Gold is preferred in making jewellery because it is

- (i) lustrous.
- (ii) highly malleable.
- (iii) ductile.

(Q.) Explain the following terms. (i) Malleability (ii) Ductility (iii) Sonorous (iv) Lustrous (v) Metalloids.

(5 Marks)

(Ans) (i) Malleability: The property of the metals by virtue of which they can be drawn into sheets.
(ii) Ductility: The property of the metals by virtue of which they can be drawn into thin wires.
(iii) Sonorous: The property of the metals by virtue of which they produce ringing sound when struck hard.
(iv) Lustrous: The property of the metals by virtue of which they appear to be shiny.
(v) Metalloids: Those materials that possess some properties of metals and some properties of non-metals.

(Q.) (a) A student passes sulphur dioxide in water. Represent this by a chemical reaction.

(b) Rohan made an electric circuit using copper wire, battery, bulb and a coal piece. On testing, he observed that the bulb did not glow. What is the problem with the circuit?

(c) You must have observed green coating on copper vessels. What does that indicate? Write the chemical composition of this green coating. (5 Marks)

(Ans) (a) $\text{SO}_2 + \text{H}_2\text{O} \rightarrow \text{H}_2\text{SO}_3$

(b) Coal piece is a bad conductor of electricity and it does not allow current to flow in the circuit.

(c) Green coating indicates corrosion of copper vessel. This green coating is mixture of copper hydroxide and copper carbonate.

