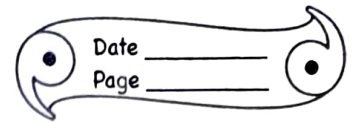


MATTERS

2CW

18.05.21

Assignment



1) Define the following.

(a) Matter

Ans → Matter is anything that has mass, occupies space and can be perceived by our senses.

(b) Diffusion

Ans → 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

Ans → The 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.

Ans - 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 known as Kinetic theory of Matter.

3) Write the postulates of the Kinetic theory of matter.

Ans - The main postulates of the kinetic theory are:

1. Matter is composed of tiny particles called atoms and molecules.

- * The constituents particles of a kind of matter are identical in all respects.
- * These particles have spaces or gaps between them which are known as interparticular or molecular spaces.
- * There exists a force of attraction between the particles of matter which holds them together. This force of attraction is known as interparticular or intermolecular force.
- * Particles of matter are always in a state of random motion and possess kinetic energy, which increases with an increase in temperature and vice-versa.

(4) What happens when—

(a) water is kept in a deep freezer.

Ans— If water is kept in a deep freezer, then the ^{water} will freeze.

(b) Water is heated.

Ans— When water is heated, evaporation takes place and there is increase in temperature.

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

Ans— Solid is a state of matter which has definite shape and a definite volume.

Eg: Chalk, stone, Ball, etc.

(6) Explain the interconversion of the states of matter with examples.

Ans → The phenomenon of change of one state of matter into another and then back to the original state, without any change in its chemical composition is called the interconversion of the states of matter.

Eg: Sublimation, deposition, etc.

(7) What is sublimation? Mention any two substances that sublime.

Ans → The process by which certain substances change directly from solid to gaseous state on heating is called sublimation.

Eg: Camphor and ammonium chloride.

(8) Give Reasons why:-

(a) Liquids are called the fluids.

Ans → All substances that can flow are called fluids. Both gases and liquids are fluids as they can flow.

(b) Solids have a definite shape.

Ans → Solids have a definite shape because the particles in solid are closely packed and they also have a strong force of attraction between them.

(9) What are the characteristics of the particles of matter.

Ans → The characteristics of the particles of matter are:

- * The particles of matter are very small
- * The particles of matter have interparticle space between them
- * The particles of matter are in constant random motion
- * The particles of matter attract each other.

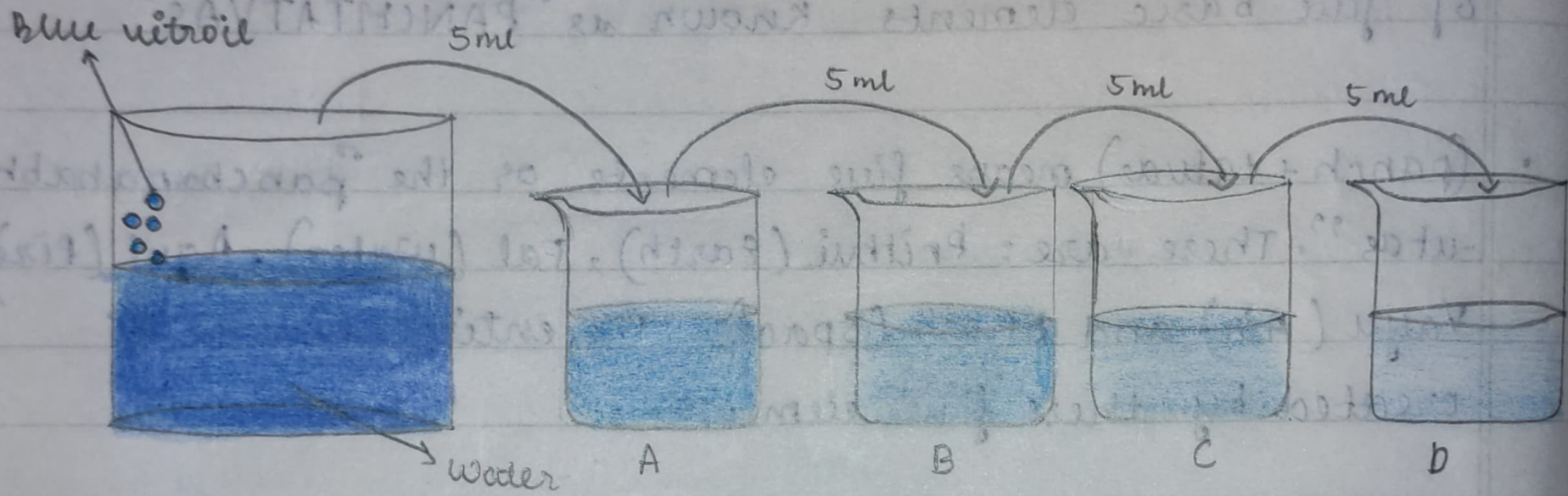
(10) Explain by an activity that the particles of matter are small in size.

Ans- Activity:

- Dissolve two or three crystals of blue vitrol (copper sulphate pentahydrate) in about 10 ml of water to get a clear transparent blue solution.
- Take 4 beakers and label them as A, B, C, and D, fill each beaker with 50 ml of water.
- Now transfer 5 ml of solution to 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.

What do you observe?

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



The colour of the solution gets fainter with 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 substances.

(11) Explain Brownian Motion with an example.

Ans → The haphazard, random motion of the suspended particles on the surface of a liquid or in air is called Brownian motion.

eg. movement of pollen grains in water.

(12) Explain what changes will take place when few pieces of marbles are added to beaker containing water.

Ans → The marble pieces will sink into the water and it will occupy some space.