SAINIK SCHOOL GOPALGANJ

CLASS-12

SURFACE CHEMISTRY ASSIGNMENT

. Which one of the following is an example of adsorption?

a. ammonia in contact with water
b. anhydrous $CaCl_2$ with water
c. silica gel in contact with water vapours
d. all of these

2. At 15°C out of H_2, CH_4, CO_2, NH_3, which gas will be adsorbed maximum by charcoal?

a. H_2
b. CH_4
c. CO_2
d. NH_3

3. Which of the following colloids are solvent hating?

a. lyophilic
b. lyophobic
c. hydrophilic
d. none of these

4. If the dispersed phase is a liquid and the dispersion medium is solid, the colloid is known as

a. foam
b. sol
c. emulsion
d. gel

5. The process of separating a crystalloid, from a colloid by filtration is called

a. emulsification
b. dialysis
c. coagulation
d. Peptization

6. The movement of colloidal particles towards the oppositely charged electrodes on passing electric current is known as

a. Tyndall effect
b. Cataphoresis
c. Brownian movement
d. None of these

7. An emulsifier is a substance which

a. stabilizes the emulsion
b. coagulates the emulsion
c. retards the dispersion of liquid in liquid
d. causes homogenesis of emulsion

8. Homogeneous catalysis does mean

a. Reactants and goods have to be at the same level
b. Catalyst and reactants must be in the same phase
c. The reaction mixture must be formed homogeneously during
d. The reaction mixture distribution must be homogeneous

9. Which of the following kinds of catalysis can be explained by the adsorption theory?

a. enzyme catalysis
b. homogeneous catalysis
c. acid base catalysis
d. heterogeneous catalysis

10. The volume of gases H_2, CH_4, CO_2 and NH_3 adsorbed by 1 gm charcoal at 293 K can be given in the order?

a. $CH_4 > CO_2 > NH_3 > H_2$
b. $CO_2 > NH_3 > H_2 > CH_4$
c. $NH_3 > CO_2 > H_2 > CH_4$
d. $NH_3 > CO_2 > CH_4 > H_2$

VSA type

11. What is collodion?

12. What happens when electric field is applied to colloidal solution?

13. Why do we add alum to purify water?

14. A colloid is formed by adding $FeCl_3$ in excess of hot water. What will happen if excess sodium chloride is added to this colloid?

15. What causes brownian motion in colloidal dispersion?

SA type

16. On the basis of Hardy-Schulze rule explain why the coagulating power of phosphate is higher than chloride.

17. How does the precipitation of colloidal smoke take place in Cottrell precipitator?

18. Why does leather get hardened after tanning?

19. Do the vital functions of the body such as digestion get affected during fever? Explain your answer.

20. Why do physisorption and chemisorption behave differently with rise in temperature?