Holiday Homework

classmate

Date
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PHYSICS

a) The solids are = ① more dense.

b) The intermolecular forces in liquids are = ③ weaker than in solids.

c) ~~The~~ What is state of motion = ③ both by the state of rest or motion.

d) The strength of force is expressed by ? = ③ magnitude.

e) The force between two charged bodies is called a.muscular force = ① electrostatic force.

f) When two forces act in opposite directions, then net force acting two forces = ⑥ difference between two factors.

Fill in the blanks

a) All the molecules of substance are identical.

b) The intermolecular spacing is least in the solids, less in liquids and maximum in gases.

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

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

e) The intermolecular forces are the weakest in gas.

1. How do the solide, liquide and gasses differ in their following properties?
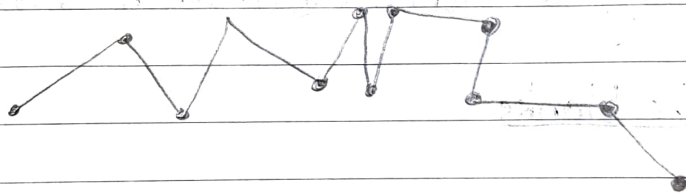
a) size- A molecule is of size nearly 10^{-10} metre. It is too small that it cannot be seen even with the help of a microscope.

b) Shape- Solide have definite shape
Liquid does'nt have definite shape.
Gras does'nt have definite shape.

c) Density = solids > liquids > Gras

2- Describe a simple experiment to illustrate that molecule are not at rest, but they constantly move.

ans-

The reason is that the molecules of water are in random motion which collide with the suspended fine particles of lycopodium powder and make them to move in a zig zag path.

3- Distinguish between the three states of matter - solid liquid and gas on the basis of their molecular models.

ans =

SOLID	LIQUIDS	Gases
1- The molecules in solid can only vibrate to and fro about their mean positions.	The molecules in a liquid can move within the boundary of the vessel.	The molecules of a gas can move freely in the available space.
2- The molecules remain fixed at their positions.	The molecules do not remain at their fixed at their positions	The molecules do not remain fixed at their positions.
3- The inter-molecular forces are very strong.	The inter-molecular forces are less strong.	The inter-molecular forces are weak.
4- The molecules in a solid are closely packed.	The molecules in a liquid are loosely packed.	The molecules in a gas are wide apart.

4- How does the density of a liquid or gas vary with temperature?

ans- As the temperature increase, volume of most of the liquid also increases and when the volume increases density decreases, when temp. dec. the volume of most liquids decreas which increases the density.

6- A given quantity
6- Two objects of same mass are moving with velocities v and 4v respectively. Find the ratio of their kinetic energies.

ans- $K.E. = \dfrac{1}{2}mv^2 = \dfrac{v^2}{16\,v^2} = \dfrac{1}{16} = 1:16$

$\qquad = \dfrac{1}{2}m(4v)^2$

7- Definition of kinetic energy = kinetic energy of a body is the energy possessed by it due to its motion.

$\qquad$ Formula of kinetic energy is - $\dfrac{1}{2}mv^2$

Definition of Potential energy = Potential energy of a body is the energy possessed by it due to its state of rest or position.

$\qquad$ Formula of Potential energy is : $mgh = m \times g \times h$.

8 - Define Pressure. Write its sl unit.

ans- Pressure is defined as thrust per unit area.

$\qquad$ Pressure $(P) = \dfrac{Thrust\,(F)}{Area\,(A)}$

The s.l. unit of pressure = Newton permetre^2
$\qquad\qquad\qquad = N/m^2 = Nm^{-2}$
$\qquad\qquad\qquad = Pascal\,(Pa)$

9- Find the amount of work done if a force of 60N moves an object through a distance of 5m in the direction of force.

ans- Work done = F×d

$$= 600N × 5m$$

$$= 300 \text{ Joule}$$

10- Define moment of force.

ans- The moment of force is equal to the product of the magnitude of the force and the perpendicular distance of the force from the pivoted point.

5- A given quantity of liquid is heated. which of the following quantity will vary and how?

ans- Volume : changes and increases with rise in temperature.

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SUB - PHYSICS