DON BOSCO SCHOOL, KOKAR, RANCHI

CLASS -7 (CHEMISTRY)

CHAPTER-1 (MATTER AND ITS COMPOSITION)

A. Short answer question:

1.What is matter? Give three examples of things made of matter.

Ans- Anything that occupies space and has mass is called matter. Pencil, oil, jam are three examples of things made of matter.

2. What do you mean by intermolecular force?

Ans-Molecules are held together by a force, called intermolecular force or cohesion.

3.Name three states of matter and give one example of each.

Ans- Solid, liquid and gas are the three states of matter. Solid-table, liquid- oil and gas- air.

4.Do gases have a fixed volume as liquids do? Give reasons.

Ans-No gases do not have fixed volume as liquids. Because the particles in the gases are much further apart than in liquids or solids, they squeezed closer together. Gases therefore can be compressed or expanded.

5.What is interconversion of states?

Ans- The change in state of matter from one to another is called interconversion of matter.

6. What is sublimation? Name two substances that can sublime.

Ans- Sublimation is a process by which certain solid substances- directly changes to vapour state on heating without passing through liquid state. Camphor and iodine two substances that can sublime.

7. What is an element? Give three examples.

Ans- An element is a substance that cannot be split into simpler substances by chemical means.

8.What is a compound? Give three examples.

Ans- A compound is a substance that can be split or broken down into simpler substances by chemical means.

9. What are atom and molecules?

Ans- Atom- An atom is the smallest part of an element that takes part in a chemical reaction, that cannot exist independently.

Molecule- A molecule is the smallest part of a compound or substance that can exist independently.

10. What forces hold atoms in a molecule and molecules in matter? Which of these forces are stronger?

Ans- Chemical bond holds the atoms in a molecule and intermolecular force holds the molecules in matter. Chemical bond is stronger than intermolecular force.

B. Long answer question:

1. Explain the ice water interconversion on the basis of intermolecular force.

Ans- When we heat ice molecules starts vibrating and pushes each other. And the intermolecular force of attraction of ice molecules decreases. Finally it is changed into water. In ice there is regular H- bonding i.e. one molecule surrounded by four molecules and form a cage like structure.

2. Discuss why the shape of a solid is fixed whereas that of a liquid or a gas are not?

Ans- Solids have fixed shape but liquids and gases do not have fixed shape because the intermolecular space between the atoms of solid matter is very very less and inter particle force of attraction is very strong. But in case of liquid and gas the intermolecular space is more and inter particle force is less as compared to solid particles.

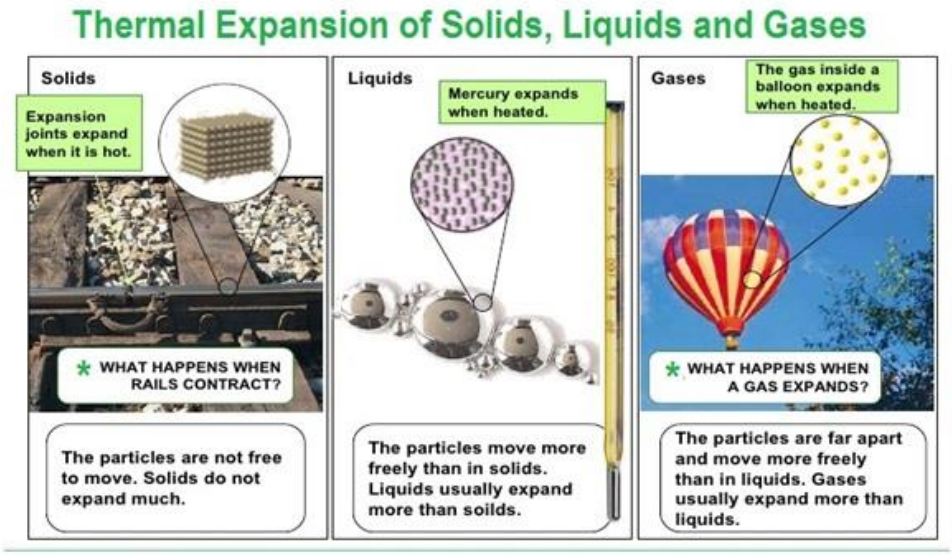
3. Why is a solid not compressible but a gas is? Explain.

Ans-Solids are not compressible but a gas is because the molecules are tightly packed and the inter molecular space is less or is negligible. The liquids have space more than solids but less than gases hence are compressible to less extent. But solids have negligible space and hence are not compressible.

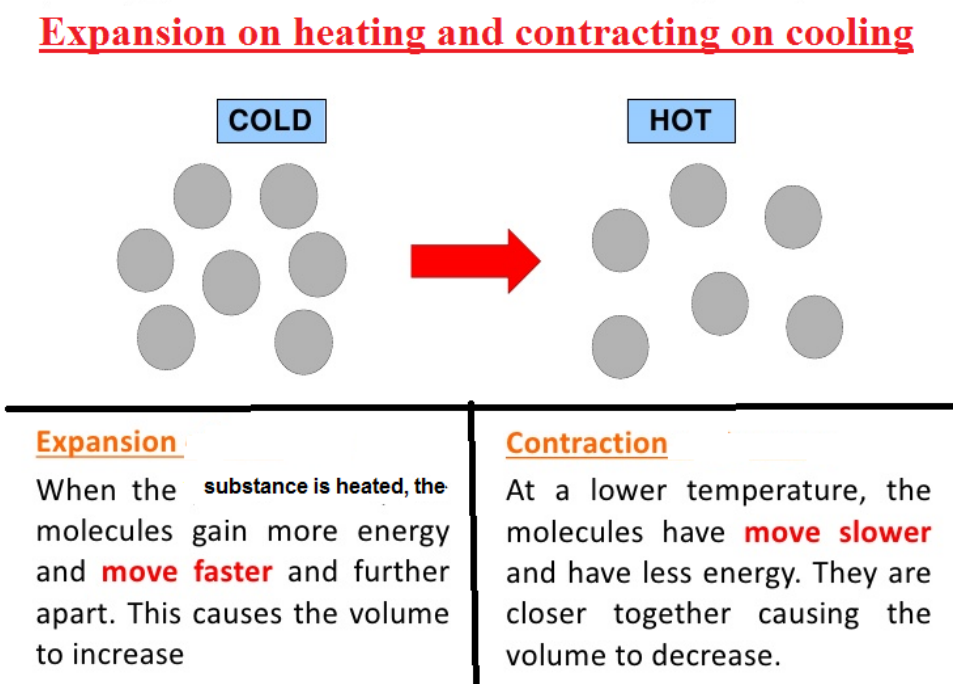
4. Describe an activities to show that thermal expansion of solid, liquid and gas.Explain expansion on heating and contraction on cooling.

Ans-In case solid: It has been observed that bottles which are tightly sealed with a metallic lid are easily opened when the bottle is kept upside down in a hot water for some time in such a way that just the lid is immersed in water.

Liquid: The level of mercury rises in thermometer when it is put in warm water and when the thermometer is taken out the mercury level drops.



In case of gases, when balloon is partially inflated in a cool room it expands to full size when put in warm water. This all is due to thermal expansion.
Expansion and **Contraction** in Solids, Liquids and Gases.



C. Fill the blanks:

Answers: 1. Mass 2. Mass 3. Three 4.Freezing 5. Element 6. Compound

7. The same 8. Compound

1.The space anything occupies is called its _____.

2. The amount of matter anything contain is called its _____.

3. Matter exists in _____ states.

4.The melting point of the solid is same as the _____point of the corresponding liquid.

5.A/An _____ is a substance that cannot be broken into simpler substances by chemical means.

6. A/An _____ can be broken down into simpler substances by chemical means.

7. A molecule of an element is made up of atoms of _____ kinds.

8. A molecule of a/an _____ is made up of atoms of two or more kinds.

D. True or false:

Answers: 1. True 2. False 3. True 4. True 5. True

1.Matter is made up of very small particle, called atoms, which are held together by intermolecular force.

2. The greater the intermolecular space, the greater the cohesion.

3. The melting point of ice is the same as the freezing point of water.

4. The atoms are held together in a molecule by a force called chemical bond.

5. Chemical bonds are stronger than cohesive force.

Assignment:

1. Write all short and long answers in your copy and learn it.

2. Define Chemistry.

3. Learn fill in the blanks and true or false.