



CHEMISTRY

BOOKS - G.R. BATHLA & SONS

CHEMISTRY (HINGLISH)

THE COLLOIDAL STATE

Practice Problems

1. The coagulation of 100mL of a colloidal solution of gold is completely prevented by

adding $0.25g$ of starch to it before adding $10mL$ of $10\% NaCl$ solution. The gold number of starch is



[Watch Video Solution](#)

2. For the coagulation of $100mL$ of arsenious sulphite *sol*, $5mL$ of $1M NaCl$ is required.

What is the flocculation value of $NaCl$?



[Watch Video Solution](#)

Objective Questions

1. Difference in between crystallid and colloid is of :

- A. particle size
- B. chemical composition
- C. ionic character
- D. solubility

Answer: A



Watch Video Solution

2. Substances whose solutions can readily pass through animal membrane are called :

A. colloids

B. crystalloids

C. electrolytes

D. non-electrolytes

Answer: B



Watch Video Solution

3. Suspensions are :

A. visible to naked eye

B. invisible through microscope

C. not visible by any means

D. invisible under electron microscope

Answer: A



Watch Video Solution

4. The size of the colloidal particles is in between :

A. $10^{-7} - 10^{-9} \text{ cm}$

B. $10^{-9} - 10^{-11} \text{ cm}$

C. $10^{-5} - 10^{-7} \text{ cm}$

D. $10^{-2} - 10^{-3} \text{ cm}$

Answer: C



Watch Video Solution

5. The size of a colloidal particle is :

A. $> 0.1\mu$

B. 1μ to 0.1μ

C. $< 0.1m\mu$

D. more than $3000\text{ m } \mu$

Answer: B



Watch Video Solution

6. If liquid is dispersed in solid medium, then this is called as:

A. sol

B. emulsion

C. liquid aerosol

D. gel

Answer: D



Watch Video Solution

7. The number of phases in colloidal system are

A. 2

B. 4

C. 3

D. 1

Answer: A



Watch Video Solution

8. The colloidal system of a solid dispersed in liquid medium is :

A. aerosol

B. sol

C. gel

D. foam

Answer: B



Watch Video Solution

9. When dispersed phase is liquid and dispersion medium is gas, then the colloidal system is called

A. smoke

B. emulsion

C. colud

D. gel

Answer: C



Watch Video Solution

10. An emulsion is a colloidal solution consisting of :

A. two solids

B. two liquids

C. two gases

D. one solid and one liquid

Answer: B



Watch Video Solution

11. The colloidal solution of gelatin is known as

:

A. solvent loving

B. reversible

C. hydrophilic

D. all of these

Answer: D



Watch Video Solution

12. Sol is a type of colloid in which :

A. solid is dispersed in liquid

B. liquid is dispersed in solid

C. gas is dispersed in liquid

D. solid is dispersed in solid

Answer: A



Watch Video Solution

13. Butter is a colloid formed when :

A. fat is dispersed in fat

B. fat is dispersed in water

C. water is dispersed in fat

D. suspension of casein in water

Answer: C



Watch Video Solution

14. The process of separation of cream from milk is called :

A. emulsification

B. demulsification

C. electro-osmosis

D. peptization

Answer: B



Watch Video Solution

15. Smoke is an example of :

A. solid dispersed in solid

B. solid dispersed in gas

C. solid dispersed in liquid

D. gas dispersed in solid

Answer: B



Watch Video Solution

16. Of which of the following colloidal systems, fog is an example?

A. gaseous particules dispersed in gas

B. gaseous particles dispersed in liquids

C. liquid dispersed in liquid

D. solid dispersed in liquid

Answer: C



Watch Video Solution

17. Lyophobic colloids are :

A. reversible

B. irreversible

C. water loving

D. solvent loving

Answer: B



Watch Video Solution

18. Sulphur sol contains

A. discrete sulphur atoms

B. discrete sulphur molecules

C. water dispersed in solid sulphur

D. large aggregates of sulphur molecules

Answer: D



Watch Video Solution

19. Which of the following is not a colloidal systems ?

A. bread

B. muddy water

C. concrete

D. sugar in water

Answer: D



Watch Video Solution

20. Peptization denotes :

A. digestion of food

B. hydrolysis of proteins

C. breaking and dispersion into colloidal
state

D. precipitation of solid from colloidal dimension

Answer: C



Watch Video Solution

21. The separation of colloidal particles from those of molecular dimension is known as :

A. dialysis

B. electrophoresis

C. peptization

D. pyrolysis

Answer: A



Watch Video Solution

22. Bredig's arc method is used for the preparation of colloidal solution of :

A. metals like silver, goldm,etc.

B. organic compounds

C. two liquids

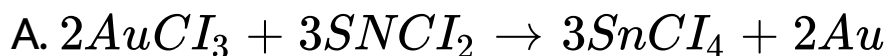
D. inorganic compounds

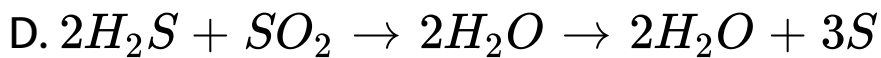
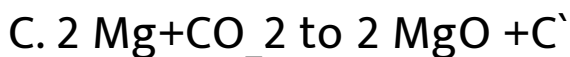
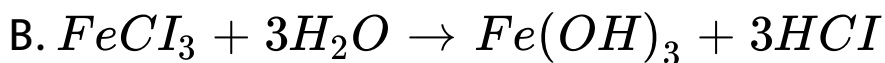
Answer: A



Watch Video Solution

23. Which of the following reactions is not used for the preparation of a colloidal solutions ?





Answer: C



Watch Video Solution

24. When freshly precipitated $Fe(OH)_3$ is boiled with water in the presence of few drops of dil. HCl, a hydrated ferric oxide sol is obtained. This method termed :

A. dialysis

B. peptization

C. ultrafiltration

D. electro-dispersion

Answer: B



Watch Video Solution

25. Which of the following substance gives a positively charged sol?

A. Gold

B. arsenic sulphide

C. starch

D. ferric hydroxide

Answer: D



Watch Video Solution

26. Brownian movement was discovered by :

A. Robert Brown

B. zsigmondy

C. hardy-schulze

D. Graham

Answer: A



Watch Video Solution

27. The cause of Brownian-movement is

A. temperatures fluctuations within the
liquid phase

B. attraction and repulsion between charges on colloidal particles

C. impact of molecules of the dispersion medium on colloidal particles

D. convection currents

Answer: C



Watch Video Solution

28. Tyndall phenomenon is exhibited by

A. dilute solution

B. colloidal solution

C. suspension

D. true solution

Answer: B



Watch Video Solution

29. The sky looks blue due to effect.

A. dispersion effect

B. reflection

C. transmission

D. scattering

Answer: D



Watch Video Solution

30. Tyndall effect in colloidal solution is due to

A. absorption of light

B. scattering of light

C. reflection of light

D. presence of electrically charged particles

Answer: B



Watch Video Solution

31. Migration of colloidal particles under the influence of electric field is known as.....

A. electro-osmosis

B. brownian movement

C. cataphoresis

D. dialysis

Answer: C



Watch Video Solution

32. the stability of lyophilic colloids is due to

A. charge on their particles

B. large size of their particles

C. smaller size of their particles

D. a layer of medium of dispersion on their particles

Answer: D



Watch Video Solution

33. Greater the valency, the higher is the coagulating power of ion.'This rule was introduced by

A. hardy-schulze

B. graham

C. kossel and lewis

D. faraday

Answer: A



Watch Video Solution

34. Bleeding is stopped by the application of ferric-chloride this is because:

A. the blood starts flowing in opposite direction

B. the ferric chloride seals the blood vessel

C. the blood reacts and forms a solid which seals the blood vessel

D. the blood is coagulated and thus, the blood vessel seals is sealed

Answer: D



Watch Video Solution

35. The property of colloidal suspension used to determine the nature of charge on the particles is :

- A. sedimentation
- B. electrophoresis
- C. dialysis
- D. ultrafiltration

Answer: B



Watch Video Solution

36. When excess of electrolyte is added to a colloid it :

A. coagulates

B. gets diluted

C. precipitates

D. does not change

Answer: A



Watch Video Solution

37. The colloidal solutions of gold prepared by different methods have different colors due to :

A. difference in size of colloidal particles

B. different concentration of gold

C. presence of different types of foreign particles

D. the variable valency of gold

Answer: A



Watch Video Solution

38. The capacity of an ion to coagulate a colloidal solution depends on

A. its shape

B. the amount of its charge

C. the sign of the charge

D. both, the amount and the sign of the charge

Answer: D



39. Lyophilic sols are more stable than lyophobic sols because

A. the colloidal particles have positive charge

B. the colloidal particles have negative charge

C. the colloidal particles are solvated

D. there are strong particles electrostatic
replusions

Answer: C



Watch Video Solution

40. which of the following will have the
highest coagulating power for As_2S_3 colloid?





Answer: B



Watch Video Solution

41. A negatively charged suspension of clay in water will need for precipitation the minimum amount of

A. aluminium chloride

B. potassium sulphate

C. sodium hydroxide

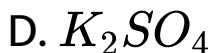
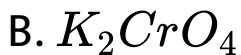
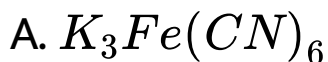
D. hydrochloric acid

Answer: A



Watch Video Solution

42. Which of the following electrolytes is least effective in causing flocculation of ferric hydroxide sol?



Answer: C



Watch Video Solution

43. Fe^{3+} ions coagulate blood. This shows that blood contains colloidal particles bearing a negative charge.

A. negative charge

B. positive charge

C. no charge

D. either positive or negative charge

Answer: A



Watch Video Solution

44. Gold number is a measure of

A. stability of colloidal system

B. coagulating power of a colloid

C. size of colloidal particles

D. efficiency of the protective colloid

Answer: D



Watch Video Solution

45. Gold number is a measure of

A. the amount of gold present in the
colloidal solution

B. the amount of gold required to break
the colloid

C. the amount of gold required to protect
the colloid

D. none of the above

Answer: D



Watch Video Solution

46. Surface of lyophilic sols is

- A. equal to that of solvent
- B. less than that of solvent
- C. more than that of solvent
- D. can not be predicted

Answer: B



Watch Video Solution

47. Gelatin is generally added to ice creams.

Why?

A. prevent formation of a colloid

B. stabilize the colloid and prevent crystallisation

C. cause the mixture to solidify easily

D. improve flavour

Answer: B



Watch Video Solution

48. Which of the following is the best protective colloid?

A. Gelatin (Gold No.0.005)

B. Starch (Gold No. 25)

C. Gum arabic (Gold No.0.08)

D. Egg albumin (Gold No. 0.08)

Answer: A



Watch Video Solution

49. Gold number is a measure of the :

A. protective action by a lyophilic colloid on lyophobic colloid

B. protective action by a lyophobic colloid on lyophilic colloid

C. number of mg of gold in a standard red gold sol

D. none of the above

Answer: A



Watch Video Solution

50. On addition of 1mL solution of 10% NaCl to 10mL gold sol in the presence of 0.0250g of starch, the coagulation is just prevented. What is the gold number of starch?

A. 25.0

B. 2.5

C. 0.25

D. 0.025

Answer: A



Watch Video Solution

51. The stability of lyophobic sols is due to

A. brownian motion only

B. electric charge only

C. both brownian motion and electric charge

D. particle size

Answer: C



Watch Video Solution

52. Which one of the following colloidal solutions is positive sol ?

A. blood

B. clay oil

C. smoke

D. gelatin in strongly acidic solution.

Answer: D



Watch Video Solution

53. An emulsifier is an agent which

- A. stabilizes the emulsion
- B. coagulates the emulsion
- C. retards the dispersion of liquid in liquids
- D. homogenises the emulsion

Answer: A



Watch Video Solution

54. Which of the following is an emulsifier ?

A. oil

B. soap

C. solvent

D. KCl

Answer: B



Watch Video Solution

55. An emulsifier is an agent which

A. helps in the dispersion of liquid in liquid

B. stabilises the emulsion

C. coagulates the emulsion

D. purifies the emulsion

Answer: B



Watch Video Solution

56. The gold numbers of some colloidal solutions are given below :

Colloidal Solution	Gold number
<i>A</i>	0.01
<i>B</i>	2.5
<i>C</i>	20

The projective powers of these colloidal solutions follow the order :

A. $c > b > a$

B. $a > b > c$

C. $a = b = c$

D. $b > a > c$

Answer: B



Watch Video Solution

57. Dialyser is a name given to

A. lyophilic colloids

B. lyophobic colloids

C. to a membrane which can separate
colloids from the solution

D. none of the above

Answer: C



Watch Video Solution

58. Flocculation value is expressed in terms of

A. millimole per litre

B. mol per litre

C. gram per litre

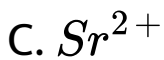
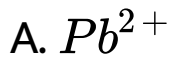
D. mol per millilitre

Answer: A



Watch Video Solution

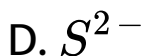
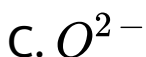
59. Which of the following has minimum flocculation value ?



Answer: B



60. The negative charge on As_2S_3 sol is due to adsorption of :

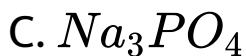
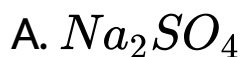


Answer: D



Watch Video Solution

61. The electrolyte having minimum flocculation value of AgI / Ag^+ sol is



Answer: B



Watch Video Solution

62. Above critical micelle concentration, particles get :

- A. associated
- B. dissociated
- C. both (a) and (b)
- D. none of these

Answer: A



Watch Video Solution

63. Continuous phase contains dispersed phase throughout Example is

A. water in milk

B. fat in milk

C. water in milk

D. oil in water

Answer: A



Watch Video Solution

64. The movement of dispersion medium in an electric field when the dispersed particles are prevented from moving is called .

A. cataphoresis

B. electrophoresis

C. electro-osmosis

D. brownian movement

Answer: C



Watch Video Solution

65. To coagulate gelatin sol, which of the following is most effective ?

A. NaCl

B. Na_3PO_4

C. $AlCl_3$

D. `Alcohol

Answer: D



Watch Video Solution

66. The emulsifying agent in milk is

A. lactic acid

B. fat

C. lactose

D. casein

Answer: D



Watch Video Solution

67. Colloidal solutions of metals like Cu, Ag, Au and Pt are generally prepared by using .

- A. peptization
- B. bredig's arc method
- C. exchange of solvent
- D. oxidation mehtod

Answer: B



Watch Video Solution

68. Which of the following process is responsible for the digestion of fat in our intestine?

A. Electrophoresis

B. demulsification

C. emulsification

D. peptization

Answer: C



Watch Video Solution

69. Purple of Cassius is

- A. colloidal solutions of silver
- B. colloidal solution of gold
- C. colloidal solution of platinum
- D. oxy acids of gold

Answer: B



Watch Video Solution

70. Which type of molecules form micells ?

- A. polar molecules
- B. non-polar molecules
- C. Surfactant molecules
- D. any of these

Answer: C



Watch Video Solution

71. The name aqualting is given to the colloidal solution of

- A. copper in water
- B. platinum in water
- C. gold in water
- D. graphite in water

Answer: D



Watch Video Solution

72. A liquid is found to scatter a beam of light but leaves no residue when passed through the filter paper.

A. a suspension

B. oil

C. a colloidal sol

D. true solution

Answer: C



Watch Video Solution

73. The potential difference between the fixed particles layer and the diffused layer having opposite charge is called :

A. colloidal potential

B. zeta potential

C. electrostatic

D. none of these

Answer: B



Watch Video Solution

74. An example of micelle is

A. As_2O_3 sol.

B. ruby glass

C. Na_2CO_3 solution

D. sodium stearate concentrated solution

Answer: D



Watch Video Solution

75. surface tension of lyophilic sols is

A. lower than H_2O

B. more than H_2O

C. equal to H_2O

D. none of these

Answer: A



Watch Video Solution

76. Curd belongs to the type of colloid

A. gel

B. sol

C. emulsion

D. solid foam

Answer: A



Watch Video Solution

77. An example of solid -solid system is :

A. smoke

B. coke

C. synthetic gems

D. pumice stone

Answer: C



Watch Video Solution

78. Detergent action of synthesis detergents is due to their.

- A. interfacila area
- B. high molecular weight
- C. ionisation
- D. emulsifying properties

Answer: D



Watch Video Solution

79. Blood contains .

A. positively charged particles

B. negatively charged particles

C. neutral particles

D. negatively as well as positively charged

colloids

Answer: B



Watch Video Solution

80. Silica gel is commonly used as :

A. wetting agent

B. drying agent

C. solvent

D. catalyst

Answer: B



Watch Video Solution

81. Which is not a colloidal solution of gas in liquid

A. froth

B. foams with tiny bubbles

C. mist

D. whipped cream

Answer: C



82. Emulsions of polyvinyl acetate are used in

- A. polishes
- B. latex paints
- C. fireworks
- D. rayons

Answer: B



83. When white light is passed through a colloidal solution containing fine suspended particles of gold, then the scattering light seen in a direction different from that of incident light is:

A. yellow coloured

B. blue coloured

C. green coloured

D. red coloured

Answer: D



Watch Video Solution

84. When a sulphur sol is evaporated, solid sulphur is left. On mixing with water no colloidal sol is formed. The sulphur sol is :

- A. hydrophilic
- B. hydrophobic
- C. reversible
- D. lyophilic

Answer: B



[Watch Video Solution](#)

85. Tails of comets are visible due to

- A. tyndall effect
- B. reflection
- C. brownian movement
- D. none of these

Answer: A



[Watch Video Solution](#)

86. Milk is an example of

A. fat dispersed in water

B. water dispersed in fat

C. water dispersed in oil

D. fat dispersed in fat

Answer: A



Watch Video Solution

87. Smog is an example of

A. ice dispersed in air

B. water dispersed in air

C. smoke dispersed in air

D. smoke and water dispersed in air

Answer: D



Watch Video Solution

88. Peptization denotes:

A. digestion of food

B. hydrolysis of proteins

C. breaking and dispersion into colloidal
state

D. precipitation of solid from colloidal state

Answer: C



Watch Video Solution

89. Whipped cream is an example of



Watch Video Solution

90. Cottrell precipitator acts on which of the following principles ?

A. hardy-schulze rule

B. distribution law

C. le chatelier's principle

D. neutralization of charge on the colloidal particles

Answer: D



Watch Video Solution

91. CMC (Critical Micelle Concentration) is

A. concentration at which micelles are destroyed

B. concentration at which micelle formation starts

C. concentration of electrolyte added to destroy the micelles

D. concentration of micelles at room temperature

Answer: B



Watch Video Solution

92. Cod liver oil is

A. fat dispersed in water

B. water dispersed in fat

C. water dispersed in water

D. fat dispersed in fat

Answer: C



Watch Video Solution

93. Which is not lyophilic colloid ?

A. milk

B. gum

C. fog

D. blood

Answer: C



Watch Video Solution

94. At the critical micelle concentration, the surfactant molecules :

A. decompose

B. dissociate

C. associate

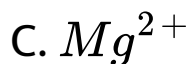
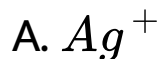
D. become completely soluble

Answer: C



Watch Video Solution

95. Which of the following ions can cause coagulation of proteins ?



Answer: A



Watch Video Solution

96. In brownian motion , the paths of the particles are :

A. linear

B. zig-zag

C. uncertain

D. curved

Answer: B



Watch Video Solution

97. Which is used in ending charge on colloidal solution?

A. electrons

B. electrolysis

C. positively charged ions

D. compounds

Answer: B



Watch Video Solution

98. Cloud or fog is a colloidal in which the dispersed phase and the dispersion medium are

A. gas, liquid

B. liquid, gas

C. liquid, liquid

D. solid, solid

Answer: B



Watch Video Solution

99. The electrolyte which has the least effect in the coagulation of $Fe(OH)_3$ sol is

- A. potassium carbonate
- B. sodium sulphate
- C. potassium ferrocyanide
- D. potassium iodide

Answer: C



Watch Video Solution

100. Gold number was given by :

A. ostwald

B. zsigmondy

C. william and chang

D. langmuir

Answer: B



Watch Video Solution

101. The diameter of colloidal particle ranges from

A. $10^{-9}m$ to $10^{-6}m$

B. $10^{-9}m$ to $10^{-12}m$

C. 10^3m to $10^{-3}m$

D. $10^{-3}m$ to $10^{-6}m$

Answer: A



Watch Video Solution

102. In which of the following Tyndall effect is not observed

A. suspensions

B. emulsions

C. colloidal solutions

D. true solutions

Answer: D



Watch Video Solution

103. Dialysis can separate which of the following in addition to the glucose from human blood ?

A. fructose

B. starch

C. proteins

D. sucrose

Answer: C



Watch Video Solution

104. Smoke has generally blue tinge. It is due to

A. scattering

B. coagulation

C. brownian motion

D. electrophoresis

Answer: A



Watch Video Solution

105. on adding $AgNO_3$ solution into KI solution , a negatively charged colloidal sol is obtained when they are in :

A. 100mL of 0.1M $AgNO_3$ + 100mL of 0.1M

KI

B. 100mL of 0.1M $AgNO_3$ + 50mL of 0.2M

KI

C. 100mL of 0.2 M $AgNO_3$ + 100mL of

0.1M KI

D. 100mL of 0.1M $AgNO_3$ + 100mL of 0.15

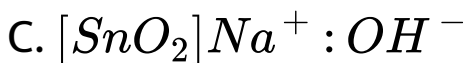
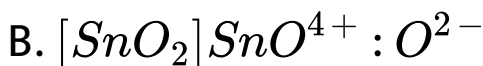
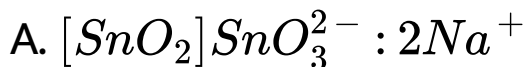
M KI

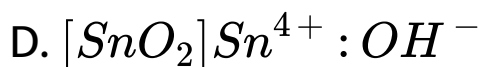
Answer: D



Watch Video Solution

106. Peptization of SnO_2 by NaOH gives :





Answer: A



Watch Video Solution

107. Alum helps in purifying water by

A. forming Si complex with clay particles

B. sulphate part which combines with the dirt and remove it

C. aluminium which coagulates the mud particles

D. making the mud water soluble

Answer: C



Watch Video Solution

108. surface tension of lyophilic sols is

A. lower than that H_2O

B. equal to that of H_2O

C. more than that of H_2O

D. none of these

Answer: A



Watch Video Solution

109. Which one of the following is correctly matched ?

A. emulsion-curd

B. foam -mist

C. aerosol-smoke

D. solid sol-cake

Answer: C



Watch Video Solution

110. When H_2S gas is passed through nitric acid, the product is :

A. rhombic sulphur

B. primatic sulphur

C. amorphous sulphur

D. monoclinic sulphur

Answer: C



Watch Video Solution

111. Tyndall effect is shown by :

A. precipitate

B. sol

C. plasma

D. solution

Answer: B



Watch Video Solution

112. On addition of 1mL solution of 10% NaCl to 10mL gold sol in the presence of 0.0250g of starch, the coagulation is just prevented. What is the gold number of starch?

A. 0.25

B. 0.025

C. 2.5

D. none of these

Answer: D



Watch Video Solution

113. Which of the following forms cationic micelles above certain concentration ?

A. sodium dodecyl sulphate

B. sodium acetate

C. urea

D. cetyltrimethyl ammonium bromide

Answer: D



Watch Video Solution

114. The smog is essentially caused by the presence of :

A. O_2 and O_3

B. O_2 and N_2

C. oxides of sulphur and nitrogen

D. O_3 and N_2

Answer: C



Watch Video Solution

115. Which one of the following is most effective in causing the coagulation of an As_2S_3 sol ?

A. KCl

B. $AlCl_3$

C. $MgSO_4$

D. $K_3[Fe(CN)_6]$

Answer: B



Watch Video Solution

116. The fresh precipitate can be transformed in colloidal state by

A. peptization

B. coagulation

C. diffusion

D. none of these

Answer: A



Watch Video Solution

117. Oils and fats are obtained by saponification potassium stearate. Its formula is $CH_3 - (CH_2)_{16} - COO - K_+$. Lyophobic

end of atom is (CH_3) and lyophilic end is $COO - K^+$. Potassium stearate is example of

- A. lyophobic colloid
- B. lyophilic colloid
- C. multimolecular colloid
- D. associated colloid or micelle

Answer: D



Watch Video Solution

118. Which one of the following forms micelles in aqueous solution above certain concentration?

A. dodecyl trimethyl ammonium chloride

B. glucose

C. urea

D. pyridinium chloride

Answer: A



Watch Video Solution

119. Muddy water can be purified through coagulation using

A. common salt

B. alums

C. sand

D. lime

Answer: B



Watch Video Solution

120. The dispersed phase in colloidal iron (III) hydroxide and colloidal gold is positively and negatively charged respectively with of the following statement is not correct ?

A. magnesium chloride solution coagulates the gold sol more readily than iron (III) hydroxide sol.

B. sodium sulphate solution causes coagulation in both sols.

C. mixing of the sols has no effect.

D. coagulation in both sols can be brought about by electrophoresis.

Answer: C



Watch Video Solution

121. An emulsifier is a substance which :

- A. stabilises the emulsion
- B. homogenises the emulsion
- C. coagulates the emulsion

D. accelerate the dispersion of liquid in
liquid

Answer: A



Watch Video Solution

122. Gold number is associated with

A. electrophoresis

B. purple of cassius

C. protective colloid

D. amount of pure gold

Answer: C



Watch Video Solution

123. Which one of the following is a false statement?

A. cell fluid is an example of sol

B. butter is an example of gel

C. hair cream is an example of foam

D. cheese is an example of emulsion.

Answer: D



Watch Video Solution

124. The presence of electric charge on colloidal particles is indicated by the property, called :

A. dialysis

B. solubility

C. electrophoresis

D. osmosis

Answer: C



Watch Video Solution

125. Which of the following properties are characteristic of lyophobic sols ?

1. low viscosity, 2. high viscosity , 3. reversibility
and 4. coagulation by electrolytes at low
concentration

Select the correct answer using the codes given below:

A. 2,3 and 4

B. 2and 3 only

C. 1 and 4 only

D. 1 and 3 only

Answer: C



Watch Video Solution

126. In a electrical field, the particles of a colloidal system move towards cathode. The coagulation of the same sol is studied using $K_2SO_4(I)$, $Na_3PO_4(II)$, $(K_4[Fe(CN)_6])(III)$ and $NaCl(IV)$. Their coagulating power should be :

A. $(I) > (II) > (III) > (IV)$

B. $(III) > (II) > (I) > (IV)$

C. $(III) > (I) > (II) > (IV)$

D. $(IV) > (III) > (I) > (II)$

Answer: B



Watch Video Solution

127. Cetyl trimethyl ammonium chloride is which type of detergent ?

A. Cationic

B. anionic

C. biosoft

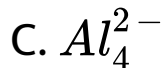
D. non-ionic

Answer: A



Watch Video Solution

128. The effective ion used in clarification of water is :



Answer: A



Watch Video Solution

129. The number of moles of lead nitrate needed to coagulate 2 mole of colloidal $[AgI]I^-$ is :

A. 2

B. 1

C. $\frac{1}{2}$

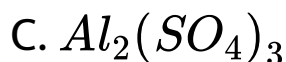
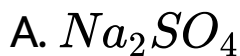
D. $\frac{2}{3}$

Answer: B



Watch Video Solution

130. Among the electrolytes Na_2SO_4 , $CaCl_2$, $Al_2(SO_4)_3$ and NH_4Cl , the most effective coagulating agent for Sb_2S_3 sol is :



D. NH_3Cl

Answer: C



Watch Video Solution

131. A micelle formed during the cleansing action of soap is

- A. a discrete particle of soap
- B. aggregated particles of soap and dirt
- C. a discrete particle of dust

D. an aggregated particle of dust and water

Answer: B



Watch Video Solution

132. The dispersed phase and dispersion medium in soap lather are respectively :

A. gas and liquid

B. liquid and gas

C. solid and gas

D. solid and liquid

Answer: A



Watch Video Solution

133. Which one of the following is correctly matched?

A. emulsion-smoke

B. gel-butter

C. sol-whipped cream

D. aerosol- hair cream

Answer: B



Watch Video Solution

134. Coagulation is not done by

A. persistent dialysis

B. boiling

C. electrophoresis

D. peptisation

Answer: D



Watch Video Solution

135. The coagulating power of electrolytes having ions Na^{\oplus} , Al^{3+} and Ba^{2+} for arsenic sulphide sol increases in the order





Answer: D



Watch Video Solution

136. Which of the following is an anionic detergent ?

A. sodium stearate

B. sodium lauryl sulphate

C. cetyltrimethyl ammonium bromide

D. glyceryl oleate

Answer: B



Watch Video Solution

137. Sulphur sol contains :

A. discrete s-atoms

B. discrete s-molecules

C. large aggrements of s-molecules

D. water dispersed in solid sulphur

Answer: C



Watch Video Solution

138. The Tyndall effect is observed only when following conditions are satisfied:

(A) the diameter of the dispersed particles is much smaller than the wavelength of the light used.

(B) the diameter of the dispersed particle is

not much smaller than the wavelength of the light use

(C) the refractive indices of the dispersed phase and dispersion medium are almost similar in magnitude

(D) the refractive indices of the dispersed phase and dispersion medium differ greatly in magnitude.

A. (A) and (D)

B. (B) and (D)

C. (A) and (C)

D. (B) and (C)

Answer: B



Watch Video Solution

139. Which of the following process is responsible for the formation of delta at a place where rivers meet the sea?

A. Coagulation colloid formation

B. emulsification

C. peptization

D.

Answer: A



Watch Video Solution

140. Gold sol not a :

A. lyophobic sol

B. negatively charged sol

C. macromolecular sol

D. multimolecular colloid

Answer: C



Watch Video Solution

Step 1 Objective

1. Which of the following statements are correct ?

1. on the application of an electric direction field, the particles of lyophobic sol may move

in either direction or not move at all

2. surface tension of lyophobic sols is similar to that of the dispersion medium.

3. electro-osmosis is the movement of the particles of dispersion medium under the influence of an electric field.

Select the correct answer using codes given below:

A. 1,2and 3

B. 1 and 3

C. 2 and 3

D. 1 and 3

Answer: C



Watch Video Solution

2. Which of the following statements are correct ?

A. 1,2 and 3

B. 1,3and 4

C. 2,3and 4

D. 1,2 and 4

Answer: A



View Text Solution

List-I

- A. Coagulation
- B. Lyophilization
- C. Peptization
- 3. D. Tyndall effect

List-II

- 1. Scattering
- 2. Washing of precipitates
- 3. Purification of colloids
- 4. Electrolyte

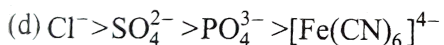
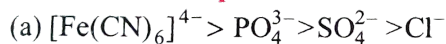
	A	B	C	D
(a)	4	—	2	1
(b)	2	—	3	4
(c)	—	1	2	4
(d)	4	3	1	—



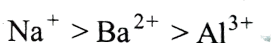
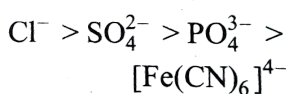
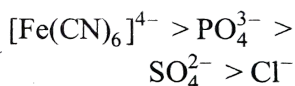
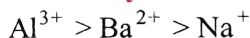
Watch Video Solution

4. The flocculating power of the given ions for the specified colloidal sols will be such that:

Arsenic sulphide sol



Ferric hydroxide sol



Watch Video Solution

5. The coagulation value in millimoles per litre of electrolytes used for the coagulation of As_2S_3 are as below :

A. $IgtIIgtIIIgtIV$

B. $IgtIIgtIII=IV$

C. $IVgtIIIgtIIgtI$

D. $IV=IIIgtIIgtI$

Answer: C



View Text Solution

6. Cotrell precipitator works on the principle of

:

A. diltribution law

B. addition of electrolyte

C. neutralisation of chrage on colloids

D. le chatelier's principle

Answer: C



Watch Video Solution

7. The substances involved in micellization are

:

A. polyphilic in nature

B. non-polar in nature

C. diphilic in nature

D. uniphilic in nature

Answer: C



Watch Video Solution

8. The swelling of 'gel' when placed in water is called:

A. gelation

B. imbibition

C. thixotrophy

D. synthesis

Answer: B



Watch Video Solution

9. A lyophilic sol is at its isoelectric point then it is :

A. negatively charged

B. positively charge

C. not charged

D. none of these

Answer: C



Watch Video Solution

10. Sedimentation potential is reverse of :

A. electro-osmosis

B. electrophoresis

C. electrokinetic potential

D. streaming potential

Answer: B



Watch Video Solution

11. The potential difference between the fixed particles layer and the diffused layer having opposite charge is called :

A. Zeta potential

B. colloidal potential

C. dorn potential

D. streaming potential

Answer: A



Watch Video Solution

12. Silver iodide is used for producing artificial rains because AgI:

A. is easy to spray at high altitude

B. is insoluble in water

C. is east to synthesize

D. has crystals similar to ice

Answer: A



View Text Solution

13. All colloidal solutions show :

A. very high osmotic pressure

B. high osmotic pressure

C. low osmotic pressure

D. no osmotic pressure

Answer: C



Watch Video Solution

14. Colloidation is a colloidal solution of :

A. sucrose in water

B. cellulose in water

C. cellulose nitrate in water

D. cellulose nitrate in ethyl alcohol

Answer: C



Watch Video Solution

15. During micelle formation :

A. $\Delta H = +ve, \Delta S = +ve$

B. $\Delta H = -ve, \Delta S = -ve$

C. $\Delta H = -ve, \Delta S = +ve$

$$D. \Delta H = +ve, \Delta S = -ve$$

Answer: A



Watch Video Solution

16. Which of the following is not the property of hydrophilic solutions ?

A. high concentration of dispersed phase

can be easily obtained

B. coagulation is reversible

C. viscosity and surface tension are nearly same as that of water

D. the charge of the particles depends on the pH of the medium and it may be positive, negative or zero

Answer: C



Watch Video Solution

17. The coagulation of 100ml of colloidal solution of gold is completely prevented by addition of 0.25g of a substance "X" to it before addition of 1 ml of 10 % NaCl solution.

The gold number of "X" is :

A. 0.25

B. 25

C. 250

D. 2.5

Answer: B



Watch Video Solution

18. Select the non- elastic gel out of the following :

A. Starch

B. agar-agar

C. silicic acid

D. gelatin

Answer: C



19. The colligative property of a colloidal sol compared to the solution of non-electrolyte of same concentration will be

A. same

B. higher

C. lower

D. higher or lower

Answer: C



Watch Video Solution

20. 1 mole of AgI / Ag^+ sol. Is coagulated by :

A. 1 mole of KI

B. 500ml of 1MK₂SO₄

C. 300ml of 1mNa₃PO₃

D. 1 mole of AgI

Answer: A



Watch Video Solution

21. 

A. $a-4, b-2, c-1, d-5$

B. $a-1, b-5, c-3, d-2$

C. $a-4, b-5, c-1, d-2$

D. $a-1, b-2, c-3, d-5$

Answer: A



View Text Solution

22. At CMC , the surfactant molecules undergoes :

A. association

B. aggregation

C. micelle formation

D. all of these

Answer: D



Watch Video Solution

23. The blue colour of the water of the sea is due to :

A. reflection of blue light by salts present in water

B. scattering of blue light by sol particles

C. reflection of blue coloured light by the impurities present in sea water

D. absorption of radiation of different colours except blue light.

Answer: B



Watch Video Solution

24. Statement : to stop bleeding from an injury ferric chloride can be applied.

A. it is not true , ferric chloride is a poison.

B. it is true Fe^{3+} ions coagulate blood which is negatively charged by

C. it is not true , Cl^{-} ions form positively charged sol, profuse bleeding takes place.

D. it is not true, ferric chloride is ionic and gets into blood stream.

Answer: B



Watch Video Solution

25. The coagulation of 200 ml of a positive colloid took place when 0.73g HCl was added to it. The flocculation value of HCl for the colloid is :

A. 150

B. 200

C. 100

D. 36.5

Answer: C



Watch Video Solution

Step 2 Objective

1. Lysione in not used as :

A. disinfectant

B. germ killer

C. treating eye disease

D. anti- cancer drug

Answer: B,C,D



Watch Video Solution

2. Which of the following are macromolecular colloids?

A. Starch

B. soap

C. Detergent

D. Cellulose

Answer: A,D



Watch Video Solution

3. Multimolecular colloids are present in :

A. sol of sulphur

B. sol of proteins

C. sol of gold

D. soap solution

Answer: A,C



Watch Video Solution

4. Methods used for the preparation of colloidal solutions are :

A. peptization

B. hydrolysis

C. ultrasonic dispersion

D. coagulation

Answer: A,B,C



Watch Video Solution

5. Isoelectric point is the pH at which colloidal particles.

A. coagulate

B. become electrically neutral

C. can move toward either electrode

D. none of the above

Answer: A,B,C



Watch Video Solution

6. Consider the following statements for micells, which is/are correct ?

A. at critical micelle concentration, several propertie of solution of surfactants such as molar conductivity, surface tension and osmotic pressure change

B. micelles from ionic surfactants can be formed only above a certain

temperature called the kraft

temperature.

C. micelle formation is exothermic

D. micelles are associated colloids

Answer: A,B,D



Watch Video Solution

7. Which of the following are negative colloids

?

A. $Fe(OH)_3$ sol

B. As_2S_3 sol

C. blood

D. gold sol

Answer: B,C,D



Watch Video Solution

8. Which of the following are examples of aerosols ?

A. Whipped cream

B. Cloud

C. fog

D. soap lather

Answer: B,C



Watch Video Solution

9. tyndall effect is applicable when:

A. the diameter of the dispersed particles is not much smaller than the wavelength of the light used

B. the diameter of the dispersed particles is much smaller than the wavelength of the light used

C. the refractive indices of the dispersed phase and the dispersion medium must be same

D. the refractive indices of the dispersed phase and the dispersion medium must differ greatly in magnitude

Answer: A,D



Watch Video Solution

10. Choose the correct reason(s) for the stability of the lyophobic colloidal particles.



Watch Video Solution

Assertion Reason

1. colloidal silver iodides is prepared by adding silver nitrate in slight excess to potassium iodide solution. When subjected to an electric field, the colloidal particles, migrate to the anode.

(R) Colloidal particles absorb ions thus become electrically charged.

A. IF both (A) and (r) are correct and (r) is the correct explanation for (a).

B. If both (a) and (r) are correct but (r) is not the correct explanation for (a).

C. IF (a) is correct but (r) is incorrect.

D. If (a) is incorrect but (r) is correct.

Answer: D



Watch Video Solution

2. (A) Lyophilic colloids such as starch, gelatin, etc, act as protective colloids .

(R) Protective power of lyophilic colloids is expressed in terms of gold number.

A. IF both (A) and (r) are correct and (r) is the correct explanation for (a).

B. If both (a) and (r) are correct but (r) is not the correct explanation for (a).

C. IF (a) is correct but (r) is incorrect.

D. If (a) is incorrect but (r) is correct.

Answer: B



View Text Solution

3. (a) True solutions do not exhibit tyndall effect.

(r) in true solutions, size of solute particles is much smaller than the wavelength of light used.

A. IF both (A) and (r) are correct and (r) is the correct explanation for (a).

B. If both (a) and (r) are correct but (r) is not the correct explanation for (a).

C. IF (a) is correct but (r) is incorrect.

D. If (a) is incorrect but (r) is correct.

Answer: A



Watch Video Solution

4. The micelle formed by sodium stearate in water has $-COO^-$ group at the surface.

(r) Surface tension of water is reduced by the addition of stearate.

A. IF both (A) and (r) are correct and (r) is the correct explanation for (a).

B. If both (a) and (r) are correct but (r) is not the correct explanation for (a).

C. IF (a) is correct but (r) is incorrect.

D. If (a) is incorrect but (r) is correct.

Answer: A



View Text Solution

5. lyophilic sols are more stable than lyophobic sols .

(r) Lyophilic sols are highly hydrated in the solution.

A. IF both (A) and (r) are correct and (r) is the correct explanation for (a).

B. If both (a) and (r) are correct but (r) is not the correct explanation for (a).

C. IF (a) is correct but (r) is incorrect.

D. If (a) is incorrect but (r) is correct.

Answer: A



Watch Video Solution

6. (a) Colloidal sol of $Fe(OH)_3$ formed by peptization carries positive charge.

(r) During the formation of positively charged colloidal particles of $Fe(OH)_3$ the electrons are lost by the colloidal particles of $Fe(OH)_3$.

A. IF both (A) and (r) are correct and (r) is the correct explanation for (a).

B. If both (a) and (r) are correct but (r) is not the correct explanation for (a).

C. IF (a) is correct but (r) is incorrect.

D. If (a) is incorrect but (r) is correct.

Answer: C



View Text Solution

7. Colloidal solutions are purified by dialysis.

(r) In the process of dialysis, colloidal particles pass through parchment paper.

- A. IF both (A) and (r) are correct and (r) is the correct explanation for (a).
- B. If both (a) and (r) are correct but (r) is not the correct explanation for (a).
- C. IF (a) is correct but (r) is incorrect.
- D. If (a) is incorrect but (r) is correct.

Answer: C



Watch Video Solution

8. Fe^{3+} can be used for coagulation of As_2S_3 sol.

(R) Fe^{3+} reacts with As_2S_3 to give Fe_2S_3 .

A. IF both (A) and (r) are correct and (r) is the correct explanation for (a).

B. If both (a) and (r) are correct but (r) is not the correct explanation for (a).

C. IF (a) is correct but (r) is incorrect.

D. If (a) is incorrect but (r) is correct.

Answer: C



View Text Solution

9. (A) fat is digested in the intestine by emulsification.

(r) Bile salts stabilize the emulsion so formed.

A. If both (A) and (r) are correct and (r) is the correct explanation for (a).

B. If both (a) and (r) are correct but (r) is not the correct explanation for (a).

C. IF (a) is correct but (r) is incorrect.

D. If (a) is incorrect but (r) is correct.

Answer: A



View Text Solution

10. (A) NH_3Cl and $RCOONa$ are colloidal electrolyte.

(R) the substances which behave as electrolyte below a certain concentration limit, beyond

this limit colloidal sol is formed, are called colloidal electrolyte.

A. IF both (A) and (r) are correct and (r) is the correct explanation for (a).

B. If both (a) and (r) are correct but (r) is not the correct explanation for (a).

C. IF (a) is correct but (r) is incorrect.

D. If (a) is incorrect but (r) is correct.

Answer: A



View Text Solution

11. (A) sulphate ores are concentrated by froth floatation process.

(R) Pine oil forms emulsion in water.

A. IF both (A) and (r) are correct and (r) is the correct explanation for (a).

B. If both (a) and (r) are correct but (r) is not the correct explanation for (a).

C. IF (a) is correct but (r) is incorrect.

D. If (a) is incorrect but (r) is correct.

Answer: A



View Text Solution

12. The conversion of fresh precipitate to colloidal state is called peptization.

(r) It is caused by addition of common ions.

A. IF both (A) and (r) are correct and (r) is the correct explanation for (a).

B. If both (a) and (r) are correct but (r) is not the correct explanation for (a).

C. IF (a) is correct but (r) is incorrect.

D. If (a) is incorrect but (r) is correct.

Answer: B



View Text Solution

13. (A) surfactent molecules form micelles above the critical micelle concentration (CMC).

(R) The conductance of solution of surfactant molecules decreases sharply at the (CMC).

- A. IF both (A) and (r) are correct and (r) is the correct explanation for (a).
- B. If both (a) and (r) are correct but (r) is not the correct explanation for (a).
- C. IF (a) is correct but (r) is incorrect.
- D. If (a) is incorrect but (r) is correct.

Answer: B



View Text Solution

14. (A) Soap and detergent are macromolecular colloids .

(R) soap and detergent are molecular of large size.

A. IF both (A) and (r) are correct and (r) is the correct explanation for (a).

B. If both (a) and (r) are correct but (r) is not the correct explanation for (a).

C. IF (a) is correct but (r) is incorrect.

D. If (a) is incorrect but (r) is correct.

Answer: D



View Text Solution

15. (A) Gold sol is hydrophobic and multimolecular.

(r) Gold sol is prepared by Bredig's arc method.

A. IF both (A) and (r) are correct and (r) is the correct explanation for (a).

B. If both (a) and (r) are correct but (r) is not the correct explanation for (a).

C. IF (a) is correct but (r) is incorrect.

D. If (a) is incorrect but (r) is correct.

Answer: B



View Text Solution

Matrix Matching Type Questions

- (i) Gold number
- (ii) Lyophobic
- (iii) Butter
- (iv) Hardy-Schulze rule
- (v) Micelles

- (vi) Purple of cassius
- (vii) Cheese
- (viii) Dialysis

- (a) Coagulation
- (b) An emulsion
- (c) Gold sol
- (d) Gel
- (e) Purification of colloidal solution
- (f) Protective colloids
- (g) Solvent hating
- (h) Associated colloids

1.



View Text Solution

2. (i) Brownian movement (a) Aerosol
(ii) Water loving colloids (b) Ultramicroscope
(iii) Liquid dispersed in gas (c) Irreversible
(iv) Tyndall effect (d) Sewage disposal
(v) Hydrophobic (e) Smoke precipitator
(vi) Coagulation (f) Hydrophilic
(vii) Electrophoresis (g) Emulsifying agent
(viii) Soap (h) Robert Brown



View Text Solution

[C] Property	Statement	Application / discoverer
(i) Tyndall effect	(a) Due to unequal bombardment by solvent molecules	1. Sewage disposal
(ii) Coagulation	(b) Surface area is large	2. Smoke precipitator
(iii) Brownian movement	(c) Movement of colloidal particles under the influence of electric field	3. Ultramicroscope
(iv) Adsorption	(d) Due to neutralisation of charge	4. Ice cream
(v) Electrophoresis	(e) Due to scattering of light	5. Colloidal medicines
(vi) Stability	(f) Addition of protective colloid	6. Robert Brown

3.



[View Text Solution](#)

4. Match the following columns

Column-I

- (a) Rain cloud
- (b) Smoke
- (c) Butter
- (d) Soap sud

Column-II

- (p) Gel
- (q) Foam
- (r) Aerosol
- (s) Gas as dispersion medium



Watch Video Solution

5. Match the following columns

List-I

- (a) Coagulation
- (b) Peptization
- (c) Tyndall effect
- (d) Dialysis

List-II

- (p) Scattering of light
- (q) Purification of colloidal solution
- (r) Addition of electrolyte
- (s) Precipitation of colloidal solution



[Watch Video Solution](#)

Column-I (Colloidal solution)	Column-II (Dispersed phase)	Column-III (Dispersion medium)
(a) Colloidion	(p) Water	(u) Ethanol
(b) Fog	(q) Cellulose	(v) Oil
(c) Butter	(r) Fat	(w) Air
6. (d) Milk	(s) Water	(x) Water



[View Text Solution](#)

Column-I

- (a) Cottrell precipitation
- (b) Electrophoresis
- (c) Hemodialysis
- (d) Coagulation

Column-II

- (p) Purification of blood
- (q) Precipitation of colloidal particles by addition of electrolytes
- (r) Removal of pollutants from industrial waste gases
- (s) Movement of charged colloidal particles towards oppositely charged electrode

7.



[View Text Solution](#)

Column-I

- (a) Emulsifier
- (b) Colloidal electrolyte
- (c) Oil dag
- (d) Xerogel

Column-II

- (p) Colloidal sol of graphite
- (q) Detergent
- (r) Cellophane
- (s) Dextrin

8.



[View Text Solution](#)

9. Match the following columns

Column-I

- (a) Milk
- (b) Dust
- (c) Cheese
- (d) Froth

Column-II

- (p) Aerosol
- (q) Emulsion
- (r) Gel
- (s) Foam



[Watch Video Solution](#)

Linked Comprehension Type Questions

1. There are certain substances which behave as normal, strong electrolytes at low concentration but at higher concentration they behave as colloidal solutions due to the formation of aggregated particles. Such colloids are called associated colloids and the aggregated particles are called micelles. Soaps and detergents are the example of associated colloids. the formation of micelles takes place above certain concentration called critical micellization concentration (CMC) and a

characteristic temperature.

Micelles are :

A. emulsions cum gels

B. associated colloids

C. adsorbed catalyses

D. ideal solutions

Answer: B



View Text Solution

2. There are certain substances which behave as normal, strong electrolytes at low concentration but at higher concentration they behave as colloidal solutions due to the formation of aggregated particles. Such colloids are called associated colloids and the aggregated particles are called micelles. Soaps and detergents are the example of associated colloids. the formation of micelles takes place above certain concentration called critical micellization concentration (CMC) and a

characteristic temperature.

What type of molecules form micelles?

A. Non-polar molecules

B. Polar molecules

C. Surfactant molecules

D. Salt of weak acid and weak base

Answer: C



View Text Solution

3. There are certain substances which behave as normal, strong electrolytes at low concentration but at higher concentration they behave as colloidal solutions due to the formation of aggregated particles. Such colloids are called associated colloids and the aggregated particles are called micelles. Soaps and detergents are the example of associated colloids. the formation of micelles takes place above certain concentration called critical micellization concentration (CMC) and a

characteristic temperature.

Micelles are formed only:

A. below the CMC and the Kraft temperature

B. above the CMC and below the Kraft temperature

C. above the cmc and above the kraft temperature

D. below the cmc and above the kraft temperature

Answer: C



View Text Solution

4. There are certain substances which behave as normal, strong electrolytes at low concentration but at higher concentration they behave as colloidal solutions due to the formation of aggregated particles. Such colloids are called associated colloids and the aggregated particles are called micelles. Soaps and detergents are the example of associated

colloids. the formation of micelles takes place above certain concentration called critical micellization concentration (CMC) and a characteristic temperature.

Above CMC, the surfactant molecules undergo :

- A. dissociation
- B. aggregation
- C. micelle formation
- D. all of these

Answer: B,C



[View Text Solution](#)

5. There are certain substances which behave as normal, strong electrolyte at low concentration but at higher concentration they behave as colloidal solutions due to the formation of aggregated particles. Such colloids called associated colloids and the aggregated particles are called micelles. The formation of micelles take place above certain concentration called critical micellization concentration (CMC) and a characteristic

temperature.

Micelles are used in

- A. detergents
- B. magnetic separation
- C. petroleum recovery
- D. all of these

Answer: A,C



Watch Video Solution

6. Emulsions are also called the colloidal solutions in which the disperse phase as well as dispersion medium are liquids. It may be oil-in-water or water-in-oil type Emulsifiers can be used to stabilize the emulsion. Soaps, detergents, proteins, and gums are used as emulsifiers.

Addition of lyophilic solution to the emulsion forms

A. a protective film around the dispersed phase

B. a protective film around the dispersion
medium

C. an aerosol

D. true solution

Answer: A



Watch Video Solution

7. Emulsions are also called the colloidal solutions in which the disperse phase as well as dispersion medium are liquids. It may be oil-

in-water or water-in-oil type Emulsifiers can be used to stabilize the emulsion. Soaps, detergents, proteins, and gums are used as emulsifiers.

Which of the following examples is/are oil-in-water-type emulsion?

A. Ink

B. Detergent

C. soap

D. milk

Answer: D



Watch Video Solution

8. Emulsions are also called the colloidal solutions in which the disperse phase as well as dispersion medium are liquids. It may be oil-in-water or water-in-oil type. Emulsifiers can be used to stabilize the emulsion. Soaps, detergents, proteins, and gums are used as emulsifiers.

Emulsion can be destroyed by (more than one correct)

- A. the addition of emulsifier which tends to form another emulsion
- B. electrophoresis with high potential
- C. freezing
- D. all of the above

Answer: B,C



Watch Video Solution

9. Emulsions are also called the colloidal solutions in which the disperse phase as well as dispersion medium are liquids. It may be oil-in-water or water-in-oil type Emulsifiers can be used to stabilize the emulsion. Soaps, detergents, proteins, and gums are used as emulsifiers.

Which of the following examples is/are oil-in-water-type emulsion?

A. milk

B. paint

C. shampoo

D. none of these

Answer: D



Watch Video Solution

10. Emulsions are also the colloidal solutions in which disperse phase as well as dispersion medium are liquids. It may be oil in water or water in oil type. Bancroft proposed that the phase in which the emulsifier is more soluble

becomes the outer phase of the emulsion.

Emulsifiers can be used to stabilize the emulsion. Soaps, detergents, proteins and gum, etc., are used as emulsifiers.

Milk is an emulsion in which:

A. milk fat is dispersed in water

B. a solid is dispersed in water

C. a gas is dispersed in water

D. lactose is dispersed in water

Answer: A



11. The process of dialysis finds application in the purification of blood by artificial kidney. In this impure blood is introduced in the artificial kidney, apparatus, where the waste material (electrolyte) diffuses through the membrane. The membrane used in the dialyser is different from the membrane used in osmosis. These membranes allow the movement of ions through them.

Blood is a negatively charged sol. The

haemoglobin particles carry a positive charge. Blood is slightly alkaline (pH 7.36-7.42).

Acidic salts like alum and $FeCl_3$ decrease the pH of the blood and the denaturation of globular proteins present in blood takes place.

Due to denaturation, these globular proteins become fibrous which are insoluble and stop bleeding. Blood is lyophobic in nature.

To stop bleeding, $FeCl_3$ is applied locally because :

A. $FeCl_3$ seals the blood vessels

B. $FeCl_3$ changes the direction of blood flow

C. $FeCl_3$ reacts with blood to form a solid substance which seals the blood vessel

D. $FeCl_3$ causes denaturation of proteins present in blood

Answer: D



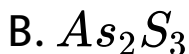
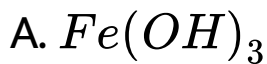
View Text Solution

12. The process of dialysis finds application in the purification of blood by artificial kidney. In this impure blood is introduced in the artificial kidney, apparatus, where the waste material (electrolyte) diffuses through the membrane. The membrane used in the dialyser is different from the membrane used in osmosis. These membranes allow the movement of ions through them.

Blood is a negatively charged sol. The haemoglobin particles carry a positive charge. Blood is slightly alkaline (pH 7.36-7.42).

Acidic salts like alum and $FeCl_3$ decrease the pH of the blood and the denaturation of globular proteins present in blood takes place. Due to denaturation, these globular proteins become fibrous which are insoluble and stop bleeding. Blood is lyophobic in nature.

Which of the following colloidal solutions does not contain negatively charged particles?



C. Blood

D. Gold sol

Answer: A



View Text Solution

13. The process of dialysis finds application in the purification of blood by artificial kidney. In this impure blood is introduced in the artificial kidney, apparatus, where the waste material (electrolyte) diffuses through the membrane. The membrane used in the dialyser is different

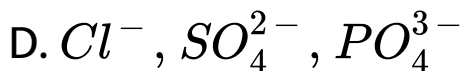
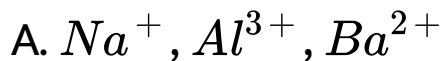
from the membrane used in osmosis. these membrane allow the movement of ions through them.

Blood is a negatively charged sol. The haemoglobin particles carry a positive charge. Blood is slightly alkaline (pH 7.36-7.42).

Acidic salts like alum and $FeCl_3$ decrease the pH of the blood and the denaturation of globular proteins present in blood takes place.

Due to denaturation, these globular proteins become fibrous which are insoluble and stop bleeding . Blood is lyophobic in nature.

The coagulating power of an electrolyte for blood decreases in the order :



Answer: C



View Text Solution

14. The process of dialysis finds application in the purification of blood by artificial kidney. In this impure blood is introduced in the artificial kidney, apparatus, where the waste material (electrolyte) diffuses through the membrane. The membrane used in the dialyser is different from the membrane used in osmosis. These membranes allow the movement of ions through them.

Blood is a negatively charged sol. The haemoglobin particles carry a positive charge. Blood is slightly alkaline (pH 7.36-7.42).

Acidic salts like alum and $FeCl_3$ decrease the pH of the blood and the denaturation of globular proteins present in blood takes place. Due to denaturation, these globular proteins become fibrous which are insoluble and stop bleeding. Blood is lyophobic in nature.

which of the following statements is/are not true ?

A. Blood is positively charged sol

B. soap solution contains ionic micelles as the colloidal particles

C. blood is purified by the process of dialysis

D. Ca^{2+} and K^+ coagulation of blood if added in excess

Answer: A



View Text Solution

15. The process of dialysis finds application in the purification of blood by artificial kidney. In this impure blood is introduced in the artificial

kidney, apparatus, where the waste material (electrolyte) diffuses through the membrane.

The membrane used in the dialyser is different from the membrane used in osmosis. These membranes allow the movement of ions through them.

Blood is a negatively charged sol. The haemoglobin particles carry a positive charge. Blood is slightly alkaline (pH 7.36-7.42).

Acidic salts like alum and $FeCl_3$ decrease the pH of the blood and the denaturation of globular proteins present in blood takes place.

Due to denaturation, these globular proteins

become fibrous which are insoluble and stop bleeding . Blood is lyophobic in nature.

which of the following is/are lyophobic colloids?

A. blood

B. starch

C. gelatin

D. gold

Answer: A,D



View Text Solution

Self Assessment

1. Dispersed phase and dispersion medium in butter are respectively :

- A. solid and liquid
- B. liquid and liquid
- C. liquid and solid
- D. solid and solid

Answer: B

2. Which one of the following acts as the best coagulating agent for ferric hydroxide sol?

A. magnesium chloride

B. hydrochloric acid

C. aluminium chloride

D. potassium ferricyanide

Answer: D

3. Colloidal solution commonly used in treatment of eye disease is :

- A. colloidal sulphur
- B. colloidal antimony
- C. colloidal silver
- D. colloidal gold

Answer: C



Watch Video Solution

4. The addition of alcohol to a saturated aqueous solution of calcium acetate first forms a sol and then sets to a gelatinous mass called solid alcohol rich is a:

A. aerosol

B. gel

C. solid foam

D. solid sol

Answer: B



Watch Video Solution

5. colloidal solutions of gold prepared by different methods are of different colours because of :

A. variable valence of gold

B. impurities produced by different methods

C. different diameters of colloidal gold particles

D. different concentration of gold particles

Answer: C



View Text Solution

6. Emulsions of polyvinyl acetate are used in :

A. polishes

B. latex paints

C. fire works

D. rayons

Answer: B



View Text Solution

7. the outcome of internal liquid of gel on shaking is called :

A. syneresis

B. imbibition

C. thixotropy

D. precipitation

Answer: C



View Text Solution

8. which of the following shows the maximum hydrophobic behaviour ?

A. adenine

B. glucose

C. stearic acid

D. glycine

Answer: A



View Text Solution

9. the solution of natural rubber in benzene is an example of :

A. lyophobic acid

B. glucose

C. stearic acid

D. glycine

Answer: B



View Text Solution

10. when NaCl solution is added to $Fe(OH)_3$ sol then :

- A. $[Fe(OH)_3]Fe^{3+}$ is formed
- B. $[Fe(OH)_3]Cl^-$ is formed
- C. $[Fe(OH)_3]$ is coagulated
- D. $[Fe(OH)_3]Na^+$ is formed

Answer: C



View Text Solution

11. which of the following are lyophilic in nature ?

A. gum

B. sulphur

C. starch

D. protein

Answer: A,C,D



View Text Solution

12. surfactant molecules form micelles in aqueous solution, which:

A. tend to congregate due to their hydrophobic tails

B. are colloidal-sized cluster of molecules

C. provide protection due to their

hydrophobic head

D. none of the above

Answer: A,B,C



View Text Solution

13. crystalloid and colloid differ with respect to

:

A. tyndall effect

B. particle size

C. diffusion through animal or vegetable
membrane

D. number of particles per unit volume of
solution.

Answer: A,B,C



View Text Solution

14. select the correct statements among the following :

A. milk is emulsion of fat in water.

B. an emulsifier stabilizes the emulsion

C. emulsifier forms a thin film around the droplets of dispersed phase.

D. milk is an emulsion of protein in water.

Answer: A,B,C



View Text Solution

15. which of the following statements are true?

A. flocculation value is inversely proportional to the coagulating power.

B. colloidal silica is a protective colloid

C. alum is used for cleaning muddy water.

D. gelatin is added in ice cream. It acts as emulsifier.

Answer: A,C,D



View Text Solution

16. Assertion (A): Micelles are formed by surfactant molecules above the critical micellization concentration (CMC) .

Reason(R): The conductivity of a solution having surfactant molecules decreases sharply at the CMC .

A. statement -1 is true, statement-2 is true ,
statement -2 is a correct

B. statement -1 is true, statement-2 is true ,
statement -2 is not a correct

C. statement -1 is true, statement-2 is false.

D. statement -1 is false, statement-2 is true.

Answer: B



Watch Video Solution

17. Assertion: A quious gold colloidal solution
is red in colour.

Reason: The colour arises due to scattering of light by colloidal gold particles.

A. statement -1 is true, statement-2 is true ,
statement -2 is a correct

B. statement -1 is true, statement-2 is true ,
statement -2 is not a correct

C. statement -1 is true, statement-2 is false.

D. statement -1 is false, statement-2 is true.

Answer: B



Watch Video Solution

18. an emulsion becomes stable if soap is added to it.

soap contains hydrophobic and hydrophilic parts .

A. statement -1 is true, statement-2 is true ,

statement -2 is a correct

B. statement -1 is true, statement-2 is true ,

statement -2 is not a correct

C. statement -1 is true, statement-2 is false.

D. statement -1 is false, statement-2 is true.

Answer: A



View Text Solution

19. Assertion : Colloidal solutions are electrically neutral

Reason : Dispersed phase and dispersion medium carry same charge.

- A. statement -1 is true, statement-2 is true ,
statement -2 is a correct
- B. statement -1 is true, statement-2 is true ,
statement -2 is not a correct
- C. statement -1 is true, statement-2 is false.
- D. statement -1 is false, statement-2 is true.

Answer: C



Watch Video Solution

20. Assertion : Colloidal sol scatters light while true solution does not.

Reason : The particles in a colloidal sol move slowly than in a true solution.

A. statement -1 is true, statement-2 is true ,

statement -2 is a correct

B. statement -1 is true, statement-2 is true ,

statement -2 is not a correct

C. statement -1 is true, statement-2 is false.

D. statement -1 is false, statement-2 is true.

Answer: A



Watch Video Solution

21. Red blood cells burst when placed in water.
water enters into blood cells due to osmosis.

A. statement -1 is true, statement-2 is true ,
statement -2 is a correct

B. statement -1 is true, statement-2 is true ,
statement -2 is not a correct

C. statement -1 is true, statement-2 is false.

D. statement -1 is false, statement-2 is true.

Answer: A



Watch Video Solution