UPmyRANKS

Surface Chemistry

1. Which of the following is correct according to adsorption isotherm?
   a) $\frac{x}{m} \propto p^o$ b) $\frac{x}{m} \propto p^1$ c) $\frac{x}{m} \propto p^{1/n}$ d) All of these
2. Plot of $\log x/m$ against $\log p$ is a straight line inclined at an angle of 45°. When the pressure is 0.5 atm and Freundlich parameter, k is 10, the amount of solute adsorbed per gram of adsorbent will be $(\log 5 = 0.6990)$
   a) 1g b) 2g c) 3g d) 5g
3. The addition of 1% alcohol to chloroform acts as
   a) Auto-catalyst b) Bio-catalyst
   c) Positive catalyst d) Negative catalyst
4. Which of the following is an example for heterogeneous catalysis reaction?
   a) $2SO_2(g) + O_2(g) \xrightarrow{NO(g)} 2SO_3(g)$
   b) Hydrolysis of aqueous sucrose solution in the presence of aqueous mineral acid
   c) $2H_2O_2(l) \xrightarrow{\text{pt}\,(s)} 2H_2O(l) + O_2(g)$
   d) Hydrolysis of liquid in the presence of aqueous mineral acid
5. Peptization demotes
   a) Digestion of food
   b) Hydrolysis of proteins
   c) Breaking and dispersion into colloidal state
   d) Precipitation of solid from colloidal dispersion
6. Tyndall effect would be observed in
   a) Solvent b) Solution
   c) Colloidal solution d) Precipitate
7. An emulsion is a colloidal dispersion of
   a) A liquid in a gas b) A liquid in a liquid
   c) A solid in a liquid d) A gas in a solid
8. An emulsifier is a substance which
   a) Stabilises the emulsion
   b) Homogenises the emulsion
   c) Coagulates the emulsion
   d) Acceleration the dispersion of liquid in liquid
9. The sky looks blue due to
   a) Dispersion effect b) Reflection effect
   c) Transmission effect d) Scattering effect
10. The basic principal of cottrell's precipitator is
    a) Le-Chatelier's principle
    b) Peptisation
    c) Neutralisation of charge on colloidal particles
    d) Scattering of light
11. An example of dispersion of a liquid in a gas is
    a) Milk b) Vegetable
    c) Foam d) Mist

12. Which has least gold number?
    a) Gelatin b) Starch
    c) Albumin d) Blood
13. When dilute aqueous solution of $AgNO_3$(excess) is added to KI solution, positively charged sol of Agl is formed due to adsorption of
    a) NO_3^- b) O_2^- c) Ag^+ d) K^+
14. The number of moles of lead nitrate needed to coagulate 2 moles of colloidal [Agl]l^- is
    a) 2 b) 1 c) 1/2 d) 2/3
15. The fresh precipitate can be transformed can be transformed in colloidal state be
    a) Peptization b) Coagulation
    c) Diffusion d) None of these