* characteristics of Physisorption :-

(1). **Lack of specificity :-**

physisorption is not specific in nature. A given adsorbent doesnot show any preference for a particular gas because vander Waals forces are universal.

(2). **Nature of adsorbate :-**

In general, easily liquefiable gases are redily adsorbed. It is because the vander Waals forces are stronger near critical temperature.

(3). **Reversible nature :-**

physical adsorption of a gas by a solid is generally reversible.

$$\text{solid} + \text{gas} \rightleftharpoons \text{Gas/solid} + \text{Heat}.$$

(4). **Surface area :-**

Greater the surface area of the adsorbent, greater is the adsorption.

(5). **Enthalpy of adsorption :-**

The enthalpy of adsorption is quite low. It is because the attraction between gas molecules and solid surface is due to weak vander Waals forces. The enthalpy of adsorption is nearly about 40 KJ/mol.

(6). **Layers :-**

In physical adsorption, multimolecular layer is formed.

(7). **Activation energy (Ea) :-** It is quite low. (almost zero).