



ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

WORKSHEET-68(CLASS-12)

TOPIC- SURFACE CHEMISTRY



SUBJECT – CHEMISTRY

DURATION – 30 mins

F.M. - 15

DATE – 16.01.21

1. 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. $NH_3 > CO_2 > CH_4 > H_2$

11. In Freundlich adsorption isotherm $x/m = Kp^{1/n}$, the value of 'n' at low pressure is-

- (a) more than one.
- (b) less than one.
- (c) equal to one.
- (d) from zero to one

12. Which shape selective catalyst is used to convert alcohol to gasoline?

- (a) Trypsin
- (b) Calgon
- (c) ZSM-5
- (d) Zeigler-Natta catalyst

13. When a small amount of $FeCl_3$ is added to a freshly precipitated $Fe(OH)_3$, a reddish brown colloidal solution is obtained. This phenomenon is known as-

- (a) dialysis
- (b) peptization
- (c) protection
- (d) dissolution

14. Lyophilic colloids are stable due to-

- (a) charge on the particles.
- (b) large size of the particles.
- (c) small size of the particles.
- (d) layer of dispersion of medium on the particles

15. The potential difference between the fixed charged layer and the diffused layer having opposite charge is called-

- (a) Zeta potential
- (b) Electrokinetic potential
- (c) Both (a) and (b)
- (d) Streaming potential

PREPARED BY: MR. ARNAB PAUL CHOWDHURY