

STEPPING STONE
SCHOOL (HIGH)

CLASS :VII

Subject: CHEMISTRY

Topic: Answers to worksheets (10-12)

Dates: 16/6/2020, 17/6/2020, 18/6/2020

Answers to Worksheet No. :10

Date : 16 / 6 / 2020

1a) Pure substance are made up of either atoms or molecules. Atoms have only one kind of particle having a definite set of properties.

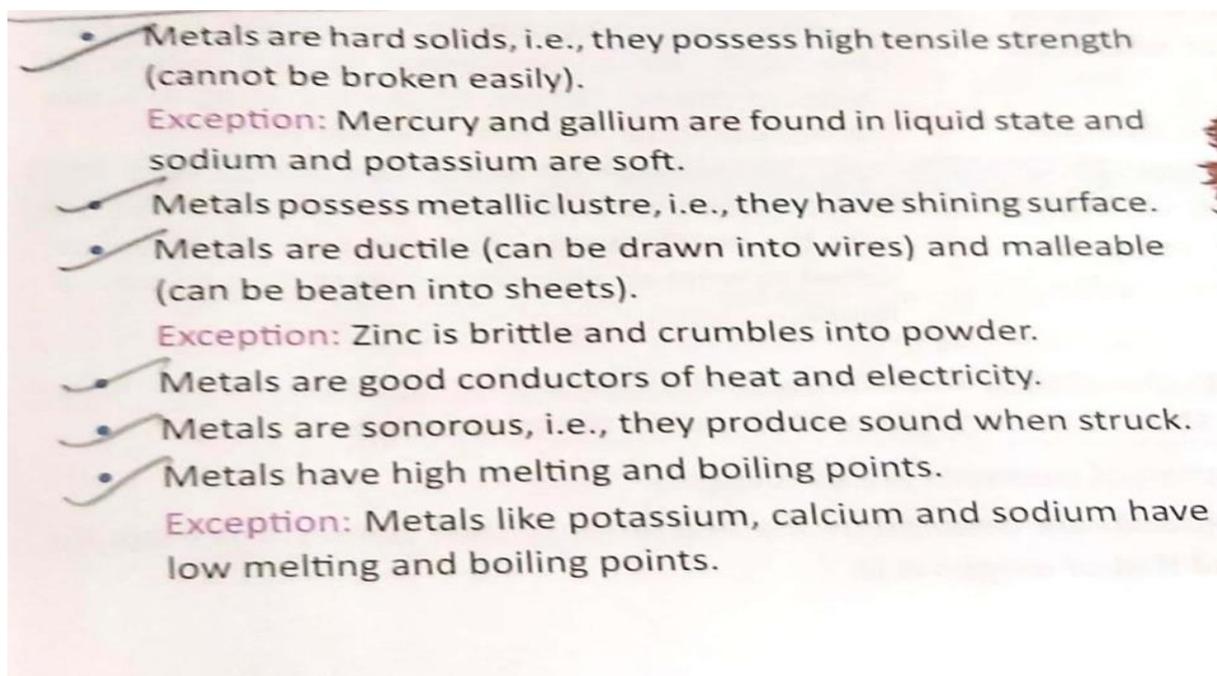
b) Impure substance are obtained by combining two or more pure substances together without any change in their chemical properties.

c) An element is the simplest form of a pure substance and it is made up of only one kind of atom. An element cannot be broken down further by physical or chemical reaction.

d) Metalloids show some properties of metal and some properties of non metal.

e) Noble gasses are also known as inert gas . They are non metals that are present in gaseous state and are reluctant to react chemically with other elements or compounds.

2.



3.

Non-metals are either soft solids or gases.
Exception: Bromine is present in liquid state.

Non-metals have dull and non-shiny surface.
Exception: Iodine and graphite are shiny.

Solid non-metals are brittle and crumble into powder.

Non-metals are poor conductors of heat and electricity.
Exception: Carbon, in the form of graphite, is a good conductor of heat and electricity.

Non-metals are non-sonorous.

Non-metals have low melting and boiling points.



Fig. 3.2: Graphite sticks

4. He , Ag, Kr, Sb, Ba.

5. Sodium, Carbon , krypton, Uranium, Radium, Iron, Cobalt.

6.i) 118, ii) atom, iii) Gallium, iv) Zinc. V) Iodine , vi) Inert gases

Answers to Worksheet No. :11

Date :17/62020

1.i) A compound is a pure substance that is formed when two or more elements chemically combined in a definite proportion by mass example water.

ii) A group of atoms held by some forces existing together as one species and possessing characteristics properties is called molecules . Example sodium chloride.

iii) The number of atoms contained in a molecule of an element is called its atomicity .

iv) Molecules which consist of more than 3 atoms of an element is call Poly atomic molecules.

V) A molecular formula is a symbolic representation of a compound since it represents the molecules of a Compound.

2.

Characteristics of a Compound

- A compound can be broken down into its constituent elements by chemical reactions.
- The properties of a compound are entirely different from those of its constituent elements. For example, both hydrogen (H_2) and oxygen (O_2) are gases, but their compound water (H_2O) is a liquid.
- A compound has a fixed composition of its own.
- During the formation of a compound, energy is either absorbed or liberated.
- Just as elements are represented by symbols, compounds are represented by chemical formulae.

Before understanding about molecular formula, let's first study about atoms, molecules and atomicity.

3. Answer by yourself.

4. CuO , FeO , CuS , MgS , N_2O .

5.

Significance of a Formula

- A formula indicates the elements present in a compound.
- It indicates the number of atoms of each kind of element present in the compound.
- It makes the calculation of mass of one molecule of a compound easier.

- 6.i Sodium, chloride
ii Sodium, hydrogen, carbon, oxygen
iii Silicon, oxygen
iv Sodium, hydrogen, oxygen
v Hydrogen, chlorine.

Answers to Worksheet No. :12
Date :18/6/2020

1. i Mixtures are combination of two or more elements or compounds.
ii An alloy is a metallic substance formed by mixing and fusing two or more metals or a metal and a non metal to obtain desirable qualities.
iii An emulsion is a heterogeneous mixture in which particles of one liquid are dispersed in another liquid.
iv A suspension is a heterogeneous mixture that consist of small solid particles suspended in a liquid.
v A solution is a form of mixture in which one constituent dissolve in another constituent.

2 1) Do by yourself.

2)

Table 3.6: Differences between Compounds and Mixtures

Compound	Mixture
• A compound is a pure substance.	• A mixture is an impure substance.
• A compound is always homogeneous.	• A mixture may be homogeneous or heterogeneous.
• The constituents are present in a fixed ratio in compounds.	• The constituents can be present in any ratio in mixtures.
• The energy is absorbed or released when a compound is formed.	• There is no change in energy when a mixture is formed.

3.

Characteristics of a Mixture

- The constituents of a mixture are not present in a definite ratio. The composition of a mixture is variable. For instance, the amount of carbon dioxide and water vapour present in the air may vary from place to place.
- There is no chemical reaction taking place amongst the constituents of a mixture. The forces of attraction holding the constituents are weak due to which the constituents can be separated using simple methods. For example, we can separate a mixture of sand and water by filtration.
- The constituents of a mixture retain their original properties. For example, air supports combustion due to the presence of oxygen which is one of its constituents.
- A mixture does not have a fixed melting or boiling point.
- A mixture does not have definite physical and chemical properties.
- There is no energy absorbed or released during the formation of a mixture.

Thinking Fountain
Give examples of any three mixtures that you see at home.

4 1)Alloys like brass.

11) Chalk in water.

111) Vinegar in water

1v) Hydrogen in palladium

V) Aerated drinks which contain carbon dioxide in water.

V) Air.

5. i physical

ii Mixtures

iii heterogeneous

iv homogeneous

v four.