CLASS : XIth SUBJECT : CHEMISTRY
DATE : **DPP No. : 1**

Topic :- SURFACE CHEMISTRY

1. The movement of colloidal particles towards their respective electrodes in the presence of an electric field is known as
   a) Electrolysis
   b) Brownian movement
   c) Dialysis
   d) Electrophoresis

2. Lyophilic sols are
   a) Irreversible sols
   b) They are prepared from inorganic compounds
   c) Coagulated by adding electrolytes
   d) Self-stabilising

3. Clouds, mist, fog and aerosols are colloidal solutions of :
   a) Solid in a gas   b) Gas in a solid   c) Liquid in a gas   d) Gas in a liquid

4. Protons accelerate the hydrolysis of esters. This is an example of :
   a) A heterogeneous catalysis
   b) An acid-base catalysis
   c) A promoter
   d) A negative catalyst

5. In the titration between oxalic acid and acidified potassium permanganate, the manganous salt formed during the reaction catalyses the reaction. The manganous salt acts as :
   a) A promoter   b) A positive catalyst   c) An autocatalyst   d) None of these

6. In Freundlich Adsorption isotherm, the value of $1/n$ is :
   a) 1 in case of physical adsorption
   b) 1 in case of chemisorption
   c) Between 0 and 1 in all cases
   d) Between 2 and 4 in all cases

7. Purple of cassius is
   a) Colloidal solution of Au
   b) Colloidal solution of Pt
   c) Colloidal solution of Ag
   d) Colloidal solution of As

8. Freundlich equation for adsorption of gases (in amount of $X g$) on a solid(in amount of $m\ g$)at constant temperature can be expressed as
   a) $\log \dfrac{X}{m} = \log p + \dfrac{1}{n}\log k$
   b) $\log \dfrac{X}{m} = \log k + \dfrac{1}{n}\log p$

c) $\dfrac{X}{m} \propto p^n$

d) $\dfrac{X}{m} = \log p + \dfrac{1}{n}\log k$

9. Which acts as poison to finely divided Fe in Haber's process for the manufacture of NH_3?
   a) CO_2
   b) NO
   c) CO
   d) N_2

10. The fresh precipitate can be transformed in colloidal state by
    a) Peptization
    b) Coagulation
    c) Diffusion
    d) None of these

11. The curve showing the variation of adsorption with pressure at constant temperature is called
    a) An isostere
    b) Adsorption isotherm
    c) Adsorption isobar
    d) None of these

12. Tyndall effect shown by colloids is due to
    a) Scattering of light by the particles
    b) Movement of particles
    c) Reflection of light by the particles
    d) Coagulation of particles

13. Negative catalyst or inhibitor is one :
    a) Which retards the rate of reaction
    b) Takes the reaction in forward direction
    c) Promotes the side reaction
    d) None of the above

14. Which is not a colloid?
    a) Chlorophyll
    b) Egg white
    c) Ruby glass
    d) Milk

15. Which forms micelles in aqueous solution above certain concentration?
    a) Glucose
    b) Dodecyl trimethyl ammonium chloride
    c) Urea
    d) Pyridinium chloride

16. Cod liver oil is :
    a) Fat dispersed in water
    b) Water dispersed in fat
    c) Water dispersed in oil
    d) Fat dispersed in fat

17. Colour of colloids depend on which of the factors?
    a) Size
    b) Mass
    c) Charge
    d) Nature

18. Colloidal gold is given by injection to act as
    a) Disinfectant
    b) Anticancer agent
    c) Germ killer
    d) Tonic to raise vitality of human systems

19. The outcome of internal liquid of gels on shear is called :
    a) Synerisis
    b) Thixotropy
    c) Swelling
    d) None of these

20. A catalyst in the finely divided form is most effective because :

a) Less surface area is available
b) More active centres are formed
c) More energy gets stored in the catalyst
d) None of the above