

1. What is sorption?
2. Explain the peptization.
3. State an important use of eletrodialysis in human being.
4. What is colloidon?
5. Which of the following electrolyte is more effective for the coagulation of $\text{Fe}(\text{OH})_3$ sol and why ? Na_3PO_4 , Na_2SO_4 , NaCl .
6. Give four applications of colloids.
7. How Cottrell smoke precipitator use to purify smoke from colloidal particles?
8. What is meant by Kraft temperature (T_c) and critical micelle concentration (CMC)?
9. Artificial rain can be caused by spray common salt on the clouds. How?
10. Answer the following:
 - (i) Why silica gel is used as dehumidizer ?
 - (ii) Ferric hydroxide sol coagulates on addition of aqueous solution of sodium sulphate.
 - (iii) Why gelatin is generally added to ice-cream?
11. Explain what happens when:
 - (i) Persistent dialysis of a colloidal sol is carried out.
 - (ii) a beam of light is passed through colloidal sol.
 - (iii) a dilute solution of FeCl_3 is added to freshly prepared $\text{Fe}(\text{OH})_3$
 - (iv) gelatin is added to gold sol.
12. Explain the following in brief.
 - (i) Sun looks red at the time of sunset.
 - (ii) Physisorption is multimolecular while chemisorptions is monomolecular.
13. Illustrate with example:-
 - (i) Lyophilic and Lyophobic sols.
 - (ii) Multimolecular and Macromolecular colloids.
 - (iii) Homogeneous and Hetrogeneous catalysis.
14. What are the two classes of emulsions? Give one example of each class. State 1 activity to test the type of an emulsion.
15. (a) How can a colloidal solution and true solution of the same colour be distinguished from each other.
(b) List four applications of adsorption.
16. Explain the following terms : (i) Peptization (ii) Dialysis (iii) Hardy – Schulze rule.
17. How do size of particles of adsorbent, pressure of gas and prevailing temperature influence the extent of adsorption of a gas on a solid?
18. What causes Brownian movement in a colloidal solution?
19. Define the term Tyndall effect?
20. Which has a higher enthalpy of adsorption, physisorption or Chemisorption?