

Assignment

1. Define the following.

a) Matter - Matter is anything which has mass, occupies space and can be perceived by our senses.

b) Diffusion - The intermixing of two or more substances due to the motion of their particles in order to get a uniform mixture is called diffusion.

c) Intermolecular force of attraction - A force of attraction between the particles of matter which holds them together is known as intermolecular force of attraction.

2. What do you mean by kinetic Theory of matter?

A) The theory stating that any substance whether solid, liquid or gas is made up of tiny particles called atoms, molecules or ions which are

in constant motion is called "kinetic theory of matter".

3. Write the postulates of the kinetic theory of matter.

A) Matter is composed of very small particles called atoms and molecules.

- These particles have spaces or gaps between them which are known as inter-particle or intermolecular spaces.

- The constituent particles of a kind of matter are identical in all respects.

4. What happens when:-

a) Water is kept in a deep freezer

A) When water is kept in a deep freezer it gets cooled and changes into ice at 0°C . ice.

b) Water is heated

A) Water on heating changes into steam at 100°C water & steam (100°C).

5. What do you mean by solid? Give some examples.

A) A solid has a definite shape and a definite volume. The molecules are closely packed it can not move freely.
Ex- Wood, Stone, Iron etc.

6. Explain the interconversion of the state of matter with examples.

A) The phenomenon of change of one state of matter into ~~at~~ another and then back to the original state without any change in its chemical composition is called interconversion of the states of matter.

7. What is Sublimation? mention any two substance that sublimates.

A) The ~~change~~ substance that directly change ~~into~~ from the solid state to the gaseous state without passing through the liquid state is known as Sublimation.

→ Naphthalene balls are used in bathrooms, wardrobes etc. to keep the pests away. With the passage of time, they become smaller because they sublime and change into vapour state.

8. Give Reason why:-

a) Liquids are called the fluids.

A) Liquids are called the fluids because if a container having a liquid is opened, they can flow out of the container.

b) Solids have a definite shape.

A) Solids have definite shape ~~or~~ because the molecules in solid are closely packed and in fixed positions.

9. What are the characteristics of the particles of matter?

A) They have space between them.

- It attract each other
- It is very small in size.
- They are in the motion.

10. Explain by an activity that the particles of matter are small in size.

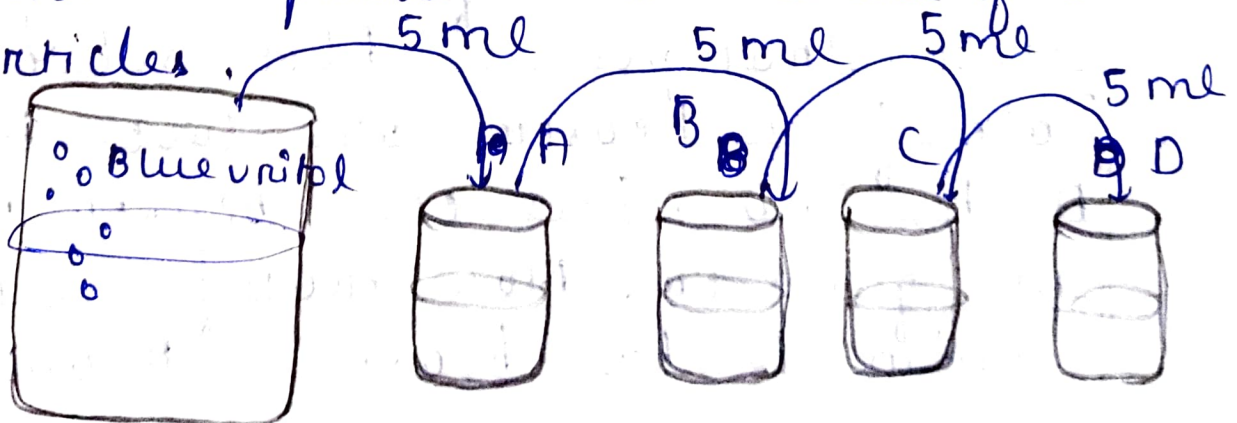
A) Dissolve two or three crystals of blue vitriol (Copper sulphate pentahydrate) in about 10 ml of water to get a clear transparent blue solution. Take four beakers and label them as A, B, C, D. Fill each beaker with 50 ml of water. Now transfer 5 ml of solution to ~~be~~ beaker A and stir

it properly to get a uniform blue colour. Take 5 ml of solution from beaker A transfer it to beaker B and stir well. Again transfer 5 ml of solution from B to C and then from C to D.

The solutions in all the beakers are coloured though they become fainter due to successive dilution.

Thus it is concluded that a small crystal of blue vitriol contains a very large number of tiny particles which show all the properties of the substance.

The whole process can be repeated for potassium permanganate crystal or ink to prove the nature of particles.



11. Explain brownian motion with an example.

A) The Haphazard, Handom motion of suspended particles on the surface of a liquid or in air is called Brownian motion.

Example - If we will suspend some pollen grains in water and looked into the water through a magnifying glass we observed, that the pollen grains were moving throughout the water in a zig-zag or irregular manner.