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Std. (Six) B Div. C Roll No. 112

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ch-1 matter

A) Objective questions

i. True or false :-

(a) The molecules of each substances are identical.

Ans- false

(b) The inter-molecular forces are effectives at all distances between the two molecules.

Ans- false

(c) The molecules in a substances are in ~~random~~ random motion.

Ans- True

(d) In a gas, the molecules can move anywhere in space.

Ans- True

(e) Liquids are less viscous than gases.

Ans - False

2) Fill in the blanks: -

(a) All the molecules of a substance are identical.

(b) The inter-molecular spacing is least in solids more in liquids and still more in gases.

(c) The molecular motion in liquid and gas is zig-zag path.

(d) In a solid, the molecules vibrate to and fro on either side but they remain at their fixed positions.

(e) The inter-molecular forces are the weakest in gases.

(f) A solid exerts pressure downwards on its base

(g) Gasses are least dense.

(n) Solids are most rigid. rigid

3. Select the correct alternative:-

(a) The diameter of a moleaules is approximately

Ans- 10^{-10} cm

(b) The inter-molecular forces are strongest in

Ans- solids

(c) The molecules

Ans- in a liquid, move within its boundary.

(d) solids are

Ans- more dense

(e) The inter-molecular forces in liquids are

Ans- weaker than in solids.

4. match the following columns:-

A	B
(a) A molecule is composed of	does not exist free in nature.
(b) Ice, water and water vapour	can vibrate only up to about 10^{-10} m from their mean positions.
(c) An atom	atoms
(d) Gases	are the three states of water
(e) The molecules of a solid	occupy space.

B. Short / long answer questions:-

1. Define matter. what is its composition?

Ans- matter is something containg weight and has mass.

It's composition are air, water, sky, fire. 1

2. Name the three states of matter.

Ans: The three states of matter are ÷ solid, liquid, gas.

3. What is a molecules?

Ans- A molecule is formed when two or more atoms of the same element or of different elements unit. it is the smallest unit of matter that can take part in a chemical reaction.

4. mention one example each of a monoatomic and a diatomic molecule

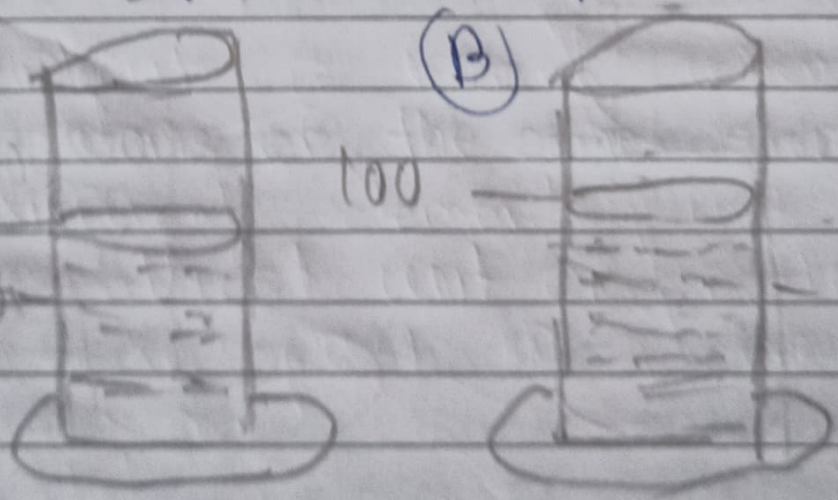
Ans. monatomic = neon.
diotomic = oxygen molecule.

5. what do you mean by inter molecular spacing?

Ans - The spacing between molecules of matter is called inter-molecular space.

5. What do you mean by inter-molecular spacing?

Ans The particles of salt occupy the space between the particles of water



Take 100ml of water in a measuring cylinder. Add 20g of salt in water gently and stir it well so as to dissolve the salt well in water. It is noticed that the top level of water does not change. It shows that the

particles of salt occupy spaces between the particles of water.

7. What do you mean by intermolecules forces?

Ans- The force of attraction between the molecules of an element, a compound or a mixture is called intermolecular force of attraction.

8. What are the forces of cohesion and adhesion?

Ans- The force of attraction between the molecules of the same substance is called the force of cohesion. while the force of attraction between the molecules of two different substances is called the force of adhesion.

9. State three characteries of molecules of matter which determine its solid liquid and gaseous state?

Ans- Molecules have the following characteristics

(a) They are very small in size.

(b) They have spaces between them.

(c) They are in constant random motion

10. How do solids, liquids and gases differ in their following properties.

	solids	liquid	gases
(a) size-	anything fixed	anything not fixed	anything
shape-	fixed	not fixed	not fixed
density-	not fixed	fixed	not fixed

11. The molecules in a substance are in motion. what type of path do they follow?

Ans- particles in a substance that are in motion move randomly in all possible directions and follow a zigzag path.

12. Describe a simple experiment to illustrate that molecules are not at rest, but they constantly move.

Ans. Take a beaker. Fill it partly with water. Add some lycopodium powder in the beaker containing water. Stir the contents of the beaker with a glass rod. Take out a few drops of this suspension on a glass plate. Place it on the table and illuminate it with a table lamp. Observing the glass plate through a microscope, it is found that the fine particles of lycopodium powder move rapidly in a random manner and their path is zig-zag - Ans.

13. Write down five general properties of solids, liquids and gases.

Ans. (a) The molecules in solids are very tightly packed having negligible or very less intermolecular space.

(b) They have the strongest intermolecular force of attraction.

(c) The molecules have very small vibration about their mean position small amplitude.