5.6. What is the role of desorption in the process of catalysis.
Ans: Desorption makes the surface of the solid- catalyst free for fresh adsorption of the reactants on the surface.

5.7. What modification can you suggest in the Hardy Schulze, law?
Ans: According to Hardy Schulze law, the coagulating ion has charge opposite to that on the colloidal particles. Hence, the charge on colloidal particles is neutralized and coagulation occurs.
The modification to this law is: When oppositely charged sols are mixed in proper proportions to neutralize the charges of each other, coagulation of both the sol occurs.

5.8. Why is it essential to wash the precipitate with water before estimating it quantitatively?
Ans: Some amount of the e lectrolyte are m ixed to form the ppt. Some of these electrolytes remains adsorbed on the surface of the particles of the ppt. Hence, it is essential to wash the ppt with water to remove the sticking electrolytes (or any other impurities) before estimating it quantitatively.

5.9. Distinguish between the meaning of the terms adsorption and absorption. Give one example of each.
Ans: This phenomenon of attracting and retaining the molecules of a substance by a solid (or a liquid) on its surface resulting into a higher concentration of the molecules on the surface is known as adsorption.
Absorption is different from adsorption. In absorption, the substance is uniformly distributed throughout the body of a solid or a liquid.
NH_3 gets adsorbed on the charcoal where as NH_3 when comes in contact with H_20 gets absorbed by forming NH_4OH solution of uniform concentration.

5.10. What is the difference between physisorption and chemisorption?
Ans:

	Physisorption	Chemisorption
1	The adsorbate and adsorbent are held by weak van der Waal's forces.	The adsorbate and adsorbent are held by forces similar to chemical bond.
2	Heat of adsorption is of the order of 20 kJ/ mol.	Heat of adsorption is of the order of 200 kJ/mol.
3	It is reversible.	It is irreversible.
4	It decreases with increase in temperature and occurs at lower temperature.	It increases with temperature and occurs at high temperature.
5	It is not specific in nature, *i.e* ., all gases are adsorbed on all solids to some extent.	It is specific in nature and occurs only when a chemical bond is formed between the adsorbate and adsorbent.
6	Multimolecular layers may be formed on the adsorbent.	Usually unimolecular layer is formed on the adsorbent.

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