



Question-8

Explain why the surface of some metals acquires a dull appearance when exposed to air for a long time.

Solution:

This is due to the surface oxidation of metals when exposed to moist air. For e.g. copper turns green on its surface due to the formation of basic copper carbonate $\text{Cu}(\text{OH})_2 \cdot \text{CuCO}_3$. Similarly silver becomes black due to the formation of black Ag_2S and Aluminium forms a white coating of Al_2O_3 on its surface.

Question-9

State which of the following metals would give hydrogen when added to dilute hydrochloric acid. i. Iron, ii. Copper iii. Magnesium
Copper does not react with dilute hydrochloric acid at all. This shows that copper is even less reactive than iron.



Question-10

Name a non-metallic element, which conducts electricity.

Solution:

Carbon in the form of graphite conducts electricity, as there is a free electron in each carbon atom, which moves freely in between the hexagonal layers.

Question-11

Which metals do not corrode easily?

Solution:

Gold and platinum and other noble metals do not corrode in air.

Question-12

What are alloys?

Solution:

Alloys are homogeneous mixtures of two or more metals, or a metal and a non-metal. E.g. steel, brass, bronze, etc.

Question-13

Define the following terms.

(i) Minerals

(ii) Ores

(iii) Gangue

Solution:

(i) Minerals

All compounds or elements, which occur naturally in the earth's crust, are called minerals. Example: Alums, $\text{K}_2\text{SO}_4 \cdot \text{Al}_2(\text{SO}_4)_3 \cdot 24 \text{H}_2\text{O}$, Bauxite $\text{Al}_2\text{O}_3 \cdot 2\text{H}_2\text{O}$

(ii) Ores

Those minerals from which a metal can be profitably extracted are called ores. Bauxite ($\text{Al}_2\text{O}_3 \cdot 2\text{H}_2\text{O}$) is the ore of Al, copper pyrite

CuFeS_2 . All minerals are not ores but all ores are minerals.

(iii) Gangue

When an ore is mined from the earth, it is always found to be contaminated with sand rocky materials. The impurity of sand and rock materials present in the ore is known as gangue.

Question-14

Name two metals that are found in nature in the free state.

Solution:

Gold and platinum are found in the free state in nature.

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