Ans The smallest unit of matter which can exist independently is called molecule. ~~Ex oxyg~~
Ex→ oxygen molecule (O_2) made up of two (O) atoms.

~~4) What is the approximate size of a molecule?~~
~~Ans Molecule is made up of molecules which are very small in size ($\sim 10^{-8}$ m)~~

5) What do you mean by inter-molecular spacing?
Ans Intermolecular space- The space between any two consecutive molecules of a substance is called intermolecular space.

4) Mention one example each of a monoatomic and a diatomic molecule.
Ans monoatomic - Neon, Argon
diatomic - Oxygen, Nitrogen

6) Describe a simple experiment to illustrate the existence of inter-molecular spacing.
Ans Take 100 ml of water in a measuring cylinder. Add 20 gram of salt in water gently and stir it well so as to dissolve

the salt well in water. It is noticed that the level of water does not change. It shows that the particles of salt occupy spaces between the particles of

7) What do you mean by inter-molecular forces?

Ans Inter-molecular force of attraction - the force of attraction between the molecules (like molecules or unlike molecules) is called intermolecular force of attraction.

8) What are the forces of cohension and adhesion?

Ans The force of attraction between the molecules of similar kind is called force of cohension.

Ex: The forces between water molecules.

This force of cohension keep the molecules of the substance bind together. The force of attraction between different types of molecules is called force of adhension.

Ex: When a glass filled with water is emptied some water particles remain stuck to the glass due to the adhesion between water molecules and glass.

10 (A)

	Solids	Liquids	Gases
Size	They have definite size	Indefinite	Indefinite
Shape	They have definit shape	Indefinito	Indefinite
Density	Highly dense	Less denser than solids	Less denser than liquids and solids.

9) State three characteristics of molecules of matter which determine it's solid, liquid and gaseous state.

Ans The particles of matter called molecules, have the following characteristics:

1) They are very small in size.
2) They have spaces between them.
3) They are in constant random motion.
4) They always attract each other.

10) How do solids, liquids and gases differ in their following properties:
a) Size b) Shape c) Density?

Ans

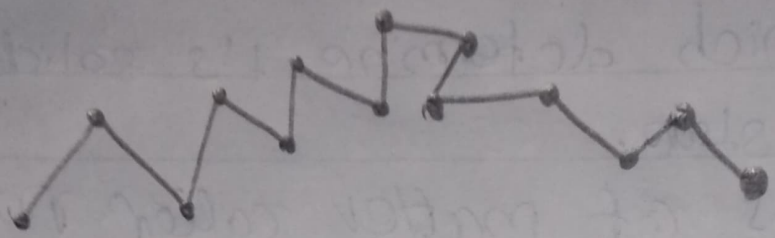
11) The molecules in a substance are in motion. What type of path do they follow?

Ans The particles in a substance are not at rest (in motion), and they move randomly in all possible directions in a zig-zag 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.

12/8/19



Zig zag path of fine particle of lyophobic powder.

Add some lycopodium powder in the beaker containing water. Stir the contents of beaker with a glass rod. Take out few drops of this suspension on a ~~plate~~ glass plate. Place it on the table and illuminate it with a table lamp. Observe 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. As shown in the figure below.

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

A) Solids :- 1) The molecules here are very tightly packed having negligible or very less intermolecular space.

2) They have the strongest intermolecular force of attraction.

3) The molecules have very small vibration about their mean position i.e. small amplitude.

4) They have a definite shape and volume.