

**Question 5.2:**

What is the difference between physisorption and chemisorption?

Answer

	<b>Physisorption</b>	<b>Chemisorption</b>
1.	In this type of adsorption, the adsorbate is attached to the surface of the adsorbent with weak van der Waal's forces of attraction.	In this type of adsorption, strong chemical bonds are formed between the adsorbate and the surface of the adsorbent.
2.	No new compound is formed in the process.	New compounds are formed at the surface of the adsorbent.
3.	It is generally found to be reversible in nature.	It is usually irreversible in nature.

4.	Enthalpy of adsorption is low as weak van der Waal's forces of attraction are involved. The values lie in the range of 20-40 kJ mol <sup>-1</sup> .	Enthalpy of adsorption is high as chemical bonds are formed. The values lie in the range of 40-400 kJ mol <sup>-1</sup> .
5.	It is favoured by low temperature conditions.	It is favoured by high temperature conditions.
6.	It is an example of multi-layer adsorption	It is an example of mono-layer adsorption.