



CHEMISTRY

BOOKS - NEET PREVIOUS YEAR (YEARWISE + CHAPTERWISE)

SURFACE CHEMISTRY



1. Of which of the following colloidal systems,

fog is an example?

- A. Gas in liquid
- B. Solid in gas
- C. Gas in gas
- D. Liquid in gas

Answer: D



2. Which one of the following chargcterisitic is

associated with adsorption?

A. $\Delta G, \Delta H$ and ΔS all are negative

B. ΔG and ΔH are negative but ΔS is

positive

C. ΔG and ΔS are negative but ΔH is

positive

D. aqueous solution of slaked lime

Answer: A

3. The coagulation value in millimoles per litre of the electrolyes used for the coagulation of As_2S_3 are given below:

I. (NaCl)=52 , II. $(BaCl_2)=0.69$

III. $(MgSO_4) = 0.22$

The correct order of their coagulating power is

A. I > II > III

 $\mathsf{B}.\,II > I > III$

 $\mathsf{C}.\,III>II>I$

D. III > I > II

Answer: C

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4. Suspension of slaked lime in water is known

as

A. limewater

B. quicklime

C. milk of lime

D. aqueous solution of slaked lime

Answer: C

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5. Which property of colloids is not dependent

on the change on colloidal particles?

A. coagulation

B. Electrophoresis

C. Electroosmosis

D. Tyndall effect

Answer: D

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6. Which of the following statements of correct for the spontaneous adsoption of a gas?

A. ΔS is negative and therefore, ΔH should be highly positive



Answer: B

7. In frenudlich adsorption isotherm, the value of 1/n is

A. between 0 and 1 in all cases

B. between 2 and 4 in all cases

C. 1 in cases of physical adsorption

D.1 in case of chemisorption

Answer: A

8. Which one of the following statements is

incorrect about enzyme catalysis?

A. Enzymes are mostly proteinous in nature

B. Enzyme action is specific

C. Enzymes are denaturated by UV-rays and

at high temperature

D. Enzymes are least reactive at optimum

temperature

Answer: D

9. The proteting power of lyophilic colloidal solution is expressed in terms of

A. coagulation value

B. gold number

C. crititcal micelle concentration

D. oxidation number

Answer: B

10. If x is the amount of adsorbate and m is the amount of adsorbent, which of the following relation is related to adsorption process?

A.
$$\frac{x}{m}$$
 = f(T) at constant p
B. p = f(T) at constant $\left(\frac{x}{m}\right)$
C. $\frac{x}{m}$ = $p \times T$
D. $\frac{x}{m}$ = f(p) at constant T

Answer: C





11. The Langmuir adsorption isotherm is deduced using the assumption.

A. the adsorption takes place in multilayers

B. the adsorption sites are equivalent in

their ability to adsorb the particles

C. the heat of adsorption varies with coverage

D. the adsorbed molecules interact with

each other

Answer: B



12. For adsorption of a gas on a solid, the plot of log (x/m) vs log P is linear with a slope equal to [n being a whole number]: B. log k

C. n

 $\mathsf{D.}\,\frac{1}{n}$

Answer: D

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13. Which one of the following forms micelles

in aqueous solution above certain

concentration?

A. Urea

B. Dodecyl trimethyl ammonium chloride

C. Pyridinium chloride

D. Glucose

Answer: B

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14. which of the following forms cationic micelles above certain concentration?

- A. Sodium ethyl sulphate
- B. Sodium acetate
- C. Urea
- D. Cetyl trimethyl ammonium bromide

Answer: D

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15. According to the adsorption theory of catalysis the speed of the reaction increases

because

A. adsorption produces heat which

increases the speed of the reaction

B. adsorption lowers the activation energy

of the reaction

C. the concentration of reactant molecules

at the active centres of the catalyst

becomes high due to adsorption

D. in the process of adsorption, the

activation energy of the molecules

becomes large

Answer: B



16. Position of non-polar and polar parts in micelle is

A. polar at outer surface but non-polar at

inner surface

B. polar at inner surface but non-polar at

outer surface

C. distributed all over the surface

D. present in the surface only

Answer: A

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17. Which is not correct regarding the adsorption of a gas on surface of a solid?

A. On increasing temperature adsorption

increases continuously

B. Enthalpy and entropy change is negative

C. Adsorption is more for some specific

substance

D. Reversible

Answer: A

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18. The method usually employed for the precipitation of a colloidal solution is

A. dialysis

B. addition of electrolytes

C. diffusion through animal membrane

D. condensation

Answer: B

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19. At CMC, the surfactant molecules :

A. decompose

B. dissociate

C. associate

D. become completely soluble

Answer: C

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20. The ability of ion to bring about coagulation of a given collidal solution depends upon

A. its charge

B. the sign of the charge alone

C. the magnitude of its charge

D. both magnitude and sign of its charge

Answer: D

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21. During dialysis

A. only solvent molecules can diffuse

B. solvent molecules, ions and colloidal

particles can diffuse

C. all kinds of particles can diffuse through

the semipermeable membrane

D. solvent molecules and ions can diffuse

Answer: D

22. If a beam of light is passed through true solution, then it is

A. visible

B. scatter

C. not visible

D. None of the above

Answer: C