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Solution: 01

False

Solution: 02

Milk, Paint, Glass

Solution: 03

Air is a mixture.

Solution: 04

Mercury is a liquid metal and bromine is a liquid non-metal.

Solution: 05

Sodium metal is soft and diamond is an extremely hard non-metal.

Solution: 06

Diamond is a non-metal which is good conductor of electricity.

Solution: 07

Mercury

Solution: 08

Carbon is a solid non-metal, bromine is a liquid non-metal and chlorine is a gaseous non-metal.

Solution: 09

(a) Malleability

(b) Ductility

Solution: 10

Non-metals show brittleness.

Solution: 11

This means that metals can be drawn into thin sheets and can also be drawn into wires.

Solution: 12

This means that non-metals break into pieces when they are hammered.

Solution: 13

This means that metals make a ringing sound when we strike them.

Solution: 14

This means that metals are shiny in nature.

Solution: 15

Mixtures.

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Solution: 16

The given statement best describes a compound.

Solution: 17

Copper is an element, water is a compound and air is a mixture.

Solution: 18

Mixtures are generally heterogeneous in which there is a boundary separation between different constituents.

Solutions are homogeneous mixtures in which no separation is visible between different materials.

Solution: 19

Metalloids

Solution: 20

(a) An element is made up of only one kind of atoms.

(b) Brine is a mixture whereas alcohol is a compound.

(c) Brass is an alloy which is considered a mixture.

(d) The three important metalloids are boron, silicon and germanium.

(e) The elements which are sonorous are called metals.

Solution: 21

(i) H_2O - Compound

(ii) He - Element

(iii) Cl_2 - Element

(iv) CO - Compound

(v) Co - Element

Solution: 22

Elements - Iron, Sulphur, Sodium and Carbon

Compounds - Iron sulphide, Chalk, Washing Soda and Urea

Solution: 23

Sugar contains carbon, hydrogen and oxygen.

Common salt contains sodium and chlorine.

Solution: 24

A pure substance is one which is made up of only one kind of atoms or molecules.

Examples - Oxygen and sugar.

Solution: 25

Two types of pure substances -

(i) Pure substance made up of same kind of atoms.

Example - Sulphur

(ii) Pure substance made up of same kind of molecules.

Example - Water

Solution: 26

Ice, iron, hydrochloric acid, calcium oxide and mercury are the pure substances

Solution: 27

Mixture is another name for impure substances.

Examples - Milk and sea-water.

Solution: 28

Elements: Mercury, Iron, Diamond, Nitrogen, Graphite, Hydrogen, Oxygen and chlorine.

Solution: 29

Air is a mixture because-

(i) Air can be separated into its constituents like oxygen, nitrogen, etc. by physical process of fractional distillation.

(ii) Air shows the properties of all the gases present in it.

(iii) Liquid air does not have a fixed boiling point.

Water is compound because -

(i) Water cannot be separated into its constituents, hydrogen and oxygen by physical methods.

(ii) Heat and light are given out when water is prepared by burning hydrogen in oxygen.

(iii) Water has standard b.p. of 100°C under standard atmospheric pressure.

Solution: 30

Two solid elements at room temp. - Iron and copper

Two liquid elements at room temp. - Mercury and bromine

Two gaseous elements at room temp. - Hydrogen and oxygen

***** END *****