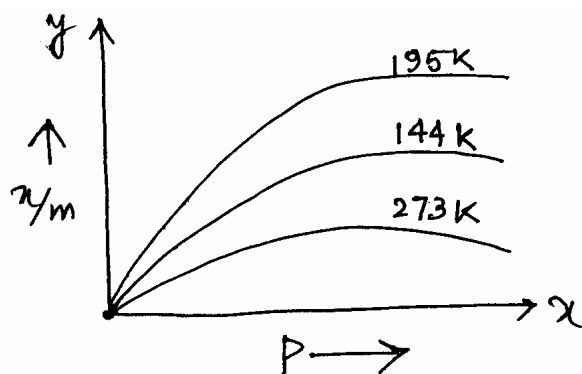


Chemistry
Assignment No:5
(Surface Chemistry)

- Q1. Why does physisorption decreases with increase of temperature?
- Q2. In chemisorptions why x/m initially increases and then decreases with rise in temperature?
- Q3. What causes Brownian movement in a colloidal solution?
- Q4. Why is ferric chloride preferred over potassium chloride in case of a cut leading to bleeding?
- Q5. What are physical states of dispersed phase and dispersion medium of froth?
- Q6. How do aerosol, hydrosol and emulsion differ from each other?
- Q7. What happens when :
- An electrolyte is added to a hydrated ferric oxide solution in water?
 - A beam of light is passed through a colloidal solution.
 - An electric current is passed through a colloidal.
- Q8. Explain Tyndall effect shown by colloidal solution.
- Q9. Explain the following terms:
a) Peptization b) Gels c) Dialysis
- Q10. Distinguish between micelles and colloidal particles. Give one example of each?
- Q11. What lyophilic and lyophobic sols? Give one example of each type. Which one of these types of sols is easily coagulated and why?
- Q12. Consider the adsorption isotherms given below and interpret the variation in the extent of adsorption (x/m) When : (a) temperature increases at constant pressure (b) pressure increases at constant temp.



Q13. Name the catalyst and the promoter used in Haber's process for manufacture of NH_3 .

Q14. What is the adsorption isotherm? Distinguish between Freundlich adsorption Isotherm and Langmuir adsorption isotherm with the help of appropriate graphs.

Q15. (a) Of NH_3 and CO_2 which will be adsorbed more readily on the surface of charcoal and why?

(b) State the principle of electro dialysis

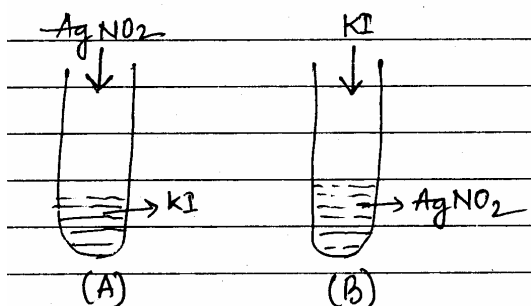
Q16. Explain why:

- Sky appears blue in colour
- Enzyme catalysts are highly specific in their action.
- Lyophilic colloid is more stable than lyophobic

Q17. Give reason for the following:

- Ferric hydroxide sol gets coagulated on addition of sodium chloride solution.
- Cottrell's smoke precipitator is fitted at the mouth of chimney used in factories
- Physical adsorption is multilayered, while chemi-sorption is monolayered.

Q18. A colloidal solution of AgI is prepared by two different methods shown below:



- What is the charge of AgI colloidal particles in two test tubes (A) and (B)
- Give reason for the origin of charge.

Q19. Adsorption of a gas on the surface of solid is generally accompanied by a decrease in entropy. Still it is a spontaneous process. Explain

Q20. Action of soap is due to emulsification and miscelle formation. Comment.