

Sem-2

Paper-2.

Behavior of real gas.

The Postulates of real gas  $\rightarrow$

- (i) The gas which does not follow Boyle's, Charles's and Avogadro's Law.
- (ii) The gas which exist in low temperature and high pressure is called real gas.
- (iii) It has definite volume, molecular size.
- (iv) in real gas  
Change in enthalpy or change in Gibbs-free energy should not be equal to zero  
ie  $\Delta H \neq 0$  or  $\Delta G \neq 0$
- (v) intermolecular attraction force or repulsion are not negligible.
- (vi) It does not follow ideal gas equation.  
 $P \neq nRT$
- (vii) The real gas equation is

$$\left(P + \frac{a}{V^2}\right)(V-b) = nRT.$$