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uniform or have localised regions with different properties.

(*) Ex (cereal) in milk, vegetable soup

Element :- (*) Elements are pure substances which are composed of only one type of atom.

(*) Elements are classified as either metals, nonmetals or metalloids.

(*) Some of the Examples of elements are Iron, Copper, Gold etc.

Compound :- (*) Compound are substances which are formed by two or more different types of elements that are united chemically in fixed proportions.

(*) Compound are classified according to their bonds which can be ionic, molecular or metallic.

(*) Ex:- Compounds are NaOH, NaCl, etc,

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Chemistry

Q) List the characteristics of pure substances

(A) Pure substances are mostly homogeneous in nature containing only one type of atoms or molecules

- The substances mainly have a constant & uniform composition throughout.
- The substances have fixed boiling and melting point.
- A pure substance usually participates in a chemical reaction to form predictable product

Homogeneous mixture

(Q) (i) The homogeneous mixture is a mixture with components that make up the mixture uniformly distributed throughout the mixture

(ii) Ex - air, sugar water, rain water

Heterogeneous mixture is a mixture, where the components of the mixture are not

MATTER

Exercise - III

(1) State the three effects of heats on matter

When a substance is heated, it can cause

(*) Interconversion of states of matter.

|*| Thermal expansion of the substance.

|*| chemical change

2(a) Define : interconversion of states of matter.

(b) What are the two conditions for the interconversion of states of matter?

(a) The process by which matter changes from one state of another and back to origional state, without any change in its chemical composition

Too conditions are:

(1) Change in temperature

(2) By applying pressure

(3) a) Fusion: The heating process by which a solid changes into the liquid

(b) Vaporisation: The heating process by which a liquid changes into its vapour

(c) condensation: The process by which substance in gaseous state changes into its liquid state

(d) Sublimation: The change of solid on heating to vapours directly.

Solid $\underset{\text{cooling}}{\overset{\text{heating}}{\rightleftharpoons}}$ Vapour

(e) ~~Diffusion~~ Melting point: The fixed temperature at which a solid changes into liquid at a given pressure is called its melting point.

(f.) Diffusion = The phenomenon of intermixing or spreading of gases molecules is called diffusion

(g) Boiling point: The fixed temperature at which a liquid change into gaseous state.

(h) Liquefaction: change of vapours on cooling to liquid is called liquefaction

(4) Solidification: The process of changing liquid into a solid state by cooling is known as solidification

condensation: The process of changing a gas or vapour state to a solide at a given pressure is called its melting point. ice - water ~~water - ice~~ steam → water

(b) Melting - The fixed temperature at which a solid changes into a liquid

ice - water

(c) Boiling - the fixed temperature at which a liquid starts changing into gaseous state is called its boiling, water → steam

(C) Vapourisation : The process by which a substance changes from a liquid state vapour state

• Gas : The substance which remain in the gaseous state under normal conditions

(d) Miscible Liquids which mix with each other are called immiscible liquids

(5) How is interconversion of state of matter different from chemical reaction?

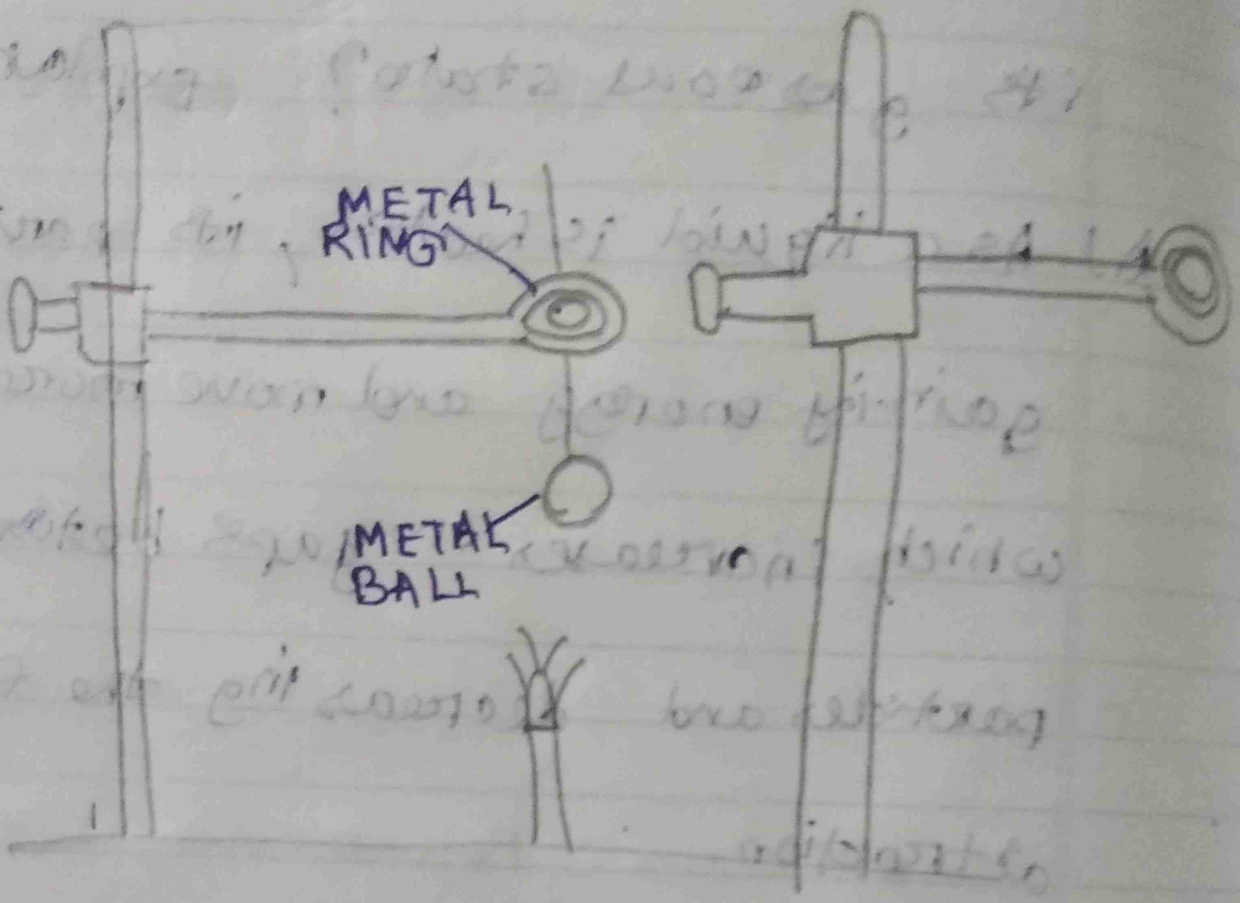
(A) During interconversion of state of matter different from of substance remains the same matter changes from one state to another.

(6) How does a liquid changes into its gaseous state? Explain?

A) As a liquid is heated, its particles starts gaining energy and move more vigorously which increases the gaps between the particles and decreasing the force of attraction

(7) Water cycles is an example of interconversion of states of water. Explain

A) Water from oceans, rivers, lakes from leaves of trees (transpiration) changes into vapours.


METAL RING
METAL BALL

(8) what happens to a metal ball when it is heated? what does this show?

(A) when metal ball is heated it expands this can be proved by following experiment: Take a metallic ring and ball Try to pass the metal ball through the ring. The ball is able to pass through the ring. Now heat the metal ball for 5-6 minutes. The hot ball is not able to pass through the ring.

(9) why does a candle became smaller on burning with flame

On heating candle wax melts, then

Burning of a candle → candle wax —heating→ Carbon dioxide + water vapour

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tures into vapour which reacts with
reats with air to produce two new
substances, carbondioxide and water
Therefore a candle on burning becomes
smaller and smaller