

Sem-II
Chemistry

Kinetic molecular Theory for gaseous state

It is based on macroscopic properties for gases

Following are the Postulates:→

- (i) Gases made of small tiny ~~atom~~ particles like atom or molecules of ~~identical~~ ^{negligible} size.
- (ii) Each particle moves ⁱⁿ straight line as long as it collides with particles or collides with container.
- (iii) Average kinetic energy of gaseous molecule is directly proportional to the absolute temperature in Kelvin scale.

if E is the indication of Average kinetic energy then

$$E \propto T$$

$$\text{i.e. } \boxed{E = KT}$$

- (iv) All particles of gaseous molecules move with same speed.
- (v) All particles of gas are independent of gravitational force.
- (vi) Pressure exerted by the gaseous molecule is the result of collision within gaseous molecule.

=.