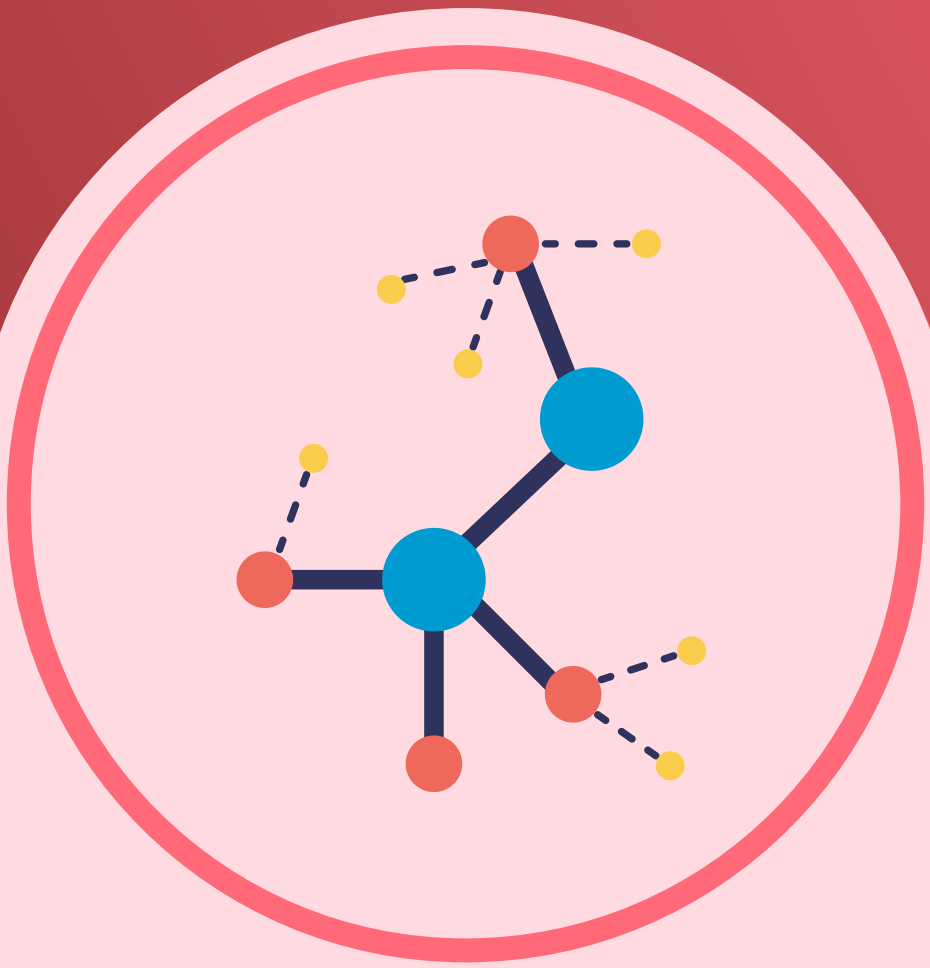
PRE-MEDICAL

PHYSICAL CHEMISTRY

ENTHUSIAST | LEADER | ACHIEVER



EXERCISE

Surface chemistry

ENGLISH MEDIUM

EXERCISE-I (Conceptual Questions) — Build Up Your Understanding

ADSORPTION

1. Physical adsorption is favourable at :–
(1) High temperature (2) Low temperatures
(3) At room temperature (4) 100^0 C
SC0001

2. The rate of physical adsorption:–
(1) Decreases with increase of pressure
(2) Is independent of pressure at high pressure
(3) Is maximum at one atmospheric pressure
(4) Always increases with increase of pressure
SC0002

3. Which of the following is not a characteristic of chemisorption :–
(1) Adsorption is irreversible
(2) ΔH is of the order of 40 kJ
(3) Adsorption is specific
(4) Adsorption increases with increase of surface area
SC0003

4. Which one of the following is not a correct statement?
(1) Physical adsorption is reversible in nature
(2) Physical adsorption involves vander waals forces
(3) Rate of physical adsorption increases with increase of pressure on the adsorbate
(4) High activation energy is involved for physical adsorption
SC0004

5. The amount of gas adsorbed on charcoal increases with :-
(1) Increase in temperature and pressure
(2) Increase in temperature and decrease in pressure
(3) Increase in pressure and decrease in temperature
(4) None
SC0005

6. Which is correct :-
(1) Chemical adsorption is highly specific
(2) Physical adsorption is reversible
(3) Both physisorption and chemisorption are exothermic
(4) All are correct
SC0007

7. Adsorption is accompanied by :-
(1) Decrease in entropy of the system
(2) Decrease in enthalpy of the system
(3) $T\Delta S$ for the process is negative
(4) All are correct
SC0008

8. Graph between log $\left(\frac{x}{m}\right)$ and log P is a straight line at an angle 45° with intercept on y-axis 0.3010. Calculate the amount of gas adsorbed in gram per gram of the adsorbent when pressure is 0.2 atm.
(1) 0.4 (2) 0.6 (3) 0.8 (4) 0.2
SC0010

9. Sorption is the term used when :
(1) Adsorption takes place
(2) Absorption takes place
(3) Both adsorption and absorption take place
(4) Desorption takes place
SC0011

10. The volume of gases H_2, CH_4, CO_2 and NH_3 adsorbed by 1 g of charcoal at 288K are in the order :
(1) $H_2 > CH_4 > CO_2 > NH_3$
(2) $CH_4 > CO_2 > NH_3 > H_2$
(3) $CO_2 > NH_3 > H_2 > CH_4$
(4) $NH_3 > CO_2 > CH_4 > H_2$
SC0012

11. The extent of adsorption of a gas on a solid depends on :
(1) The nature of gas
(2) Pressure of gas
(3) Temperature of the system
(4) All
SC0013

12. Which forms multi molecular layers during adsorption :
(1) Physical adsorption under high pressure
(2) Physical adsorption under low pressure
(3) Chemical adsorption
(4) All
SC0014

13. A substance is a better adsorbent in its finely powdered form as compared to crystalline form because :
(1) adsorption is an exothermic process.
(2) In the powdered state adsorbent becomes inert and does not react with adsorbate.
(3) adsorption is a surface phenomenon.
(4) adsorption varies directly with size of particles of adsorbate.
SC0145

14. Which of the following processes will be observed when a chalk stick is dipped in the solution of ink?
(1) Adsorption (2) Absorption
(3) Desorption (4) Both (1) & (2)
SC0146

COLLOIDAL SOLUTION

15. The number of phases present in colloidal solution is :–
(1) 2 (2) 4 (3) 3 (4) 1
SC0015

16. Butter is a colloid formed when :–
(1) Fat is dispersed in fat
(2) Fat is dispersed in water
(3) Water is dispersed in fat
(4) Suspension of casein in water
SC0016

17. Lyophobic colloids are :–
(1) Reversible (2) Irreversible
(3) Water loving (4) Solvent loving
SC0017

18. When freshly precipitated $Fe(OH)_3$ is boiled with water in the presence of few drops of dilute HCl, a hydrated ferric oxide sol is obtained. This method is termed as :–
(1) Dialysis (2) Peptization
(3) Ultrafiltration (4) Electrodispersion
SC0018

19. Greater the valency, the higher is the coagulating power of ion. This rule was introduced by :–
(1) Hardy–Schulze (2) Graham
(3) Kossel & Lewis (4) Faraday
SC0019

20. The capacity of an ion to coagulate a colloidal solution depends on :–
(1) Its shape
(2) The amount of its charge
(3) The sign of the charge
(4) Both, the amount and the sign of the charge
SC0020

21. All colloidal solutions show (Compared to true solutions) :-
(1) Very high osmotic pressure
(2) High osmotic pressure
(3) Low osmotic pressure
(4) No osmotic pressure
SC0021

22. The charge of As_2S_3 sol is due to the absorbed :–
(1) H^+ (2) OH^-
(3) O^{2-} (4) S^{2-}
SC0022

23. Brownian motion shown by colloidal particles is its ---------- property :–
(1) Optical (2) Electrical
(3) Kinetic (4) Chemical
SC0023

24. In both dialysis and osmosis which particle do not pass through SPM :
(1) Water (2) Small molecules
(3) Colloids (4) All
SC0025

25. The correct statement in case of milk :-
(1) Milk is an emulsion of fat in water
(2) Milk in an emulsion of protein in water
(3) Milk is unstabilized by protein
(4) Milk is unstabilized by fat
SC0026

26. A colloidal system involves :-
(1) A state of dissolution
(2) A state of dispersion
(3) A state of suspension
(4) None
SC0027

27. In electrophoresis :-
(1) Sol particles move towards opposite electrodes
(2) Medium moves towards opposite electrodes
(3) Neither (1) nor (2)
(4) Both (1) & (2)
SC0028

28. Which is not shown by sols :-
(1) Adsorption (2) Tyndall effect
(3) Flocculation (4) Paramagnetism
SC0030

29. Which of the following is an emulsifier ?
(1) Soap (2) Water (3) Oil (4) NaCl
SC0031

30. Emulsifiers are generally :-
(1) Soaps
(2) Synthetic detergents
(3) Proteins
(4) All of the above
SC0032

31. Which of the following is most effective in causing the coagulation of ferric hydroxide sol :-
(1) KCl (2) KNO_3
(3) K_2SO_4 (4) $K_3[Fe(CN)_6]$
SC0033

32. The colloidal sol of $SnCl_4$ prefers to adsorb _____ in excess of HCl :
(1) Sn^{+4} (2) K^+
(3) H^+ (4) Cl^-
SC0034

33. On adding $AgNO_3$ solution into KI solution, a negatively charged colloidal sol is obtained when they are mixed as :
(1) 100 mL of 0.1 M $AgNO_3$ + 100 mL of 0.1 M KI
(2) 100 mL of 0.1 M $AgNO_3$ + 50 mL of 0.2 M KI
(3) 200 mL of 0.1 M $AgNO_3$ + 200 mL of 0.1 M KI
(4) 100 mL of 0.1 M $AgNO_3$ + 100 mL of 0.15 M KI
SC0035

34. Micelles are :
(1) Ideal solution (2) Associated colloids
(3) Adsorbed surfaces (4) Adsorbent solutes
SC0036

35. Which of the following sol is formed due to following reaction :- SnO_2 + HCl (Excess) $\rightarrow$
(1) $[SnCl_4]\,Cl^-$ (2) $[SnCl_4]O^{-2}$
(3) $[SnCl_4]H^+$ (4) None
SC0038

36. Which of followig ion has minimum flocculation value:
(1) Cl^- (2) SO_4^{-2}
(3) PO_4^{3-} (4) $[Fe(CN)_6]^{4-}$
SC0039

37. A negatively charged suspension of clay in water needs for precipitation the minimum amount of:
(1) Aluminium chloride (2) Potassium sulphate
(3) Sodium hydroxide (4) Hydrochloric acid
SC0040

38. Which is not a colloidal solution :
(1) Smoke (2) Ink
(3) Air (4) Blood
SC0041

39. Which one is natural colloid :
(1) NaCl (2) Blood
(3) RCOONa (4) Sugar
SC0042

40. Medicines are more effective if they are used in :
(1) Colloidal state (2) Solid state
(3) Granular state (4) All of the above
SC0043

41. Egg albumin is :
(1) Reversible colloid (2) Lyophilic colloid
(3) Protective colloid (4) All
SC0044

42. Gelatin protects :-
(1) Gold sol (2) As_2S_3 sol
(3) $Fe(OH)_3$sol (4) All
SC0045

43. The coagulating power of an effective ion carrying the charge opposite to the sol particles has been illustrated by :-
(1) Brownian movement
(2) Gold number
(3) Tyndall effect
(4) Hardy-schulze rule
SC0046

44. Hardy-Schulze rule states that :-
(1) Non-electrolytes have better coagulating action on colloids than electrolytes.
(2) Sols are coagulated by effective ions whose charge is opposite to that of sol and the ions of higher charge are much more effective than the ions of lower charge.
(3) Charge of the ions has no effect on the coagulation of a sol.
(4) Sols are coagulated only by those ions whose charges is similar to that of the sol.
SC0047

45. An example of micelle is :–
(1) As_2O_3 sol
(2) Ruby glass
(3) Na_2CO_3 solution
(4) Concentrated sodium stearate solution
SC0048

46. Which of the following has minimum flocculation value:–
(1) Pb^{2+} (2) Pb^{4+} (3) Sr^{2+} (4) Na^+
SC0050

47. The gold numbers of A, B, C & D are 0.04, 0.002, 10 and 25 respectively. The protective powers of A, B, C and D are in the order :–
(1) A > B > C > D (2) B > A > C > D
(3) D > C > B > A (4) C > A > B > D
SC0051

48. On addition of 1 mL of 10% NaCl solution to 10 mL gold sol in presence of 0.025 g of starch, the coagulation is just prevented. The gold number of starch is :–

(1) 25 (2) 2.5 (3) 0.25 (4) 0.025

SC0052

49. Gold number is a measure of :–

(1) The amount of gold present in the colloidal solution.

(2) The amount of gold required to break the colloid.

(3) The amount of gold required to protect the colloid.

(4) None of the above

SC0053

50. Opal (mineral with liquid inclusions) is a:

(1) Gel (liquid dispersed in solid phase)

(2) Solid sol (solid dispersed in solid phase)

(3) Sol (solid dispersed in liquid)

(4) Foam (gas dispersed in liquid)

SC0056

51. In multimolecular colloidal sols, atoms or molecules are held together by :

(1) H–bonding

(2) vander-Waals forces

(3) Ionic bonding

(4) Polar covalent bonding

SC0058

52. Tyndall effect is not observed in :

(1) Suspension (2) Starch sol

(3) Gold sol (4) NaCl solution

SC0059

53. Which is kinetic phenomenon?

(1) Brownian motion (2) Tyndall effect

(3) Both (1) and (2) (4) None of these

SC0060

54. Which is not a correct matching of emulsions:

(1) Milk : O/W

(2) Cold cream : W/O

(3) Butter : O/W

(4) Vanishing cream: O/W

SC0063

55. Which of the following is correct for colloidal solutions?

(1) It is a homogeneous system

(2) Range of diameter of colloidal particles is 1 to 1000 nm

(3) They exist between the two extremes suspension and sol.

(4) They exist between the two extremes sol and solutions.

SC0147

CATALYST

56. Which of the following statement is correct ?

(1) Catalyst accelerates the rate of a chemical reaction.

(2) A catalyst can retard the rate of a chemical reaction.

(3) A catalyst can control the speed of a reaction.

(4) A catalyst does not alter the speed of a reaction.

SC0064

57. Which one of the following is not the example of homogeneous catalysis :–

(1) Formation of SO_3 in the chamber process

(2) Formation of SO_3 in the contact process

(3) Hydrolysis of an ester in presence of acid

(4) Decomposition of $KClO_3$ in presence of MnO_2

SC0065

58. The decomposition of hydrogen peroxide can be slowed down by the addition of a small amount of acetanilide. The later act as :–

(1) Inhibitor (2) Promoter

(3) Moderator (4) Poison

SC0066

59. Efficiency of the catalyst depends on its :–

(1) Molecular weight

(2) Number of free valencies

(3) Physical state

(4) Amount of reactant used

SC0067

60. Which of the following types of metals make the most efficient catalysts :–

(1) Transition metals (2) Alkali metals

(3) Alkaline earth metals (4) Radioactive metals

SC0068

61. In the reaction

$KMnO_4 + H_2SO_4 + H_2C_2O_4 \rightarrow$ products,

Mn^{++} ions act as :–

(1) Positive catalyst (2) Negative catalyst

(3) Auto catalyst (4) Enzyme catalyst

SC0069

62. In the Haber's process of synthesis of NH_3 :–
(1) Mo acts as a catalyst and Fe as a promoter.
(2) Fe acts as a catalyst and Mo as a promoter.
(3) Fe acts as inhibitor and Mo as a catalyst.
(4) Fe acts as promoter and Mo as auto–catalyst.
SC0070

63. Which of the following statement is incorrect ?
(1) Enzymes exist in colloidal state
(2) Enzymes are catalysts
(3) Enzymes can catalyse any reaction
(4) Urease is an enzyme
SC0071

64. Platinized asbestos is used as a catalyst in the manufacture of H_2SO_4. It is an example of :–
(1) Homogeneous catalyst
(2) Heterogeneous catalyst
(3) Auto–catalyst
(4) Induced catalyst
SC0072

65. In the Ostwald's process for the manufacturing of HNO_3, the catalyst used is :–
(1) Fe (2) Pt (3) V_2O_5 (4) Mo
SC0073

66. In a reversible reaction a catalyst :–
(1) Increases the rate of forward reaction only
(2) Increases the rate of forward reaction to a greater extent than that of the backward reaction
(3) Increases the rate of forward reaction and decreases that of the backward reaction
(4) Increases the rate of forward and backward reaction equally
SC0074

67. Which acts as a catalyst in the hydrogenation of vegetable oil :-
(1) Cu (2) Mo (3) Fe (4) Pt
SC0076

68. Air can oxidize sodium sulphite in aqueous solution but cannot do so in the case of sodium arsenite. If however, air is passed through a solution containing both sodium sulphite & sodium arsenite then both are oxidized. This is an example of :–
(1) Positive catalysis (2) Negative catalysis
(3) Induced catalysis (4) Auto catalysis
SC0077

69. Zeolites are :-
(1) Water softner (2) Catalyst
(3) cation exchanger (4) All of these
SC0078

70. Which is correct regarding Zeolites :-
(1) They are microporous aluminosilicates
(2) They have general formula $M_{x/n}[(AlO_2)_x(SiO_2)_y]mH_2O$
(3) They have pore sizes between 260 pm to 740 pm
(4) All are correct
SC0079

71. Zeolites are used as catalyst in :
(1) Petrochemical industries during cracking
(2) In the preparation of H_2SO_4
(3) In the hydrolysis of ester
(4) All of these
SC0080

72. Which is not the correct statement for a catalyst ?
(1) It does not alter activation energy.
(2) It provides an alternate mechanism with a lower energy of activation.
(3) Catalyst may form intermediates with the reactants.
(4) Action of enzyme catalyst is always specific.
SC0081

EXERCISE-I (Conceptual Questions) ANSWER KEY

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	**2**	**2**	**2**	**4**	**3**	**4**	**4**	**1**	**3**	**4**	**4**	**1**	**3**	**4**	**1**
Que.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	**3**	**2**	**2**	**1**	**4**	**3**	**4**	**3**	**3**	**1**	**2**	**1**	**4**	**1**	**4**
Que.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Ans.	**4**	**4**	**4**	**2**	**1**	**4**	**1**	**3**	**2**	**1**	**4**	**4**	**4**	**2**	**4**
Que.	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Ans.	**2**	**2**	**1**	**4**	**1**	**2**	**4**	**1**	**3**	**2**	**1**	**2**	**1**	**2**	**1**
Que.	61	62	63	64	65	66	67	68	69	70	71	72			
Ans.	**3**	**2**	**3**	**2**	**2**	**4**	**4**	**3**	**4**	**4**	**1**	**1**			

EXERCISE-II (Previous Year Questions) AIPMT/NEET

AIPMT 2010

1. Butter is an example of :-
(1) Water oil emulsion
(2) Gas-liquid colloidal system
(3) Oil water emulsion
(4) Solid-solid colloidal system

SC0084

AIPMT Pre. 2011

2. If x is amount of adsorbate and m is amount of adsorbent, which of the following relations is not related to adsorption process ?
(1) x/m = f(p) at constant T
(2) x/m = f(T) at constant p
(3) p = f(T) at constant (x/m)
(4) $\frac{x}{m} = p \times T$

SC0085

AIPMT Pre. 2012

3. In Freundlich adsorption isotherm, the value of 1/n is :
(1) 1 in case of physical adsorption
(2) 1 in case of chemisorption
(3) between 0 and 1 in all cases
(4) between 2 and 4 in all cases

SC0087

4. Which one of the following statements is **incorrect** about enzyme catalysis?
(1) Enzymes are denaturated by ultraviolet rays and at high temperature
(2) Enzymes are least reactive at optimum temperature
(3) Enzymes are mostly proteinous in nature
(4) Enzyme action is specific

SC0088

5. The protecting power of lyophilic colloidal sol is expressed in terms of:
(1) Critical micelle concentration
(2) Oxidation number
(3) Coagulation value
(4) Gold number

SC0089

NEET-I 2014

6. Which property of colloids is **not** dependent on the charge on colloidal particles ?
(1) Coagulation (2) Electrophoresis
(3) Electro - osmosis (4) Tyndall effect

SC0093

7. Which of the following statements is correct for the spontaneous adsorption of a gas ?
(1) ΔS is negative and, therefore, ΔH should be highly positive.
(2) ΔS is negative and therefore, ΔH should be highly negative.
(3) ΔS is positive and, therefore, ΔH should be negative.
(4) ΔS is positive and, therefore, ΔH should also be highly positive.

SC0094

NEET-I 2016

8. Which one of the following characteristics is associated with adsorption ?
(1) ΔG is negative but ΔH and ΔS are positive
(2) ΔG, ΔH and ΔS all are negative
(3) ΔG and ΔH are negative but ΔS is positive
(4) ΔG and ΔS are negative but ΔH is positive

SC0097

9. Fog is colloidal solution of :-
(1) Liquid in gas (2) Gas in liquid
(3) Solid in gas (4) Gas in gas

SC0098

NEET-II 2016

10. The coagulation values in millimoles per litre of the electrolytes 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
(1) III > II > I (2) III > I > II
(3) I > II > III (4) II > I > III

SC0099

NEET(UG) 2018

11. On which of the following properties does coagulating power of an ion depend ?
(1) The magnitude of the charge on the alone
(2) Size of the ion alone
(3) Both magnitude and sign of the charge of ion
(4) The sign of charge on the ion alone

SC0104

NEET(UG) 2019

12. Which mixture of the solutions will lead to the formation of negatively charged colloidal [AgI] I^- sol. ?

(1) 50 mL of 1M $AgNO_3$ + 50 mL of 1.5 M KI

(2) 50 mL of 1M $AgNO_3$ + 50 mL of 2 M KI

(3) 50 mL of 2 M $AgNO_3$ + 50 mL of 1.5 M KI

(4) 50 mL of 0.1 M $AgNO_3$ + 50 mL of 0.1 M KI

SC0148

NEET(UG) 2019 (ODISHA)

13. The correct option representing a Freundlich adsorption isotherm is

(1) $\frac{x}{m} = kp^{0.3}$ (2) $\frac{x}{m} = kp^{2.5}$

(3) $\frac{x}{m} = kp^{-0.5}$ (4) $\frac{x}{m} = kp^{-1}$

SC0149

NEET (UG) 2020

14. Measuring Zeta potential is useful in determining which property of colloidal solution?

(1) Size of the colloidal particles

(2) Viscosity

(3) Solubility

(4) Stability of the colloidal particles

SC0155

NEET (UG) 2020 (COVID-19)

15. In which of the sols, the colloidal particles are with negative charge ?

(1) TiO_2

(2) Haemoglobin

(3) Starch

(4) Hydrated $A\ell_2O_3$

SC0156

NEET (UG) 2021

16. The right option for the statement "Tyndall effect is exhibited by", is :

(1) NaCl solution

(2) Glucose solution

(3) Starch solution

(4) Urea solution

SC0157

NEET (UG) 2022

17. Given below are two statements:

Statement I :

In the coagulation of a negative sol, the flocculating power of the three given ions is in the order -

$$Al^{3+} > Ba^{2+} > Na^+$$

Statement II :

In the coagulation of a positive sol, the flocculating power of the three given salts is in the order -

$$NaCl > Na_2SO_4 > Na_3PO_4$$

In the light of the above statements, choose the most appropriate answer from the options given below:

(1) Both statement I and statement II are incorrect.

(2) Statement I is correct but statement II is incorrect

(3) Statement I is incorrect but statement II is correct.

(4) Both statements I and statements II are correct.

SC0158

18. The incorrect statement regarding enzymes is:

(1) Like chemical catalysts enzymes reduce the activation energy of bio processes.

(2) Enzymes are polysaccharides.

(3) Enzymes are very specific for a particular reaction and substrate.

(4) Enzymes are biocatalysts.

SC0159

NEET (UG) 2022 (OVERSEAS)

19. Match **List-I** with **List-II** :

List-I (Example of Colloidal Systems)		**List-II (Nature of dispersion medium and dispersed phase)**
(a) Insecticide spray	(i)	Dispersion medium-liquid Dispersed phase - solid
(b) Whipped Cream	(ii)	Dispersion medium – gas Dispersed phase – liquid
(c) Paint	(iii)	Dispersion medium– liquid Dispersed phase – liquid
(d) Hair Cream	(iv)	Dispersion medium– liquid Dispersed phase - gas

Choose the **correct answer** from the options given below :

(1) (a)-(iv), (b)-(ii), (c)-(iii), (d)-(i)

(2) (a)-(ii), (b)-(iv), (c)-(iii), (d)-(i)

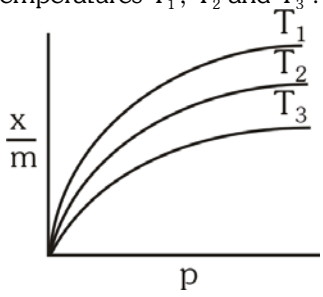
(3) (a)-(iv), (b)-(ii), (c)-(i), (d)-(iii)

(4) (a)-(ii), (b)-(iv), (c)-(i), (d)-(iii)

SC0160

Re-NEET (UG) 2022

20. Shown below are adsorption isotherms for a gas 'X' at temperatures T_1, T_2 and T_3 :



p and $\frac{x}{m}$ represent pressure and extent of adsorption, respectively. The correct order of temperatures for the given adsorption is:

(1) $T_1 > T_2 > T_3$ (2) $T_3 > T_2 > T_1$

(3) $T_1 = T_2 = T_3$ (4) $T_1 = T_2 > T_3$

SC0161

EXERCISE-II (Previous Year Questions) ANSWER KEY

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	**1**	**4**	**3**	**2**	**4**	**4**	**2**	**2**	**1**	**1**	**3**	**1,2**	**1**	**4**	**3**
Que.	16	17	18	19	20										
Ans.	**3**	**2**	**2**	**4**	**2**										

EXERCISE-III (Analytical Questions) Master Your Understanding

1. According to Freundlich adsorption isotherm, which of the following is correct ?

(1) $\frac{x}{m} \propto p^0$

(2) $\frac{x}{m} \propto p^1$

(3) $\frac{x}{m} \propto p^{1/n}$

(4) All are correct for different range of pressure

SC0110

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

(1) Glucose

(2) Urea

(3) Sodium stearate

(4) Pyridinium chloride

SC0113

3. Fog is a colloidal system of :-

(1) gas in liquid (2) liquid in gas

(3) gas in gas (4) gas in solid

SC0114

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

(1) $Al^{3+} < Ba^{2+} < Na^+$ (2) $Na^+ < Ba^{2+} < Al^{3+}$

(3) $Ba^{2+} < Na^+ < Al^{3+}$ (4) $Al^{3+} < Na^+ < Ba^{2+}$

SC0115

5. Which of the following colloidal solution can not be prepared by Bredig's arc method?

(1) Pt sol (2) Au sol

(3) Ag sol (4) protein sol.

SC0150

6. Brownian movement

(a) is optical property of colloid

(b) depends on size of particles

(c) depends on viscosity of solution

(d) is kinetic property of colloid

The correct statement are :-

(1) a, b

(2) a, b, c

(3) c, d

(4) b, c, d

SC0151

7. The coagulation of Lyophobic sol can be carried out by :-

(a) Electrophoresis

(b) Boiling

(c) Persistent dialysis

(d) addition of oppositely charged electrolyte

The correct statements are :-

(1) a, b (2) b, c

(3) c, d (4) a, b, c, d

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8. The process by which sites of adsorbent are made free and active so that more adsorbate can occupy them is called.

(1) sorption (2) desorption

(3) dissociation (4) all of these

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9. Gas mask is usually used for breathing in coal mine because it contains :-

(1) activated charcoal

(2) high vacuum

(3) more amount of pure oxygen

(4) all of these

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EXERCISE-III (Analytical Questions) ANSWER KEY

Que.	1	2	3	4	5	6	7	8	9
Ans.	**4**	**3**	**2**	**2**	**4**	**4**	**4**	**2**	**1**