Surface Chemistry

1. Why are substances like platinum and palladium often Used for carrying out electrolysis of aqueous solutions?
2. What modification can you suggest in the Hardy-Schulze law?
3. Why is it essential to wash the precipitate with water before estimating it quantitatively.
4. Explain the following terms:
   (i) Electrophoresis (ii) Dialysis (iii) Tyndall effect.
5. What are micelles? Give an example of a micelle's system.
6. Give an example of sorption.
7. Name two industrial processes in which heterogeneous catalysts are employed
8. (a) Define adsorption.
(b) Give reasons why a finely divided substance is more effective as an adsorbent
9. (i) Define electro-osmosis.
(b) Give reasons why coagulation occurs during electrophoresis.
10. (a) In which of the following does adsorption take place and why?
   (i) Silica gel placed in the atmosphere saturated with water.
   (ii) Anhydrous $CaCl_2$ placed in the atmosphere saturated with water.
. (b) How does BF_3 act as a catalyst in industrial process?
(c) Give an example of shape-selective catalysis.
11. Explain the following:
(i) Gold number (ii) Coagulation (iii) Flocculating value.
12. Explain the terms with suitable example.
(a) Electro dialysis (b) Brownian movement.
13. Explain with proper reasoning:
(i) Colloidal particles cannot be seen. (ii) Dust particles become visible when a strong beam of light passes through a cinema hall. (iii) Medicines are more effective in their colloidal form. (iv) Lyophilic colloids are more stable than lyophobic colloids.