Exercises

A) Objective Questions:

1) Write true or false for each statement:

a) The molecules of each substance are identical. False

b) The inter-molecular forces are effective at all distances between the two molecules: False

c) The mole cules in a substance are in random motion. True

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

e) Liquids are less viscous than gases. False

2) Fill in the blanks:

a) All the molecules of a substance are identical.

b) The intermolecular spacing is least in solids more in liquids and still more in gases.

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

d) In a solid the molecules vibration 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.

g) Gases are least dense

h) Solids are most rigid.

3) Select the correct alternative:

a) The diameter of a molecular is approximately

iii) 10^{-10} m

b) The inter-molecular forces are strongest in
Ans i) Solids

c) The molecules :
Ans iii) In a liquid, move within it's boundary.

d) Solids are :
Ans i) more dense

e) The inter-molecular forces in liquids are:
Ans iii) weaker than in solids

4) Match the following columns:

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

B) Short / Long answer questions:

1) Define matter. What is it's composition?

A) Matter is defined as anything which occupies space and has mass. It can be perceived by our sense of smell, touch, sight, hearing and taste. Matter is composed of tiny particles known as atoms.

2) Name the three states of matter.

A) The three states of matter are solids, liquids, gases.

* Solids - A solid has a definite shape and definite volume.

Ex) wood, stone, iron, ice, etc.

* Liquid - A liquid has a definit volume but not definite shape.

Ex) water, juice, milk, oil, etc.

* Gases - A gas neither has definite shape nor a definite volume.

Ex) air, hydrogen, oxygen, water vapour etc.

3) What is a molecule?