H.W
13.10.21

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MCQs

a) More dense

b) Weaker than in solids

c) Position of motion are rest

e) Magnitude

f) Electrostatic force

g) Difference between two Factors

Fill in the blanks

a) Identical
b) least, less and most
c) Zig-zag path
d) vibrate on either side
e) Gas

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Q and Ans

1) Solids have definite size, definite shape and they are less dense.
Liquids have no definite size and shape and they are less dense than solids.
Gases have no definite size and shape and less dense than liquids and solids

2) Add some lycopodium powder in the beaker containing water. Stir the contents of the beakere with a glass rod Take out few drops of this suspension on a glass plate. It is found that the fine particles of lycopodium powdere move rapidly in a random manner and their path is zig-zag .

3) Here the molecules are very tightly packed and there is no or very less intermolecular force of cohesion.

The molecules do not move about their mean positions and thus solids have a definite shape and volume.

In liquids the molecules are less tightly packed as compared to solids and also there is less force of intermolecular attraction. The intermolecular distance is greater than that in the solids. Thus, they don't have a definite shape but acquire the shape of the vessel in which they are contained but have a definite volume at a given temperature.

In gases the molecules are far apart from each other have the greatest intermolecular distance with result into the weakest intermolecular forces of attraction.

4) As the temperature increases, volumes of most of the liquids also increases and when the volume increases density decreases. Similarly, when temperature decreases, the volume of most liquids decreases which increases the density

5) Volume: changes and increases with rise in temperature

6) Kinetic energy of the body $K = \frac{1}{2}mv^2$
For same mass m, $K \propto v^2$
Given: $v_1 = v$ and $v_2 = 4v$
Thus ratio of kinetic energy $\frac{K_1}{K_2} = \frac{v_2}{v_2^2}$

$= \frac{1}{16}$

7) Kinetic energy is a form of energy that an object or a particle has by reason of its motion.

Potential energy is the energy possessed by a body by virtue of it position relatives to others.

8) Pressure is the trust acting per unit area.

It's S.I unit is Pa or N/m^2.

9) 12 Nm

10) The product of the distance from the point to point of application of the force and the component of the force perpendicu-lare to the line of the distance.