

ST. XAVIER'S SCHOOL, PURULIA

Class VII Subject – Chemistry

Date- 18-05-2020

Ch-1 Introduction To Chemistry

Pg -22

- E. 1. Sound and magnetism are the two quantities which are not regarded as matter.
2. Water exhibits three states of matter, namely solid(ice), liquid(water) and gas(steam).
3. Solid is the state that cannot be compressed since its particles are closely packed.
4. Carbon-dioxide(CO₂) is the gas present in aerated drinks.
5. Kinetic energy is the energy present in the molecules of gas.
6. Anything that occupies space, has weight and can be perceived by our senses is called matter. E.g. Water, Paper etc.
7. All matter is made up of a large number of extremely small particles called molecules. These particles are always in a state of random motion in all possible directions.
8. The three properties of matter are:
 - i) It occupies space.
 - ii) It has mass.
 - iii) It can be perceived by our senses.
9. The distance between the molecules of any substance is known as intermolecular space. Gases have the highest intermolecular space, it is lesser in liquids and least in solids.
10. The process in which the molecules strike each other and bounce in different directions is known as collision.
11. By increasing temperature, a solid can be changed into a liquid and a liquid can be changed into a gas. This is because on increasing temperature, the kinetic energy of the molecules increases and they can move freely which results in the increase of space resulting in the change of state. The reverse changes occur on cooling.
12. When we try to squeeze a gas, the molecules of a gas comes closer thereby decreasing the intermolecular spaces between them. Hence, the gases gets compressed.

Extra Questions

1. Write any 3 characteristics of solids, liquids and gases.

Ans: Write the characteristics given on Pg 13-16 from your coursebook.

2. What do you mean by intermolecular force of attraction?

Ans: The property by which molecules are held close to each other is known as intermolecular force of attraction. It is maximum in solids, lesser in liquids and least in gases.

3. Define sublimation.

Ans: The process in which solid changes directly to vapours and vapours change back to solid without undergoing intermediate liquid state is known as sublimation.

E.g. Naphthalene balls, Iodine etc.

4. Draw well labelled diagrams of the following:

i) Molecular arrangement of solids, liquids, and gases. (Pg- 17)

ii) Interconversion of states of matter. (Pg- 18)

CH-2 CHANGES IN THE WORLD AROUND US

WORKSHEET, Pg -30-31

- I. 1. Undesirable 2. Reversible 3. Chemical 4. Periodic
- II. 1. Natural changes 2. Chemical 3. Slow 4. Chemical 5. Chemical
- III. 1. A – Sublimating substance B. Sand Bath C. Vapours of sublimating substance
2. Violet coloured
3. Sublimation
4. The process in which solid changes directly to vapours and vapours change back to solid without undergoing intermediate liquid state is known as sublimation.
5. Naphthalene and camphor

WORKSHEET, Pg -35

- I. Evaporation, Boiling, Melting, Dissolving
- II. 1. Condensation 2. Corrosion 3. Exothermic reaction 4. Increases 5. Evaporation

OBJECTIVE QUESTIONS, Pg -35-37

- A. 1. b) Physical change 2. c) Chemical and exothermic change 3. b) Physical change
4. a) Man-made change 5. d) Permanent change
- B. 1. Chemical 2. Physical 3. Physical 4. Physical 5. Chemical 6. Physical 7. Chemical
8. Physical 9. Chemical 10. Periodic
- C. 1. True
2. False, Correct statement – New substance is formed
3. False, Correct statement – It is an endothermic reaction
4. True
5. False, Correct statement – It is an irreversible reaction
6. True
- D. 1. Natural changes 2. Man-made 3. Periodic changes 4. Non periodic changes

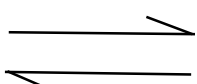
5. Fast changes 6. Slow changes 7. Reversible changes 8. Irreversible changes 9. Melting
10. Evaporation

F. 1. Freezing of water, Reason – All others are chemical changes

2. Burning of candle, Reason – All others are physical changes

3. Melting, Reason – All others are chemical changes

E. 1. The formula of quick lime is CaO (Calcium oxide).

2.  is used to indicate a reversible reaction.

3. When magnesium burns in air, it forms a dazzling white flame.

4. The two factors are :

i) Nature and intensity of interaction

ii) Temperature

5. Heat is absorbed in Endothermic reactions.

6. The process in which a substance mixes thoroughly in another substance is known as dissolution.
E.g. Salt in water.

7. When temperature is increased, the particles gain more energy and begin to vibrate more rapidly, thereby increasing their tendency to escape. Thus rate of evaporation increases with increase in temperature.

8. During rusting, iron forms a layer of powdered iron oxide on its surface. This powdered layer is loosely attached to the metal surface and gets removed easily. Thus, metal is lost. Hence rusting is referred as slow eating of metals.

9. The changes which are harmful to us are called undesirable changes. For e.g. spoiling of foodstuffs, breaking of glass etc.

10. A rubber band changes its shape on stretching but on releasing, comes back to its original shape. This is why, pulling of a rubber string is a reversible change.

11. a) Pg – 34, all points

b) Pg- 35, all points

12. The process in which a liquid changes into vapour, on application of heat, is known as evaporation.

E.g.- Drying of wet clothes, drying up of rivers etc.

13. Pg.- 30, all points

EXTRA QUESTIONS

1. Differentiate between evaporation and boiling.

Ans: The differences are as follows:

Evaporation	Boiling
<ol style="list-style-type: none">1. It is a slow process.2. It takes place from the surface of the liquid.3. It takes place at all temperatures. E.g. Drying of wet clothes	<ol style="list-style-type: none">1. It is a fast process.2. It takes place from all the parts of a liquid.3. It takes place at a fixed temperature on heating. E.g. Boiling of water

2. Draw well labelled diagrams of the following:

- i) The process of sublimation in laboratory (Pg- 27, Activity-1, diagram only)
- ii) Burning of magnesium (Pg- 29)
- iii) Demonstration of exothermic change using quicklime (Pg- 32, Activity-2, diagram only)

Home Assignment:

Note the above question and answers in full sentences, neatly in your notebooks. Notebooks will be corrected when the school reopens.
