Surface Chemistry (chapter-5)

Q.1 What is the role of activated charcoal in gas mask?

Q.2 How does chemisorption vary with temperature?

Q.3 Give the empirical relationship between the quantity of gas adsorbed by unit mass of solid absorbent and pressure at a particular temperature.

Q.4 What is the difference between physisorption and chemisorption?

Q.5 What are lyophilic and lyophobic sols? Give one example of each type.

Q.6 Explain what is observed

(i) when a beam of light is passed through a colloidal sol.

(ii) an, electrolyte, NaCl is added to hydrated ferric oxide sol.

(iii) electric current is passed through a colloidal sol?

Q.7 What is the difference between multimolecular and macromolecular colloids?

Q.8 Why is adsorption always exothermic?

Q.9 Out of $MgCl_2$ and $AlCl_3$, which one is more effective in causing coagulation of negatively charged sol and why?

Q.10 Out of sulphur and proteins, which one forms multimolecular colloids?

Surface Chemistry

11. Freshly prepared precipitate sometimes get converted to colloidal solution by
(a) coagulation (b) electrolysis
(c) Diffusion (d) Peptization

12. Method by which lyophobic sol can be protected
(a) by addition of oppositely charged sol.
(b) by addition of an electrolyte
(c) by addition of lyophilic sol.
(d) by boiling

13. A colloidal system having a solid substance as a dispersed phase and a liquid as a dispersion medium is classified as
(a) solid sol. (b) gel (c) emulsion (d) sol

14. Which of the following process is responsible for the formation of delta at a place where rivers meet the sea?
(a) Emulsification (b) Colloid formation
(c) Coagulation (d) Peptization

15. Which of the following electrolytes will have maximum coagulating value for AgI/Ag^+ sol.?
(a) Na_2S (b) Na_3PO_4
(c) Na_2SO_4 (d) NaCl.