EdLoop

EdLoop EAPCET

CHEMISTRY · EAPCET (EAMCET)

Surface Chemistry

Previous Year Questions with answers

191 questions · **141** papers · **2010–2026** · newest paper first

Step-by-step solutions for every question: free in the EdLoop EAPCET app (Google Play) · pyq.edloop.in

What is in this PDF: every Surface Chemistry question we hold from past AP and TS EAPCET (called EAMCET until 2020 in Andhra Pradesh and 2023 in Telangana) papers, with its options and answer. Where an answer comes from a source other than the official final key, it says so next to the answer.

Step-by-step solutions for every question are free in the EdLoop EAPCET app (Google Play) and on app.edloop.in. More chapters: pyq.edloop.in/free-pdfs/

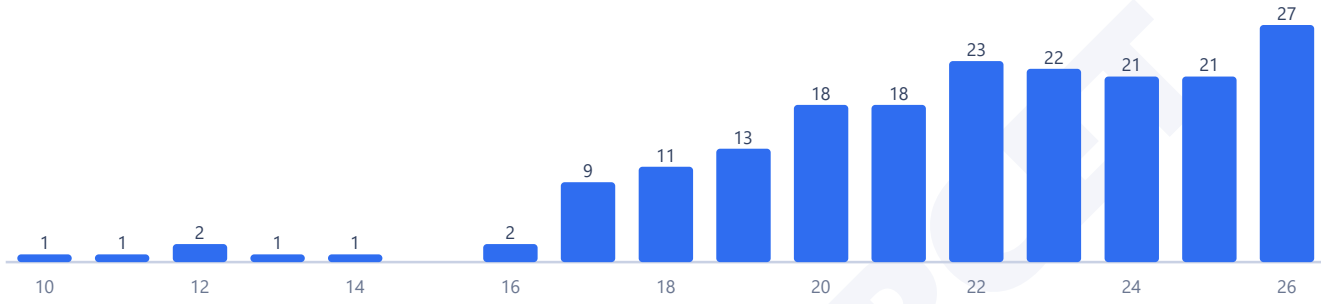
EdLoop EA

Chapter at a glance

3.7%	191	74 of 77	191 / 0
of Chemistry questions, 2022–2026	questions, 2010–2026	papers asked it, 2022–2026	MCQ / numerical, 2010–2026

Trend. Steady: 1.5 questions per paper in 2024–2026 against 1.5 in 2022–2023.

Questions per year



Counts are the questions we hold: 191 in 141 papers. 4 questions in this chapter came back in more than one paper.

Most-asked topics in this chapter (2010–2026)

Colloids	96
Adsorption	69
Catalysis	26

How often it comes up

Surface Chemistry sits at position 10 among the 31 chemistry chapters in the modern 2022 to 2026 timeframe. Across our complete repository of entrance papers from 2010 through 2026, the chapter delivered 191 questions across 149 papers, appearing in 141 of those tests to record a 3.2 percent subject share with an overall rate of 1.3 questions per paper. In the recent five-year period from 2022 to 2026, it gathered 114 questions across 77 sittings, being present in 74 papers to maintain 1.5 questions per paper and a 3.7 percent share.

The chapter has appeared in every exam year since 2022, though it was absent from three papers across that five-year window. Looking at state-specific trends from 2022 to 2026, AP tests carried 86 questions across 48 papers (appearing in all 48 papers, 1.8 questions per paper, 4.5 percent share), while TS papers contributed 28 questions across 29 papers (appearing in 26 papers, 1.0 question per paper, 2.4 percent share).

During the earlier historical interval from 2010 through 2021, papers featured 77 questions across 72 sittings (appearing in 67 tests), corresponding to 1.1 questions per paper and a 2.7 percent subject share. Across the most recent three exam cycles from 2024 to 2026, question setters included 69 questions across 46 sittings (with 43 papers containing questions), generating 1.5 questions per test and 3.8 percent share. In terms of long-term trajectory, comparing early testing with the last three years shows the share is up, while comparing the recent five-year window with the last three years shows the share is about the same.

Most-asked topics

Questions in this branch focus on interfacial phenomena and dispersion systems:

- **Colloids** forms the largest topic with 96 questions overall and 65 in the recent period through 2026. Major areas include classification of sols (lyophilic versus lyophobic, multimolecular, macromolecular, and associated colloids), micelle formation and critical micelle concentration, Hardy-Schulze rule for coagulation, gold numbers, and optical properties like the Tyndall effect.

- **Adsorption** accounts for 69 questions across the archive, with 36 occurring between 2022 and 2026. Key themes contrast physical adsorption with chemical adsorption, evaluate the Freundlich adsorption isotherm, and analyze logarithmic plots relating adsorbed mass to equilibrium gas pressure or solute concentration.
- **Catalysis** rounds out the syllabus with 26 questions overall and 13 during the recent window up to 2026. Frequent tasks match industrial processes with their catalysts, evaluate enzyme kinetics, and test shape-selective aluminosilicate zeolites in petrochemical cracking.

What the questions look like

Examiners place heavy emphasis on matching lists, graphical interpretations, and classification rules. A typical adsorption question presents a linear plot of log x by m against log P from the Freundlich isotherm and asks you to extract constants k and one over n from the intercept and slope, or to rank operating temperatures based on isotherm heights.

Colloid questions frequently test the Hardy-Schulze rule by asking which electrolyte exhibits the lowest flocculation value (highest coagulating power) for a negatively charged arsenious sulphide sol or a positively charged ferric hydroxide sol. Other standard formats involve calculating the gold number of a protective lyophilic colloid or selecting the odd compound out from a list of aerosols, gels, foams, and emulsions.

How to practise it

Thoroughly review NCERT tables covering types of colloidal systems by physical states of dispersed phase and dispersion medium. Be prepared to identify examples of sols, gels, solid sols, emulsions, and foams without hesitation.

Master the differences between physisorption and chemisorption: physisorption involves weak van der Waals forces, low enthalpy of adsorption, lacks specificity, forms multimolecular layers, and decreases continuously with temperature. Chemisorption involves chemical bond formation, high enthalpy, is highly specific, forms a unimolecular layer, and first increases with temperature before decreasing due to an activation energy requirement. Learn the Hardy-Schulze rule stating that coagulating power increases sharply with the valency of the active oppositely charged ion.

EdLoop EAPCET

Q1 AP EAPCET 2026 · 18 May · Shift 1 MCQ

In which of the following, colloidal system is correctly matched with its example?

(A) Sol – Butter
(B) Gel – Smoke
(C) Emulsion – Milk
(D) Foam – Paint

Answer: (C) Emulsion – Milk · The council's preliminary key

Q2 AP EAPCET 2026 · 18 May · Shift 1 MCQ

Observe the following statements

I. Micelles have both lyophilic and lyophobic parts

II. Starch in water is an example for multimolecular colloid

III. The CMC of a soap is 10^{-3} mol L^{-1}. It can form a micelle when its concentration is less than 10^{-3} mol L^{-1}

IV. Gold sol can be prepared by Bredig's Arc method

The correct statements are

(A) I, II, III, IV
(B) I, II, IV only
(C) I, IV only
(D) II, III only

Answer: (C) I, IV only · The council's preliminary key

Q3 AP EAPCET 2026 · 18 May · Shift 2 MCQ

The mass of gas adsorbed (x) per gram of adsorbent (m) is called extent of adsorption ($^{x}/_{m}$). If a graph is drawn between $\log {}^{x}/_{m}$ (on y-axis) and $\log p$ (x-axis) we get a straight line with slope equal to 2 and intercept equal to 0.60. The value of $^{x}/_{m}$ at a pressure of 9 atm is ($\log 4 = 0.60$)

(A) 243
(B) 81
(C) 162
(D) 324

Answer: (D) 324 · The council's preliminary key

Q4 AP EAPCET 2026 · 18 May · Shift 2 MCQ

Which of the following is most effective towards coagulation of CdS sol?

EdLoop EAPCET

(A) K_2SO_4
(B) $CaCl_2$
(C) Na_3PO_4
(D) $AlCl_3$

Answer: (D) $AlCl_3$ · The council's preliminary key

Q5 AP EAPCET 2026 · 15 May · Shift 1 MCQ

In a flask, 2 g of activated charcoal was added to 100 mL of acetic acid solution of 0.06 N. After 2 hours, the solution was filtered. The concentration of filtrate was found to be 0.04 N. The mass of acetic acid (in mg) adsorbed per gram of charcoal is

(A) 30
(B) 60
(C) 90
(D) 120

Answer: (B) 60 · The council's preliminary key

Q6 AP EAPCET 2026 · 15 May · Shift 1 MCQ

Which of the following colloidal system represents a gel?

(A) Solid in liquid
(B) Solid in gas
(C) Liquid in solid
(D) Liquid in gas

Answer: (C) Liquid in solid · The council's preliminary key

Q7 AP EAPCET 2026 · 15 May · Shift 2 MCQ

Match List – I with List – II

List – I (Substance)	List – II (Application)
A. Eosin	I. Separation of inert gases
B. Alumina gel	II. Hydrogenation of oils
C. Coconut charcoal	III. Argentometric titrations
D. Finely divided nickel	IV. Humidity control

The correct answer is

(A) A-III; B-I; C-IV; D-II
(B) A-II; B-IV; C-I; D-III
(C) A-III; B-IV; C-II; D-I
(D) A-III; B-IV; C-I; D-II

Answer: (D) A-III; B-IV; C-I; D-II · The council's preliminary key

Q8 AP EAPCET 2026 · 15 May · Shift 2 MCQ

Given below are two statements

Statement I: Animal skin is positively charged and tannin is negatively charged

Statement II: In leather tanning, chromium salts are used in place of tannin

Correct answer is

(A) Both Statements I and II are correct
(B) Both Statements I and II are not correct
(C) Statement I is correct but statement II is not correct
(D) Statement I is not correct but statement II is correct

Answer: (A) Both Statements I and II are correct · The council's preliminary key

Q9 AP EAPCET 2026 · 14 May · Shift 1 MCQ

Identify the correct pair of ions which are most effective towards the coagulation of sols $Fe_2O_3 \cdot xH_2O$ and CdS

(A) PO_4^{3-}, Al^{3+}
(B) Al^{3+}, PO_4^{3-}
(C) $[Fe(CN)_6]^{4-}, Al^{3+}$
(D) $Al^{3+}, [Fe(CN)_6]^{4-}$

Answer: (C) $[Fe(CN)_6]^{4-}, Al^{3+}$ · The council's preliminary key

Q10 AP EAPCET 2026 · 14 May · Shift 1 MCQ

Which of the following statements are correct about chemisorption?

I. It is highly specific in nature
II. It is reversible in nature
III. It depends on nature of gas
IV. It is unilayered adsorption

The correct answer is

(A) I & II only
(B) I & IV only
(C) I, II & IV only
(D) I, III & IV only

Answer: (D) I, III & IV only · The council's preliminary key

Q11 AP EAPCET 2026 · 14 May · Shift 2 MCQ

When $FeCl_3$ solution is added to hot water forms a sol "P". However, when $FeCl_3$ solution is added to $NaOH$ solution taken in excess, forms a sol 'Q'. What are P and Q respectively?

(A) $Fe_2O_3.xH_2O/Cl^-$; $Fe_2O_3.xH_2O/OH^-$
(B) $Fe_2O_3.xH_2O/H^+$; $Fe_2O_3.xH_2O/Na^+$
(C) $Fe_2O_3.xH_2O/Fe^{3+}$; $Fe_2O_3.xH_2O/OH^-$
(D) $Fe_2O_3.xH_2O/OH^-$; $Fe_2O_3.xH_2O/Fe^{3+}$

Answer: (C) $Fe_2O_3.xH_2O/Fe^{3+}$; $Fe_2O_3.xH_2O/OH^-$ · The council's preliminary key

Q12 AP EAPCET 2026 · 14 May · Shift 2 MCQ

In argentometric titrations, fluorescein is used as an indicator. This is due to

(A) Adsorption of fluorescein on the surface of $AgCl$
(B) Absorption of fluorescein by $AgCl$
(C) Complex formation of fluorescein with Ag^+
(D) Oxidation of $AgCl$ to $AgClO_3$

Answer: (A) Adsorption of fluorescein on the surface of $AgCl$ · The council's preliminary key

Q13 AP EAPCET 2026 · 13 May · Shift 1 MCQ

At T(K), adsorption of acetic acid on 1g of charcoal gave a Freundlich adsorption isotherm with slope of 0.5 and intercept of 1. What is the value of x, when the concentration of acetic acid is $0.1\ mol\ L^{-1}$? (antilog (0.5) = 3.162; antilog (0.301) = 2.0)

(A) 0.3162
(B) 3.162
(C) 0.5
(D) 0.2

Answer: (B) 3.162 · The council's preliminary key

Q14 AP EAPCET 2026 · 13 May · Shift 1 MCQ

Match List – I with List – II

List – I (colloid)	List – II (use)

A	Smoke	I	Eye lotion
B	Silver sol	II	Kalaazar
C	Antimony colloid	III	Cottrell precipitator
D	Gold sol	IV	Intramuscular injection

The correct answer is

(A) A – III, B – I, C – IV, D – II
(B) A – III, B – I, C – II, D – IV
(C) A – IV, B – II, C – I, D – III
(D) A – II, B – I, C – III, D – IV

Answer: (B) A – III, B – I, C – II, D – IV · The council's preliminary key

Q15 AP EAPCET 2026 · 13 May · Shift 2 MCQ

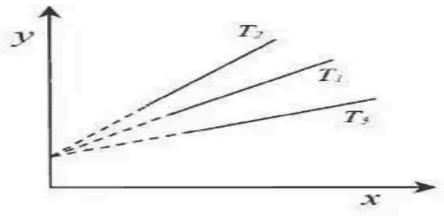
The following isotherms were obtained for adsorption of a gas on solid surface at three different temperatures. What is the correct relationship of temperatures?

$(x - axis = \log p;\ y - axis = \log\left(\frac{x}{m}\right))$

(see the figure above)

The following isotherms were obtained for adsorption of a gas on solid surface at three different temperatures. What is the correct relationship of temperatures?

$(x - axis = \log p;\quad y - axis = log\left(\frac{x}{m}\right)$



మూడు వేరు వేరు ఉష్ణోగ్రతల వద్ద, ఒక ఘన ఉపరితలంపై వాయువు అధిశోషణం చెందినపుడు లభించు సమోష్ణరేఖలు క్రింద ఇవ్వబడ్డాయి. ఉష్ణోగ్రతల సరియైన సంబంధము ఏది?

$(x - \text{అక్షం} = \log p;\quad y - \text{అక్షం} = log\left(\frac{x}{m}\right)$

Options :

1. $T_1 = T_2 = T_3$
2. $T_2 < T_1 < T_3$
3. $T_3 < T_1 < T_2$
4. $T_2 < T_3 < T_1$

(A) $T_1 = T_2 = T_3$
(B) $T_2 < T_1 < T_3$
(C) $T_3 < T_1 < T_2$
(D) $T_2 < T_3 < T_1$

Answer: (B) $T_2 < T_1 < T_3$ · The council's preliminary key

Q16 AP EAPCET 2026 · 13 May · Shift 2 MCQ

Identify the correct statements from the following

I. Lyophilic sols are more stable than Lyophobic sols

II. As_2S_3 sol is a negatively charged sol

III. TiO_2 sol is a negatively charged sol

IV. Milk of magnesia is used to cure kalaazar

Correct answer is

(A) I, II only
(B) III, IV only
(C) I, III, IV only
(D) I, II, III only

Answer: (A) I, II only · The council's preliminary key

Q17 AP EAPCET 2026 · 13 May · Shift 2 MCQ

Match the following

List - I (Reaction)	List - II (Catalyst)
A. $2\,SO_2 + O_2 \rightarrow 2\,SO_3$	I. MnO_2
B. $4\,HCl + O_2 \rightarrow 2\,Cl_2 + 2\,H_2O$	II. $PdCl_2$
C. $C_2H_4 \rightarrow CH_3CHO$	III. $CuCl_2$
D. $2\,KClO_3 \xrightarrow{\Delta} 2KCl + 3O_2$	IV. V_2O_5

The correct answer is

(A) A-IV, B-II, C-III, D-I
(B) A-I, B-III, C-II, D-IV
(C) A-IV, B-III, C-II, D-I
(D) A-II, B-I, C-IV, D-III

Answer: (C) A-IV, B-III, C-II, D-I · The council's preliminary key

Q18 AP EAPCET 2026 · 12 May · Shift 1 MCQ

Given below are two statements

Statement I: The amount of $CH_4(g)$ (critical temperature = 190 K) adsorbed on 1g of charcoal is less than that of $SO_2(g)$ (critical temperature = 630 K)

Statement II: The amount of physical adsorption of a gas increases with increase in temperature

The correct answer is

(A) Both statements I and statement II are correct
(B) Both statements I and statement II are not correct
(C) Statement I is correct but statement II is not correct
(D) Statement I is not correct but statement II is correct

Answer: (C) Statement I is correct but statement II is not correct · The council's preliminary key

Q19 AP EAPCET 2026 · 12 May · Shift 1 MCQ

Which of the following is not related to purification of colloidal solutions?

(A) Electrophoresis
(B) Dialysis
(C) Ultrafiltration
(D) Electro dialysis

Answer: (A) Electrophoresis · The council's preliminary key

Q20 AP EAPCET 2026 · 12 May · Shift 2 MCQ

At $T(K)$, adsorption of $CH_3COOH(aq)$ on $1g$ of charcoal gave Freundlich adsorption isotherm with slope of 0.5 and intercept of 1.0. The constants k and n are respectively

(A) $10, 2$
(B) $2, 10$
(C) $0.5, 1$
(D) $1, 0.5$

Answer: (A) $10, 2$ · The council's preliminary key

Q21 TS EAPCET 2026 · 11 May · Shift 1 MCQ

The graph drawn between $\log \frac{x}{m}$ and $\log P$ for an adsorption process is a straight line at an angle of 45°, with intercept equal to 0.3010. The extent of adsorption $\left(\frac{x}{m}\right)$ at a pressure of 0.2 atm is

$(\log 2 = 0.3010\ ;\ \tan 45^\circ = 1)$

(A) 0.2
(B) 0.3
(C) 0.4
(D) 0.8

Answer: (C) 0.4 · The council's preliminary key

Q22 TS EAPCET 2026 · 11 May · Shift 2 MCQ

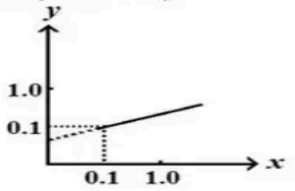
At T(K), adsorption of gas (A) on solid adsorbent (B) follows Freundlich adsorption isotherm. On 10 g of B, adsorption of the gas (A) gave the isotherm shown below. What is x (the quantity of A adsorbed

on one gram of B in g) when the pressure of A is 1.259 atm?

(log (1.259) = 0.1 ; Antilog (0.1) = 1.259)

(see the figure above)

Yes
Correct Marks : 1 Wrong Marks : 0
At T(K), adsorption of gas (A) on solid adsorbent (B) follows Freundlich adsorption isotherm. On 10 g of B, adsorption of the gas (A) gave the isotherm shown below. What is x (the quantity of A adsorbed on one gram of B in g) when the pressure of A is 1.259 atm?
(log (1.259) = 0.1 ; Antilog (0.1) = 1.259)
T(K) వద్ద, ఘన అధిశోషకం (B) పై అధిశోషణం చెందు వాయువు (A) ఫ్రాయిండ్లిష్ అధిశోషణ సమోష్ణరేఖను పాటిస్తుంది. 10 g ల B పై వాయువు (A) అధిశోషణం చెందిన సమోష్ణరేఖ క్రింద ఇవ్వబడింది. A పీడనము 1.259 atm అయినప్పుడు x (ఒక గ్రామ్ B పై అధిశోషణం చెందిన A పరిమాణం g లలో) ఎంత?
(log (1.259) = 0.1 ; Antilog (0.1) = 1.259)



Options :
1. 1.259
2. 12.59
3. 0.1259
4. 0.1

(A) 1.259
(B) 12.59
(C) 0.1259
(D) 0.1

Answer: (B) 12.59 · The council's preliminary key

Q23 TS EAPCET 2026 · 10 May · Shift 1 MCQ

Which of the following is not the characteristic of chemisorption?

(A) It is a multilayer adsorption
(B) It is highly specific in nature
(C) It is irreversible
(D) High temperature is favorable for adsorption

Answer: (A) It is a multilayer adsorption · The council's preliminary key

Q24 TS EAPCET 2026 · 10 May · Shift 2 MCQ

Which of the following is not correctly matched with the example mentioned in brackets?

(A) Solid dispersed in gas (Smoke)
(B) Solid dispersed in liquid (Paint)
(C) Liquid dispersed in solid (Butter)
(D) Gas dispersed in liquid (Cloud)

Answer: (D) Gas dispersed in liquid (Cloud) · The council's preliminary key

Q25 TS EAPCET 2026 · 9 May · Shift 1 MCQ

Identify the incorrect statement about colloidal solution

(A) They scatter light
(B) The diameter range of colloidal particles is 1-1000 nm
(C) Elevation in boiling point of a colloidal solution is greater than the true solution of same concentration
(D) As_2S_3 and CdS sols are negatively charged

Answer: (C) Elevation in boiling point of a colloidal solution is greater than the true solution of same concentration · The council's preliminary key

Q26 TS EAPCET 2026 · 9 May · Shift 2 MCQ

Gold number of a protective colloid (A) is x. A mixture is prepared by adding 50 mL of 10% NaCl solution to 500 mL of gold sol. What is the minimum mass (in mg) of A to be added to the solution to prevent the coagulation of gold sol?

(A) $50x$
(B) $500x$
(C) $5x$
(D) $0.5x$

Answer: (A) $50x$ · The council's preliminary key

Q27 TS EAPCET 2026 · 9 May · Shift 2 MCQ

In which of the following sets, the reaction and catalyst are correctly matched?

(g = gas, l = liquid)

	Reaction	Catalyst
I	$SO_2(g) + Cl_2(g) \rightarrow SO_2Cl_2(l)$	Charcoal
II	$2SO_2(g) + O_2(g) \rightarrow 2SO_3(g)$	V_2O_5
III	$4HCl + O_2 \xrightarrow{723\,K} 2Cl_2 + 2H_2O$	$CuCl_2$

The correct answer is (only)

(A) I, II, III
(B) I, II only
(C) II, III only
(D) I, III only

Answer: (A) I, II, III · The council's preliminary key

Q28 AP EAPCET 2025 · 27 May · Shift 1 MCQ

Match the following

List-I (Reaction)	List-II (Catalyst)
A) Hydrogenation of vegetable oils	I. Ni
B) Decomposition of potassium chlorate	II. $\mathrm{MnO_2}$
C) Oxidation of $\mathrm{SO_2}$ in lead chamber process	III. Pt
D) Oxidation of ammonia in Ostwald's process	IV. $\mathrm{NO(g)}$

The correct answer is

(A) A-II, B-IV, C-I, D-III
(B) A-I, B-II, C-IV, D-III
(C) A-III, B-IV, C-I, D-II
(D) A-III, B-II, C-IV, D-I

Answer: (B) A-I, B-II, C-IV, D-III · The council's preliminary key

Q29 AP EAPCET 2025 · 27 May · Shift 1 MCQ

The critical micelle concentration (CMC) of a soap solution is 5×10^{-4} mol L^{-1}. Identify the correct statements about this solution.

I. The micelle is stable if the soap solution concentration is 10^{-7} mol L^{-1}

II. The micelle is stable if the soap solution concentration is higher than 5×10^{-4} mol L^{-1}

III. Micelles are also known as associated colloids.

(A) I, II, III
(B) I, II only
(C) I, III only
(D) II, III only

Answer: (D) II, III only · The council's preliminary key

Q30 AP EAPCET 2025 · 26 May · Shift 1 MCQ

Choose the incorrect statement from the following

EdLoop EAPCET

(A) Brownian movement and Tyndall effect are shown by colloidal systems
(B) Hardy-Schulze rule is related with coagulation
(C) Gold number is a measure of the protection power of a lyophilic colloid
(D) Aerosol is a colloidal system in which gas is dispersed in liquid.

Answer: (D) Aerosol is a colloidal system in which gas is dispersed in liquid. · The council's preliminary key

Q31 AP EAPCET 2025 · 26 May · Shift 1 MCQ

Which of the following statements regarding adsorption theory of heterogeneous catalysis is not correct ?

(A) The reactant molecules get adsorbed on the surface of the catalyst
(B) The chemical reaction occurs at the surface of the catalyst
(C) The product molecules remains permanantly bound to the catalyst surface
(D) The catalyst remains unchanged in mass and chemical composition at the end of the reaction

Answer: (C) The product molecules remains permanantly bound to the catalyst surface · The council's preliminary key

Q32 AP EAPCET 2025 · 26 May · Shift 2 MCQ

Match the following

List-I (sol)	List-II (Method of preparation)
A) As_2S_3	I) Bredig's arc method
B) Au	II) Oxidation
C) S	III) Hydrolysis
D) $Fe(OH)_3$	IV) Double decomposition

The correct answer is

(A) A-III, B-II, C-IV, D-I
(B) A-I, B-III, C-IV, D-II
(C) A-IV, B-I, C-II, D-III
(D) A-IV, B-III, C-I, D-II

Answer: (C) A-IV, B-I, C-II, D-III · The council's preliminary key

Q33 AP EAPCET 2025 · 24 May · Shift 1 MCQ

In a Freundlich adsorption isotherm, if the slope is unity and k is 0.1, the extent of adsorption at 2 atm is (log 2 = 0.30)

EdLoop EAPCET

(A) 0.6
(B) 0.4
(C) 0.2
(D) 0.8

Answer: (C) 0.2 · The council's preliminary key

Q34 AP EAPCET 2025 · 23 May · Shift 1 MCQ

The adsorption of a gas on a solid surface follows Freundlich adsorption isotherm. At T(K), the gas pressure is 2 atm. What is the value of $\frac{x}{m}$? (n = 2 and k = constant)

(A) $\frac{x}{m} = 4\mathrm{k}$
(B) $\frac{x}{m} = \frac{1.414}{\mathrm{k}}$
(C) $\frac{x}{m} = \frac{\mathrm{k}}{1.414}$
(D) $\frac{x}{m} = 1.414\,\mathrm{k}$

Answer: (D) $\frac{x}{m} = 1.414\,\mathrm{k}$ · The council's preliminary key

Q35 AP EAPCET 2025 · 23 May · Shift 2 MCQ

Match the following

List-I (colloidal solution)	List-II (use)
A) Colloidal antimony	I) Eye lotion
B) Argyrol	II) Intramuscular injection
C) Colloidal gold	III) Kalaazar
D) Milk of magnesia	IV) Stomach disorders

The correct answer is

(A) A-III, B-I, C-II, D-IV
(B) A-III, B-I, C-IV, D-II
(C) A-IV, B-II, C-I, D-III
(D) A-II, B-I, C-IV, D-III

Answer: (A) A-III, B-I, C-II, D-IV · The council's preliminary key

Q36 AP EAPCET 2025 · 23 May · Shift 2 MCQ

Adsorption of a gas on solids follows Freundlich adsorption isotherm. The graph drawn between $\log \frac{x}{m}$ (on y-axis) and $\log p$ (on x-axis) is a straight line with slope equal to 3 and intercept equal to 0.30. What is the value of $\frac{x}{m}$ at a pressure of 2 atm ?
(Given; $\log 2 = 0.3$)

EdLoop EAPCET

(A) 48
(B) 32
(C) 16
(D) 8

Answer: (C) 16 · The council's preliminary key

Q37 AP EAPCET 2025 · 22 May · Shift 1 MCQ

Which one of the following is not the correct characteristic property of physical adsorption?

(A) It is not specific in nature
(B) Enthalpy of adsorption of this is low
(C) It increases with increase of temperature
(D) It is a multilayer adsorption under high pressure

Answer: (C) It increases with increase of temperature · The council's preliminary key

Q38 AP EAPCET 2025 · 22 May · Shift 1 MCQ

In each of four separate beakers (I, II, III, IV), X mL of yM $Fe_2O_3.xH_2O$ colloidal solution is present. Equal volume and equal concentration of of KCl, $K_4[Fe(CN)_6]$, K_3PO_4 and K_2SO_4 was added into I, II, III and IV respectively. The efficiency of precipitations in these beakers follows the order

(A) II > III > IV > I
(B) II > III > I > IV
(C) I > IV > III > II
(D) III > IV > I > II

Answer: (A) II > III > IV > I · The council's preliminary key

Q39 AP EAPCET 2025 · 22 May · Shift 2 MCQ

In a colloidal solution, both the dispersed phase and dispersion medium are in liquid phase. What is the type of colloid ?

(A) gel
(B) emulsion
(C) foam
(D) aerosol

Answer: (B) emulsion · The council's preliminary key

Q40 AP EAPCET 2025 · 22 May · Shift 2 MCQ

The equation which represents Freundlich adsorption isotherm is

(x = amount of gas, m = mass of solid)

(A) $\log \frac{x}{m} = \log p + \frac{1}{n} \log k$

(B) $\log \frac{x}{m} = \log k + \frac{1}{n} \log p$

(C) $\frac{x}{m} = k + \frac{1}{n} \log p$

(D) $\frac{x}{m} = \log p + \frac{1}{n} \log k$

Answer: (B) $\log \frac{x}{m} = \log k + \frac{1}{n} \log p$ · The council's preliminary key

---

Q41 AP EAPCET 2025 · 21 May · Shift 1 MCQ

Identify the correct statements from the following

I) Sulphur sol is an example for multi molecular colloid.

II) Starch sol is an example for associated colloid.

III) Artificial rubber is an example for macromolecular colloid.

(A) I, II, III

(B) I, II only

(C) II, III only

(D) I, III only

Answer: (D) I, III only · The council's preliminary key

Q42 AP EAPCET 2025 · 21 May · Shift 2 MCQ

Identify the catalytic reaction in which both reactants are in different phases.

(A) Ammonia synthesis by Haber process.

(B) Synthesis of sulphur trioxide by lead chamber process

(C) Hydrogenation of vegetable oils

(D) Hydrolysis of methyl acetate

Answer: (C) Hydrogenation of vegetable oils · The council's preliminary key

---

Q43 AP EAPCET 2025 · 21 May · Shift 2 MCQ

Consider the following.

Statement-I : Gold sol is prepared by Bredig's arc method.

Statement-II : Bredig's arc method involves only dispersion but not condensation.

The correct answer is

(A) Both statement-I and statement-II are correct
(B) Both statement-I and statement-II are not correct
(C) Statement-I is correct, but statement-II is not correct
(D) Statement-I is not correct, but statement-II is correct

Answer: (C) Statement-I is correct, but statement-II is not correct · The council's preliminary key

Q44 AP EAPCET 2025 · 21 May · Shift 2 MCQ

Activation energy for the hydrolysis of sucrose by acid is X $\mathrm{kJ\ mol^{-1}}$ whereas activation energy for the hydrolysis of sucrose by sucrase is Y $\mathrm{kJ\ mol^{-1}}$. X and Y respectively are

(A) 6.22, 2.15
(B) 2.15, 6.22
(C) 6.22, 6.22
(D) 2.15, 2.15

Answer: (A) 6.22, 2.15 · The council's preliminary key

Q45 TS EAPCET 2025 · 4 May · Shift 1 MCQ

The correct statements about the properties of colloidal solutions are

A. Tyndall effect is used to distinguish between a colloidal solution and a true solution

B. Zeta potential is related to movement of colloidal particles

C. Brownian motion in colloidal solution is faster if the viscosity of the solution is very high.

D. Brownian motion stabilises the sols

(A) A & B
(B) B & C
(C) A & D
(D) B & D

Answer: (C) A & D · The council's preliminary key

Q46 TS EAPCET 2025 · 3 May · Shift 2 MCQ

Match the following

List – 1 (Type of colloid)	List – 2 (Example)
A Sol	I Cloud
B Foam	II Whipped cream
C Gel	III Paint
D Aerosol	IV Butter

The correct answer is

(A) A – IV, B – II, C – III, D – I
(B) A – III, B – I, C – IV, D – II
(C) A – III, B – II, C – IV, D – I
(D) A – IV, B – I, C – II, D – III

Answer: (C) A – III, B – II, C – IV, D – I · The council's preliminary key

Q47 TS EAPCET 2025 · 2 May · Shift 1 MCQ

Which of the following is not correct about Freundlich adsorption isotherm?

(A) $\frac{x}{m} = k\,p^{1/n}\ (n > 1)$
(B) Extent of adsorption of gas is more at high temperature than at low temperature
(C) $\frac{1}{n}$ represents the slope of the isotherm
(D) $\log \frac{x}{m} = \log k + \frac{1}{n}\log p$ holds good over a limited range of pressures

Answer: (B) Extent of adsorption of gas is more at high temperature than at low temperature · The council's preliminary key

Q48 TS EAPCET 2025 · 2 May · Shift 2 MCQ

The most effective coagulating agent for antimony sulphide sol is

(A) Na_2SO_4
(B) $CaCl_2$
(C) NH_4Cl
(D) $Al_2(SO_4)_3$

Answer: (D) $Al_2(SO_4)_3$ · The council's preliminary key

Q49 AP EAPCET 2024 · 23 May · Shift 1 MCQ

Two statements are given below

Statement I: Adsorption of a gas on the surface of charcoal is primarily an exothermic reaction

Statement II: A closed vessel contains O_2, H_2, Cl_2, NH_3 gases. Its pressure is P (atm). About 1 g of charcoal is added to this vessel and after some time its pressure was found to be less than P (atm)

The correct answer is

(A) Both statement-I and statement-II are correct
(B) Both statement-I and statement-II are not correct
(C) Statement-I is correct but statement-II is not correct
(D) Statement-I is not correct but statement-II is correct

Answer: (A) Both statement-I and statement-II are correct · The council's preliminary key

Q50 AP EAPCET 2024 · 23 May · Shift 1 MCQ

The critical temperature of A, B, C, D gases are 190 K, 630 K, 261 K, 400 K respectively. The quantity of gas adsorbed per gram of charcoal at same pressure is least for the gas

(A) D
(B) C
(C) B
(D) A

Answer: (D) A · The council's preliminary key

Q51 AP EAPCET 2024 · 22 May · Shift 1 MCQ

The following data is obtained for coagulating a positively charged sol in 2 hours

Conc. of Cl^- in mol L^{-1}	Result
5×10^{-5}	Sol not precipitated
6×10^{-5}	Sol not precipitated
7×10^{-5}	Sol precipitated
8×10^{-5}	Sol precipitated
1×10^{-4}	Sol precipitated

What is the coagulating value of electrolyte for this sol?

(A) 7×10^{-5}
(B) 7×10^{-2}
(C) 5×10^{-2}
(D) 9×10^{-2}

Answer: (B) 7×10^{-2} · The council's preliminary key

Q52 AP EAPCET 2024 · 22 May · Shift 2 MCQ

Which of the following solutions is used in the styptic action which prevents bleeding of blood?

(A) $CoCl_2$ solution
(B) $FeCl_3$ solution
(C) Gold sol
(D) $AgBr$ emulsion

Answer: (B) $FeCl_3$ **solution** · The council's preliminary key

Q53 AP EAPCET 2024 · 22 May · Shift 2 MCQ

'A' is a protecting colloid. The following data is obtained for preventing the coagulation of 10 mL of gold sol to which 1 mL of 10% NaCl is added. What is the gold number of 'A'?

EdLoop EAPCET

Expt. No.	Wt (in mg) of A added to gold sol	Coagulation
1	40	Prevented
2	35	Prevented
3	25	Not prevented
4	32	Not prevented
5	33	Prevented

(A) 32
(B) 33
(C) 35
(D) 40

Answer: (B) 33 · The council's preliminary key

Q54 AP EAPCET 2024 · 21 May · Shift 1 MCQ

The correct statement regarding chemisorption is

(A) It is a multilayered adsorption
(B) The process is reversible in nature
(C) The process is not specific in nature
(D) Enthalpy of adsorption is in the range of 80-240 $\mathrm{kJ\ mol^{-1}}$

Answer: (D) Enthalpy of adsorption is in the range of 80-240 $\mathrm{kJ\ mol^{-1}}$ · The council's preliminary key

Q55 AP EAPCET 2024 · 21 May · Shift 1 MCQ

Which of the following is incorrectly matched?

(A) Multi molecular colloid – $\mathrm{S_8}$
(B) Macro molecular colloid - enzyme
(C) $\mathrm{As_2S_3}$ sol – positively charged sol
(D) Starch sol – lyophilic sol

Answer: (C) $\mathrm{As_2S_3}$ sol – positively charged sol · The council's preliminary key

Q56 AP EAPCET 2024 · 21 May · Shift 2 MCQ

Match List - I, with List - II

	List-I		List-II
I	Colloidal antimony	A	Kalaazar
II	Silver sol	B	Intermuscular injection
III	Milk of magnesia	C	Eye lotion
IV	Gold sol	D	Stomach disorder

Correct answer is

(A) I-B, II-A, III-C, IV-D
(B) I-A, II-C, III-D, IV-B
(C) I-A, II-B, III-C, IV-D
(D) I-A, II-D, III-B, IV-C

Answer: (B) I-A, II-C, III-D, IV-B · The council's preliminary key

Q57 AP EAPCET 2024 · 21 May · Shift 2 MCQ

Identify the method of preparation of a colloidal sol from the following

(A) Ultrafiltration
(B) Peptisation
(C) Dialysis
(D) Electro-dialysis

Answer: (B) Peptisation · The council's preliminary key

Q58 AP EAPCET 2024 · 20 May · Shift 1 MCQ

'X' is a protecting colloid. The following data is obtained for preventing the coagulation of 10 mL of gold sol to which 1 mL of 10% NaCl is added. What is the gold number of 'X'?

Expt No.	Weight of X (in mg) added to gold sol	Coagulation
1	24	Not prevented
2	23	Not prevented
3	26	Prevented
4	27	Prevented
5	25	Prevented

(A) 24
(B) 26
(C) 27
(D) 25

Answer: (D) 25 · The council's preliminary key

Q59 AP EAPCET 2024 · 20 May · Shift 1 MCQ

Which sol is used as intramuscular injection?

EdLoop EAPCET

(A) Antimony Sol
(B) Silver sol
(C) Emulsion of milk of magnesia
(D) Gold sol

Answer: (D) Gold sol · The council's preliminary key

Q60 AP EAPCET 2024 · 20 May · Shift 2 MCQ

Which of the following general reaction is an example for heterogeneous catalysis?

(A) $A_2(g) + B_2(g) \xrightarrow{C(g)} 2AB(g)$
(B) $A(s) + B(s) \xrightarrow{C(s)} D(s)$
(C) $A(g) + B(g) \xrightarrow{C(s)} D(g)$
(D) $A_2(g) + B_2(g) \xrightarrow{C(g)} D(s)$

Answer: (C) $A(g) + B(g) \xrightarrow{C(s)} D(g)$ · The council's preliminary key

Q61 AP EAPCET 2024 · 20 May · Shift 2 MCQ

Match List I with List II

List-I		List-II
A Aerosol	I	Milk
B Foam	II	Soap lather
C Emulsion	III	Cheese
D Gel	IV	Smoke

The correct answer is

(A) A-II, B-I, C-III, D-IV
(B) A-IV, B-I, C-II, D-III
(C) A-I, B-II, C-IV, D-III
(D) A-IV, B-II, C-I, D-III

Answer: (D) A-IV, B-II, C-I, D-III · The council's preliminary key

Q62 AP EAPCET 2024 · 19 May · Shift 2 MCQ

Which of the following has maximum coagulating power in the coagulation of positively charged sol?

(A) Cl^-
(B) SO_4^{2-}
(C) PO_4^{3-}
(D) $[Fe(CN)_6]^{4-}$

Answer: (D) $[Fe(CN)_6]^{4-}$ · The council's preliminary key

EdLoop EAPCET

Q63 AP EAPCET 2024 · 19 May · Shift 2 MCQ

Identify the autocatalytic reaction from the following

(A) $N_2(g) + 3H_2(g) \xrightarrow[Mo(s)]{Fe(s)} 2NH_3(g)$

(B) $2KClO_3(s) \xrightarrow{MnO_2} 2KCl(s) + 3O_2$

(C) $CH_3COOC_2H_5 + H_2O \longrightarrow CH_3COOH + C_2H_5OH$

(D) $AgNO_3(aq) + KCl(aq) \longrightarrow AgCl(s) + KNO_3(aq)$

Answer: (C) $CH_3COOC_2H_5 + H_2O \longrightarrow CH_3COOH + C_2H_5OH$ · The council's preliminary key

Q64 AP EAPCET 2024 · 18 May · Shift 1 MCQ

Given below are two statements

Statement-I: Easily liquefiable gases are readily adsorbed

Statement-II: Adsorption enthalpy for physisorption is less compared to adsorption enthalpy for Chemisorption

The correct answer is

(A) Both Statement-I and statement-II are correct

(B) Both Statement-I and statement-II are not correct

(C) Statement-I is correct but statement-II is not correct

(D) Statement-I is not correct but statement-II is correct

Answer: (A) Both Statement-I and statement-II are correct · The council's preliminary key

Q65 AP EAPCET 2024 · 18 May · Shift 1 MCQ

The validity of Freundlich isotherm can be verified by plotting

(A) $\log \frac{x}{m}$ on y-axis and $\log p$ on x-axis

(B) $\frac{x}{m}$ on y-axis and p on x-axis

(C) $\log \frac{x}{m}$ on x-axis and p on y-axis

(D) $\frac{x}{m}$ on x-axis and $\log p$ on y-axis

Answer: (A) $\log \frac{x}{m}$ **on y-axis and** $\log p$ **on x-axis** · The council's preliminary key

Q66 TS EAPCET 2024 · 10 May · Shift 1 MCQ

10 mL of 0.5 M NaCl is required to coagulate 1L of Sb_2S_3 sol in 2 hours time. The flocculating value of NaCl (in milli moles) is

EdLoop EAPCET

(A) 20
(B) 10
(C) 5
(D) 15

Answer: (C) 5 · The council's preliminary key

Q67 TS EAPCET 2024 · 10 May · Shift 2 MCQ

In Haber's process of manufacture of ammonia, the 'catalyst' the 'promoter' and 'poison for the catalyst' are respectively

(A) $\mathrm{Fe, W, CO}$
(B) $\mathrm{Co, Mo, CO}$
(C) $\mathrm{Fe, Mo, CO_2}$
(D) $\mathrm{Fe, Mo, CO}$

Answer: (D) $\mathrm{Fe, Mo, CO}$ · The council's preliminary key

Q68 TS EAPCET 2024 · 9 May · Shift 1 MCQ

Adsorption of a gas (A) on an adsorbent follows Freundlich adsorption isotherm. The slope and intercept (on y-axis) of the isotherm are 0.5 and 1.0 respectively. What is the value of $\frac{x}{m}$, when the pressure of the gas (A) is 100 atm?

(A) 10
(B) 1
(C) 100
(D) 1000

Answer: (C) 100 · The council's preliminary key

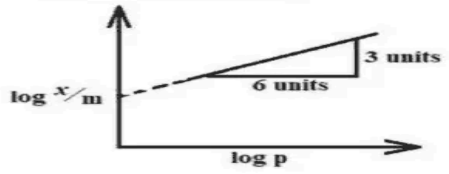
Q69 TS EAPCET 2024 · 9 May · Shift 2 MCQ

Adsorption of a gas on a solid adsorbent follows Freundlich adsorption isotherm. If x is the mass of the gas adsorbed on mass 'm' of the adsorbent at pressure p. From the graph given extent of adsorption is proportional to

(see the figure above)

Adsorption of a gas on a solid adsorbent follows Freundlich adsorption isotherm. If x is the mass of the gas adsorbed on mass 'm' of the adsorbent at pressure p. From the graph given extent of adsorption is proportional to

ఘన అధిశోషకం పై అధిశోషణం చెందే వాయువు ఫ్రాయిండ్‌లిష్ అధిశోషణ సమోష్ణ రేఖను అనుసరిస్తుంది. వాయు పీడనం p వద్ద m ద్రవ్యరాశి గల అధిశోషకం పై అధిశోషణ చెందే వాయు ద్రవ్యరాశి x అయినచో గ్రాఫ్ నుంచి అధిశోషణ అవధి దీనికి అనులోమాను పాతంలో ఉంటుంది



Options :

1. $p^{1/2}$
2. p^2
3. p
4. $p^{1/4}$

(A) $p^{1/2}$
(B) p^2
(C) p
(D) $p^{1/4}$

Answer: (A) $p^{1/2}$ · The council's preliminary key

Q70 AP EAPCET 2023 · 19 May · Shift 1 MCQ

The process of converting a precipitate into colloidal solution is known as

(A) Dialysis
(B) Peptization
(C) Electrophoresis
(D) Flocculation

Answer: (B) Peptization · The council's preliminary key

Q71 AP EAPCET 2023 · 18 May · Shift 1 MCQ

Match the following

List – I (Dispersed Phase – Dispersion medium)	List – II (Type of colloid)
A) Solid – Liquid	I) Gel
B) Liquid – Liquid	II) Aerosol
C) Solid – Gas	III) Sol
D) Liquid – Solid	IV) Emulsion

The correct answer is

(A) A-II, B-III, C-I, D-IV
(B) A-III, B-IV, C-II, D-I
(C) A-III, B-IV, C-I, D-II
(D) A-I, B-III, C-IV, D-II

Answer: (B) A-III, B-IV, C-II, D-I · The council's preliminary key

Q72 AP EAPCET 2023 · 18 May · Shift 1 MCQ

Given below are two statements (S-I and S-II)

S-I: Scattering of light by dispersed particles of colloidal system is known as Tyndall effect.

S-II: The diameter of the dispersed particles should not be much smaller than the wavelength of the light used.

Choose the most appropriate answer from the options given below.

(A) Both S-I and S-II are correct
(B) S-I is correct but S-II is incorrect
(C) Both S-I and S-II are incorrect
(D) S-I is incorrect but S-II is correct

Answer: (A) Both S-I and S-II are correct · The council's preliminary key

Q73 AP EAPCET 2023 · 18 May · Shift 2 MCQ

Consider the following statements for a gold sol

I) It is macromolecular colloid

II) It is a lyophobic sol

III) It is a negatively charged sol

IV) It is a multimolecular colloid

V) It is an associated colloid

The correct statements are

(A) I, II, III only
(B) II, III, IV only
(C) III, IV, V only
(D) I, IV V only

Answer: (B) II, III, IV only · The council's preliminary key

Q74 AP EAPCET 2023 · 18 May · Shift 2 MCQ

Match the following

List – I (Process)	List - II (Catalyst)

EdLoop EAPCET

A) Ostwald's process	I) NO
B) Lead Chamber process	II) Fe
C) Deacon's process	III) Rh
D) Haber's process	IV) $CuCl_2$

The correct answer is

(A) A-IV, B-I, C-II, D-III
(B) A-II, B-III, C-IV, D-I
(C) A-III, B-I, C-IV, D-II
(D) A-III, B-IV, C-I, D-II

Answer: (C) A-III, B-I, C-IV, D-II · The council's preliminary key

Q75 AP EAPCET 2023 · 17 May · Shift 1 MCQ

The greater the valence of the flocculating ion added, the greater is its power to cause precipitation of a colloid. This rule is

(A) Hund's rule
(B) Pauling rule
(C) Henry's rule
(D) Hardy – Schulze rule

Answer: (D) Hardy – Schulze rule · The council's preliminary key

Q76 AP EAPCET 2023 · 17 May · Shift 2 MCQ

This equation represents the preparation of gold sol by

$2\,AuCl_3 + 3\,HCHO + 3\,H_2O \rightarrow 2\,Au + 3\,HCOOH + 6\,HCl.$

(A) Oxidation
(B) Reduction
(C) Double decomposition
(D) Hydrolysis

Answer: (B) Reduction · The council's preliminary key

Q77 AP EAPCET 2023 · 17 May · Shift 2 MCQ

2.0 g of activated charcoal is added to 100 mL of 0.5 M acetic acid (molar mass 60 g mol^{-1}), shaken well and filtered. The concentration of solution is reduced to 0.4 M. How many grams of acetic acid is adsorbed on charcoal per gram?

(A) 0.1
(B) 0.2
(C) 0.3
(D) 0.15

Answer: (C) 0.3 · The council's preliminary key

Q78 AP EAPCET 2023 · 16 May · Shift 1 MCQ

Which of the following is an example of a multi molecular colloid?

(A) Sulphur sol
(B) Starch sol
(C) Natural rubber sol
(D) Soap sol

Answer: (A) Sulphur sol · The council's preliminary key

Q79 AP EAPCET 2023 · 16 May · Shift 1 MCQ

Consider the reactions

I. $CO + 3H_2 \xrightarrow{A} CH_4 + H_2O$

II. $CO + 2H_2 \xrightarrow{B} CH_3OH$

III. $O_2 + 2H_2 \xrightarrow{C} 2H_2O$

The catalysts A, B, C are respectively

(A) $Ni,\ ZnO - Cr_2O_3,\ Pt$
(B) $Pt,\ ZnO - Cr_2O_3,\ Ni$
(C) $CuCl_2,\ Ni,\ V_2O_5$
(D) $Pd,\ Pt,\ ZnO - Cr_2O_3$

Answer: (A) $Ni,\ ZnO - Cr_2O_3,\ Pt$ · The council's preliminary key

Q80 AP EAPCET 2023 · 16 May · Shift 2 MCQ

In which of the following, the sol is not correctly matched with respect to its charge?

I. $Al_2O_3.xH_2O$ sol; +ve sol

II. Starch sol ; +ve sol

III. TiO_2 sol; −ve sol

IV. Methylene blue sol; +ve sol

The correct answer is

(A) I, IV
(B) I, III
(C) II, III
(D) II, IV

Answer: (C) II, III · The council's preliminary key

Q81 AP EAPCET 2023 · 16 May · Shift 2 MCQ

The graph drawn between $\log\left(\frac{x}{m}\right)$ and $\log(p)$ is shown below with intercept OA.

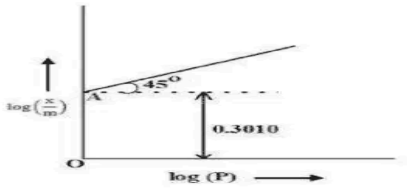
What is the value of $\frac{x}{m}$ at a pressure of 0.3 atm? $(\log 2 = 0.30, \log 3 = 0.477)$

(see the figure above)

The graph drawn between $\log\left(\frac{x}{m}\right)$ and log (p) is shown below with intercept OA.

What is the value of $\frac{x}{m}$ at a pressure of 0.3 atm? $(\log 2 = 0.30, \log 3 = 0.477)$

$\log\left(\frac{x}{m}\right)$, log (p) ల మధ్య రేఖపటం క్రింద చూపబడినది. అంతర్ ఖండం OA. 0.3 ఎట్మాస్ఫియర్ల పీడనం వద్ద $\frac{x}{m}$ విలువ ఎంత? $(\log 2 = 0.30, \log 3 = 0.477)$



Options :

1. 0.6
2. 0.5
3. 0.4
4. 0.7

(A) 0.6
(B) 0.5
(C) 0.4
(D) 0.7

Answer: (A) 0.6 · The council's preliminary key

Q82 AP EAPCET 2023 · 15 May · Shift 1 MCQ

The correct statements about Zeolites are

I) They are good shape selective catalysts

II) They contain Al-O-Si framework

III) They are not found in nature

IV) They are used as catalysts for cracking hydrocarbons, in petrochemical industry

(A) I & II only
(B) II & III only
(C) III & IV only
(D) I, II & IV only

Answer: (D) I, II & IV only · The council's preliminary key

Q83 AP EAPCET 2023 · 15 May · Shift 1 MCQ

Which of the following is not the application of adsorption?

(A) Use of SiO_2 gel for removing the moisture
(B) Use of coconut charcoal to separate inert gases
(C) Use of Al_2O_3 to separate the components of organic mixture in chromatography
(D) Use of $CaCl_2$ for removing the moisture

Answer: (D) Use of $CaCl_2$ for removing the moisture · The council's preliminary key

Q84 AP EAPCET 2023 · 15 May · Shift 2 MCQ

The most effective coagulating agent for antimony sulphide sol is

(A) K_2SO_4
(B) NH_4Cl
(C) $Al_2(SO_4)_3$
(D) $K_4(Fe(CN)_6)$

Answer: (C) $Al_2(SO_4)_3$ · The council's preliminary key

Q85 AP EAPCET 2023 · 15 May · Shift 2 MCQ

The plot of $\log \frac{x}{m}$ (y-axis) and $\log p$ (x-axis) is a straight line inclined at an angle of 45°. When the intercept, K is 10 and pressure is 0.3 atm the amount of solute in grams adsorbed per gram of adsorbent ($\log 3 = 0.4771$)?

(A) 30.0
(B) 2.0
(C) 3.0
(D) 20.0

Answer: (C) 3.0 · The council's preliminary key

Q86 TS EAMCET 2023 · 14 May · Shift 1 MCQ

Which of the following can form ionic micelles in water?

(A) Starch molecules
(B) sodium lauryl sulphate
(C) Iodine molecules
(D) S_8 molecules

Answer: (B) sodium lauryl sulphate · The council's preliminary key

Q87 TS EAMCET 2023 · 14 May · Shift 2 MCQ

The sol prepared by Bredig's Arc method is X and the charge of sol particles of it is q.

X and q are respectively

(A) Metal sol, -ve
(B) Metal sol, +ve
(C) Metal sulphide sol, -ve
(D) TiO_2 sol, +ve

Answer: (A) Metal sol, -ve · The council's preliminary key

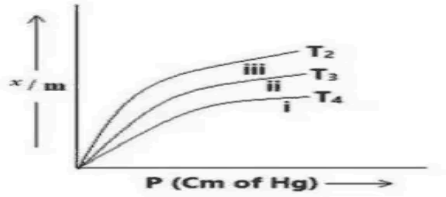
Q88 TS EAMCET 2023 · 13 May · Shift 1 MCQ

The graph given below is showing the relation between the extent of adsorption (x/m) and Pressure at different temperatures. The correct order of temperatures for curves i, ii and iii is

(see the figure above)

The graph given below is showing the relation between the extent of adsorption (x/m) and Pressure at different temperatures. The correct order of temperatures for curves i, ii and iii is

క్రింద ఇవ్వబడిన గ్రాఫ్ వివిధ ఉష్ణోగ్రతల వద్ద అధిశోషణ విస్తృతి కి (x/m) పీడనం నకు మధ్య సంబంధాన్ని తెలుపుతుంది. i, ii, iii వక్రరేఖల ఉష్ణోగ్రతలకు సంబంధించి సరియైన క్రమం



Options :

1. $T_4 > T_2 > T_3$
2. $T_4 > T_3 > T_2$
3. $T_2 > T_3 > T_4$
4. $T_2 > T_4 > T_3$

(A) $T_4 > T_2 > T_3$
(B) $T_4 > T_3 > T_2$
(C) $T_2 > T_3 > T_4$
(D) $T_2 > T_4 > T_3$

Answer: (B) $T_4 > T_3 > T_2$ · The council's preliminary key

Q89 TS EAMCET 2023 · 13 May · Shift 2 MCQ

Match the following

List I	List-II
A. Negatively charged sol	I. Emulsion
B. Milk	II. Kalaazar
C. Gold number	III. $FeCl_3$ solution is added to excess $NaOH$ solution
D. Colloidal antimony	IV. Protection of colloids

The correct answer is

(A) A-III, B-I, C-II, D-IV
(B) A-III, B-I, C-IV, D-II
(C) A-I, B-III, C-IV, D-II
(D) A-II, B-I, C-III, D-IV

Answer: (B) A-III, B-I, C-IV, D-II · The council's preliminary key

Q90 TS EAMCET 2023 · 12 May · Shift 1 MCQ

Identify the factors which favour the physical adsorption from the following

I) High surface area

II) Low temperatures

III) High temperatures

IV) Low pressures

V) High pressures

(A) I, III & IV only
(B) I, II & V only
(C) III & V only
(D) I, II & IV only

Answer: (B) I, II & V only · The council's preliminary key

Q91 TS EAMCET 2023 · 12 May · Shift 2 MCQ

Consider the following about the Tyndall effect

I) It is used to distinguish between a true and colloidal solution

II) It is possible only when the dispersed medium and dispersed phase differ much in their refractive indices

III) It is observed only when the size of colloidal particles is much smaller than the wavelength of the light used

The correct statements are

(A) I & III only
(B) II & III only
(C) I, II & III
(D) I & II only

Answer: (D) I & II only · The council's preliminary key

Q92 TS EAMCET 2022 · 20 Jul · Shift 1 MCQ

10 g of a gas is adsorbed on 500 g of solid at 10 bar. If the pressure is increased at 20 bar, 14 g of the gas is adsorbed by the same solid at the same temperature. What is the slope of Freundlich adsorption isotherm?

(A) 1.0
(B) $\frac{4}{3}$
(C) 3
(D) 0.5

Answer: (D) 0.5 · The council's preliminary key

Q93 TS EAMCET 2022 · 20 Jul · Shift 2 MCQ

The process in which colloids, when subjected to DC electric field move towards an electrode is

(A) Brownian movement
(B) Tyndall effect
(C) Peptization
(D) Electrophoresis

Answer: (D) Electrophoresis · The council's preliminary key

Q94 TS EAMCET 2022 · 19 Jul · Shift 1 MCQ

Which of the following does not show Tyndall effect?

(A) Clouds
(B) Milk
(C) Sugar solution
(D) Suspension

Answer: (C) Sugar solution · The council's preliminary key

Q95 TS EAMCET 2022 · 19 Jul · Shift 2 MCQ

The coagulation of 200 ml of a positive colloid took place when 0.73 g of HCl was added to it without changing the volume much. The flocculation value of HCl for the colloid is

(A) 1000
(B) 0.365
(C) 200
(D) 100

Answer: (D) 100 · The council's preliminary key

Q96 TS EAMCET 2022 · 18 Jul · Shift 1 MCQ

For As_2S_3 sol, the most effective coagulating agent is

(A) $CaCO_3$
(B) $NaCl$
(C) $FeCl_3$
(D) Clay

Answer: (C) $FeCl_3$ · The council's preliminary key

Q97 TS EAMCET 2022 · 18 Jul · Shift 2 MCQ

A cube of edge length 1 cm is divided into smaller cubes of uniform size of length 1 nm. Assuming that no voids are present, the ratio of total surface area of all the cubes of 1 nm edge length to the surface area of the initial cube is

(A) 10^9
(B) 10^7
(C) 10^6
(D) 10^5

Answer: (B) 10^7 · The council's preliminary key

Q98 TS EAMCET 2022 · 18 Jul · Shift 2 MCQ

Catalysts in the following reactions are
I) $CH_3COOCH_3(l) + H_2O(l) \rightarrow CH_3COOH(aq) + CH_3OH(l)$
II) $2SO_2(g) \rightarrow 2SO_3(g)$

III) $2SO_2(g) + O_2(g) \rightarrow 2SO_3(g)$
IV) $N_2(g) + 3H_2(g) \rightarrow 2NH_3(g)$

(A) HCl (l), Pt (s), NO (g) and Fe (s)
(B) HCl (l), NO (g), Pt (s) and Fe (s)
(C) HCl (l), Ni (s), NO (g) and Fe (s)
(D) HCl (l), Pt (s), N_2O (g) and Fe (s)

Options (1) or (2) were accepted. More than one answer was accepted. · The council's preliminary key

Q99 AP EAPCET 2022 · 8 Jul · Shift 1 MCQ

The correct order of adsorption of the following gases on the surface of charcoal is
H_2 (I), CH_4 (II), SO_2 (III)

(A) III > II > I
(B) III > I > II
(C) II > I > III
(D) II > III > I

Answer: (A) III > II > I · The council's preliminary key

Q100 AP EAPCET 2022 · 8 Jul · Shift 1 MCQ

Relatively which conditions favour the faster Brownian movement of colloidal particles in solution?

(A) Smaller size and higher viscosity
(B) Smaller size and lesser viscosity
(C) Bigger size and higher viscosity
(D) Bigger size and lesser viscosity

Answer: (B) Smaller size and lesser viscosity · The council's preliminary key

Q101 AP EAPCET 2022 · 8 Jul · Shift 2 MCQ

Assertion (A) :- Adsorption is an exothermic process
Reason (R) : - Physisorption of a gas on a solid surface is normally reversible

(A) Both (A) and (R) are correct and (R) is the correct explanation of (A)
(B) Both (A) and (R) are correct but (R) is not the correct explanation of (A)
(C) (A) is correct but (R) is incorrect
(D) (A) is incorrect but (R) is correct

Answer: (B) Both (A) and (R) are correct but (R) is not the correct explanation of (A) · The council's preliminary key

Q102 AP EAPCET 2022 · 8 Jul · Shift 2 MCQ

When a dilute $AgNO_3$ solution is mixed with excess of dilute KI, the colloidal solution formed is

(A) $AgNO_3/I^-$
(B) AgI
(C) $Ag\,I/Ag^+$
(D) AgI/I^-

Answer: (D) AgI/I^- · The council's preliminary key

Q103 AP EAPCET 2022 · 7 Jul · Shift 1 MCQ

Assertion (A) :- Finely divided charcoal can act as an adsorbent
Reason (R): - Finely divided material has small surface area

(A) Both (A) and (R) are correct and (R) is the correct explanation of (A).
(B) Both (A) and (R) are correct and (R) in not the correct explanation of (A).
(C) (A) is correct but (R) is incorrect
(D) (A) is incorrect but (R) is correct

Answer: (C) (A) is correct but (R) is incorrect · The council's preliminary key

Q104 AP EAPCET 2022 · 7 Jul · Shift 1 MCQ

The correct statements with respect to dialysis of colloidal solution are
I. Colloidal particles can pass through the membrane
II. Animal bladder can be used as membrane
III. Cellophane is not used as membrane
IV. Ions or small molecules can diffuse through membrane into water

(A) I, II only
(B) II, III only
(C) III, IV only
(D) II, IV only

Answer: (D) II, IV only · The council's preliminary key

Q105 AP EAPCET 2022 · 7 Jul · Shift 2 MCQ

Freundlich adsorption isotherm fails at which of the following condition?

(A) High temperature
(B) Low temperature
(C) High Pressure
(D) Low pressure

Answer: (C) High Pressure · The council's preliminary key

EdLoop EAPCET

Q106 AP EAPCET 2022 · 7 Jul · Shift 2 MCQ

The no. of positively and negatively charged sols respectively in the following are TiO_2, blood, CdS, Cu, Ag, Clay, SiO_2, Fe_2O_3.

(A) 5, 3
(B) 3, 5
(C) 6, 2
(D) 4, 4

Answer: (B) 3, 5 · Checked by our team

Q107 AP EAPCET 2022 · 6 Jul · Shift 1 MCQ

Milk – water mixture when viewed by the reflected light appears in which colour?

(A) Yellow
(B) Green
(C) Blue
(D) Red

Answer: (C) Blue · The council's preliminary key

Q108 AP EAPCET 2022 · 6 Jul · Shift 2 MCQ

Assertion (A):- The aggregate of carboxylate ions of fatty acids form a spherical shape
Reason (R) : - Soap helps in emulsification and washing away of oils

(A) Both (A) and (R) are correct and (R) is the correct explanation of (A).
(B) Both (A) and (R) are correct but (R) is not the correct explanation of (A).
(C) (A) is correct but (R) is incorrect
(D) (A) is incorrect but (R) is correct

Answer: (B) Both (A) and (R) are correct but (R) is not the correct explanation of (A). · The council's preliminary key

Q109 AP EAPCET 2022 · 6 Jul · Shift 2 MCQ

In the following reaction for the preparation of gold sol, a, b, c, x, y, and z are
a $AuCl_3$ + b HCHO + c H_2O → x Au(sol) + y HCO_2H + z HCl

(A) a=2 b=3 c=3 x=2 y=3 z=6
(B) a=2 b=3 c=2 x=2 y=3 z=4
(C) a=2 b=2 c=2 x=2 y=2 z=4
(D) a=3 b=2 c=2 x=3 y=2 z=6

Answer: (A) a=2 b=3 c=3 x=2 y=3 z=6 · The council's preliminary key

Q110 AP EAPCET 2022 · 5 Jul · Shift 1 MCQ

The correct order of coagulating power of the following ions to coagulate the positive sol is $[Fe(CN)_6]^{4-}$ (I), $Cl^{(-)}$ (II), SO_4^{2-} (III)

(A) I > II > III
(B) III > II > I
(C) I > II > III
(D) I > III > II

Answer: (D) I > III > II · The council's preliminary key

Q111 AP EAPCET 2022 · 5 Jul · Shift 2 MCQ

The sol formed in the following unbalanced equation is

$As_2O_3 + H_2S \rightarrow$

(A) As_2S_2
(B) As_2S_3
(C) As
(D) S

Answer: (B) As_2S_3 · The council's preliminary key

Q112 AP EAPCET 2022 · 4 Jul · Shift 1 MCQ

The diameters range of colloidal particles is approximately.

(A) 1 to 1000 nm
(B) 1000 to 2000 nm
(C) 2000 to 3000 nm
(D) 3000 to 4000 nm

Answer: (A) 1 to 1000 nm · The council's preliminary key

Q113 AP EAPCET 2022 · 4 Jul · Shift 2 MCQ

The macromolecular colloids of the following are
I. Starch solution II. Sulphur sol
III. Synthetic detergent IV. Synthetic rubber

(A) I, II
(B) II, III
(C) III, IV
(D) I, IV

Answer: (D) I, IV · The council's preliminary key

EdLoop EAPCET

Q114 AP EAPCET 2022 · 4 Jul · Shift 2 MCQ

Assertion (A) :- Animal skins are colloidal in nature
Reason (R) :- Animal skin has positively charged particles.

(A) Both (A) and (R) are correct and (R) is the correct explanation of (A)
(B) Both (A) and (R) are correct and (R) is not the correct explanation of (A)
(C) (A) is correct but (R) is incorrect
(D) (A) is incorrect but (R) is correct

Answer: (B) Both (A) and (R) are correct and (R) is not the correct explanation of (A) · The council's preliminary key

Q115 AP EAPCET 2021 · 5 Oct · Shift 1 MCQ

Freundlich adsorption isotherm is _____

(A) $\frac{x}{m} = k(p)^{1/n}$
(B) $\frac{x}{m} = (p)^{1/n}$
(C) $\frac{x}{m} \propto (p)^2$
(D) $\frac{x}{m} = k(p)^n$

Answer: (A) $\frac{x}{m} = k(p)^{1/n}$ · The council's preliminary key

Q116 AP EAPCET 2021 · 25 Aug · Shift 2 MCQ

In general, for soaps, the concentration of surfactant at CMC is around _____ $\mathrm{mol.L^{-1}}$

(A) 10^{-4} to 10^{-3}
(B) 10^{-4} to 10^{-1}
(C) 10^{-7} to 10^{-4}
(D) 10^{-4} to 10^{+2}

Answer: (A) 10^{-4} **to** 10^{-3} · The council's preliminary key

Q117 AP EAPCET 2021 · 24 Aug · Shift 1 MCQ

Assertion (A): The property of adsorption is shown to a great extent by solids than liquids
Reason (R): Solids like charcoal, silica can act as good adsorbents

(A) A and R are correct and R is the correct explanation for A
(B) A and R are correct but R is not the correct explanation for A
(C) A is correct, R is wrong
(D) A is wrong, R is correct

Answer: (B) A and R are correct but R is not the correct explanation for A · The council's preliminary key

EdLoop EAPCET

Q118 AP EAPCET 2021 · 24 Aug · Shift 2 MCQ

A catalyst is a substance which _____

(A) Changes the equilibrium concentration of the products
(B) Changes the energy of the reactants
(C) Shortens the time to reach equilibrium
(D) Changes the equilibrium constant

Answer: (C) Shortens the time to reach equilibrium · The council's preliminary key

Q119 AP EAPCET 2021 · 24 Aug · Shift 2 MCQ

Colloids can be purified by _____

(A) Condensation
(B) Peptization
(C) Coagulation
(D) Dialysis

Answer: (D) Dialysis · The council's preliminary key

Q120 AP EAPCET 2021 · 23 Aug · Shift 1 MCQ

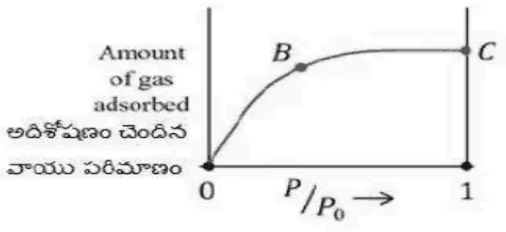
The adsorption of a gas at the boiling point of the gas follows the isotherm shown in the figure. Identify the correct thermodynamic properties at point C.

(see the figure above)

Mandatory : No

The adsorption of a gas at the boiling point of the gas follows the isotherm shown in the figure. Identify the correct thermodynamic properties at point C.

ఒక వాయువు యొక్క అదిశోషణము (దాని మరుగు ఉష్ణోగ్రత వద్ద) నకు సంబంధించిన సమోష్ణక రేఖ చూపబడినది. C అనే బిందువు వద్ద సరైన ఉష్ణగతిక ధర్మము ఏది



Options :

1. $\Delta H = T\Delta S \; ; \; \Delta G = 0$
2. $\Delta H > T\Delta S \; ; \; \Delta G = +ve$
3. $\Delta H < T\Delta S \; ; \; \Delta G = -ve$
4. $\Delta H = T\Delta S = \Delta G = 0$

(A) $\Delta H = T\Delta S\ ;\ \Delta G = 0$
(B) $\Delta H > T\Delta S\ ;\ \Delta G = +\text{ve}$
(C) $\Delta H < T\Delta S\ ;\ \Delta G = -\text{ve}$
(D) $\Delta H = T\Delta S = \Delta G = 0$

Answer: (A) $\Delta H = T\Delta S\ ;\ \Delta G = 0$ · The council's preliminary key

---

Q121 AP EAPCET 2021 · 23 Aug · Shift 2 MCQ

At high concentration of soap in water soap behaves as a

(A) Multi molecular colloid
(B) Associated colloid
(C) Macromolecular colloid
(D) Lyophilic colloid

Answer: (B) Associated colloid · The council's preliminary key

---

Q122 AP EAPCET 2021 · 20 Aug · Shift 1 MCQ

In an adsorption experiment, a graph between $\log(x/m)$ versus $\log P$ was found to be linear with a slope of 45°. The intercept on $\log(x/m)$ axis was found to be 0.3010. The amount of gas adsorbed per gram of charcoal under a pressure of $0.5\ atm$ is

(A) $0.5\ g$
(B) $1.0\ g$
(C) $1.5\ g$
(D) $0.75\ g$

Answer: (B) $1.0\ g$ · The council's preliminary key

Q123 AP EAPCET 2021 · 20 Aug · Shift 2 MCQ

Which statements among the following are correct?
(i) Freundlich isotherm fails at high pressure of the gas.
(ii) $\Delta H < 0$ for both physical and chemical adsorption.
(iii) Physical adsorption is non-selective.
(iv) Chemical adsorption is reversible, where as physical adsorption is irreversible.

(A) (i), (ii), (iii) & (iv)
(B) (i), (ii) & (iii) only
(C) (i), (iii) & (iv) only
(D) (ii) & (iv) only

Answer: (B) (i), (ii) & (iii) only · The council's preliminary key

Q124 AP EAPCET 2021 · 19 Aug · Shift 1 MCQ

A plot of $\log(x/m)$ verses $\log(P)$ for adsorption of a gas on a solid gives a straight line with a slope of ____

(A) $-\log k$
(B) $\log(1/n)$
(C) $\frac{1}{n}$
(D) $\text{antilog}(1/n)$

Answer: (C) $\frac{1}{n}$ · The council's preliminary key

Q125 AP EAPCET 2021 · 19 Aug · Shift 1 MCQ

During the action of enzyme "Zymase", glucose is converted into ___ with the liberation of carbon dioxide gas.

(A) Phenol
(B) Ethanol
(C) Methanol
(D) Isopropyl alcohol

Answer: (B) Ethanol · The council's preliminary key

Q126 AP EAPCET 2021 · 19 Aug · Shift 2 MCQ

The protective power of a lyophilic colloidal sol is expressed in terms of _____

(A) Critical micelle concentration
(B) Standard reduction potential
(C) Gold number
(D) Oxidation number

Answer: (C) Gold number · The council's preliminary key

Q127 TS EAMCET 2021 · 6 Aug · Shift 1 MCQ

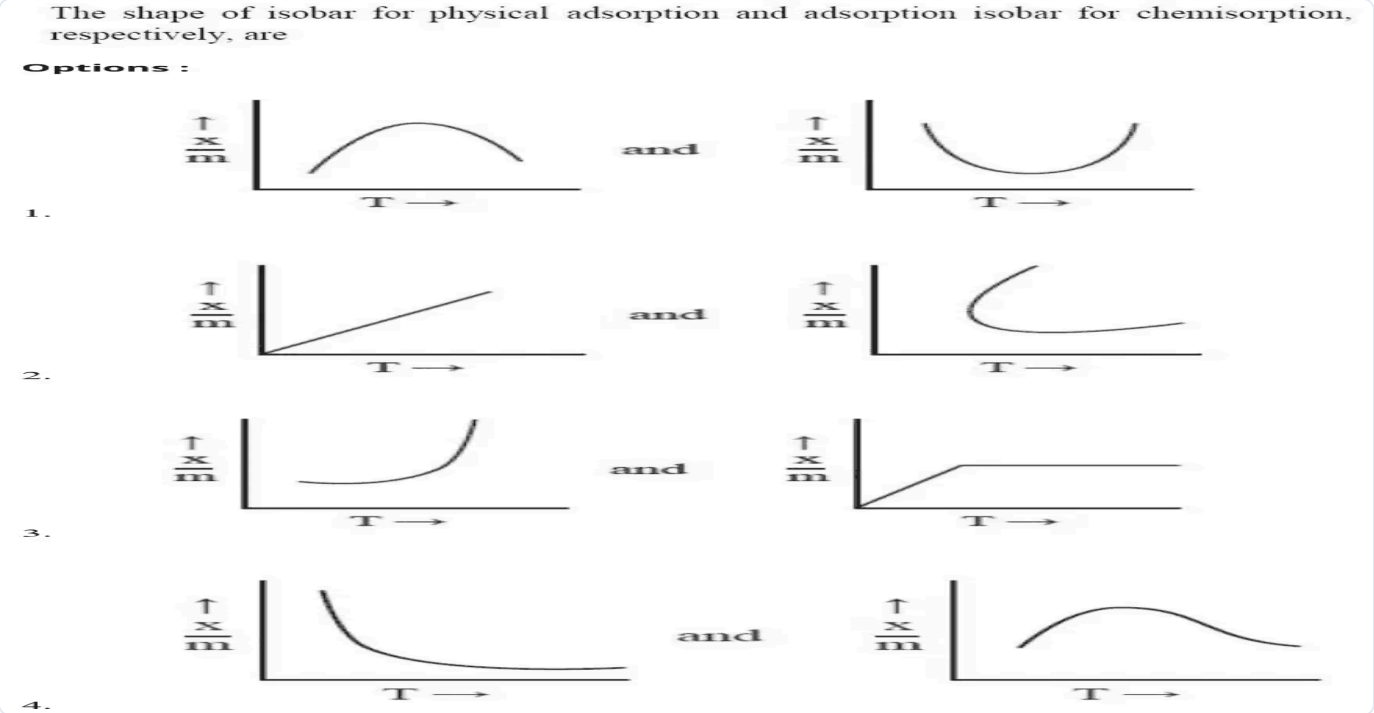
For precipitating $Fe(OH)_3$ sol, the best precipitating agent is

(A) Na_2SO_4
(B) $Cr(OH)_3$
(C) $Al(OH)_3$
(D) $Na_3[Fe(CN)_6]$

Answer: (D) $Na_3[Fe(CN)_6]$ · The council's preliminary key

Q128 TS EAMCET 2021 · 6 Aug · Shift 2 MCQ

The shape of isobar for physical adsorption and adsorption isobar for chemisorption, respectively, are *(see the figure above)*



(A) *see figure*
(B) *see figure*
(C) *see figure*
(D) *see figure*

Answer: (D) · The council's preliminary key

Q129 TS EAMCET 2021 · 5 Aug · Shift 1 MCQ

The most effective coagulating agent among the options for Sb_2S_3 sol is

(A) Na_2SO_4
(B) $Al_2(SO_4)_3$
(C) $CaCl_2$
(D) NH_4Cl

Answer: (B) $Al_2(SO_4)_3$ · The council's preliminary key

Q130 TS EAMCET 2021 · 5 Aug · Shift 2 MCQ

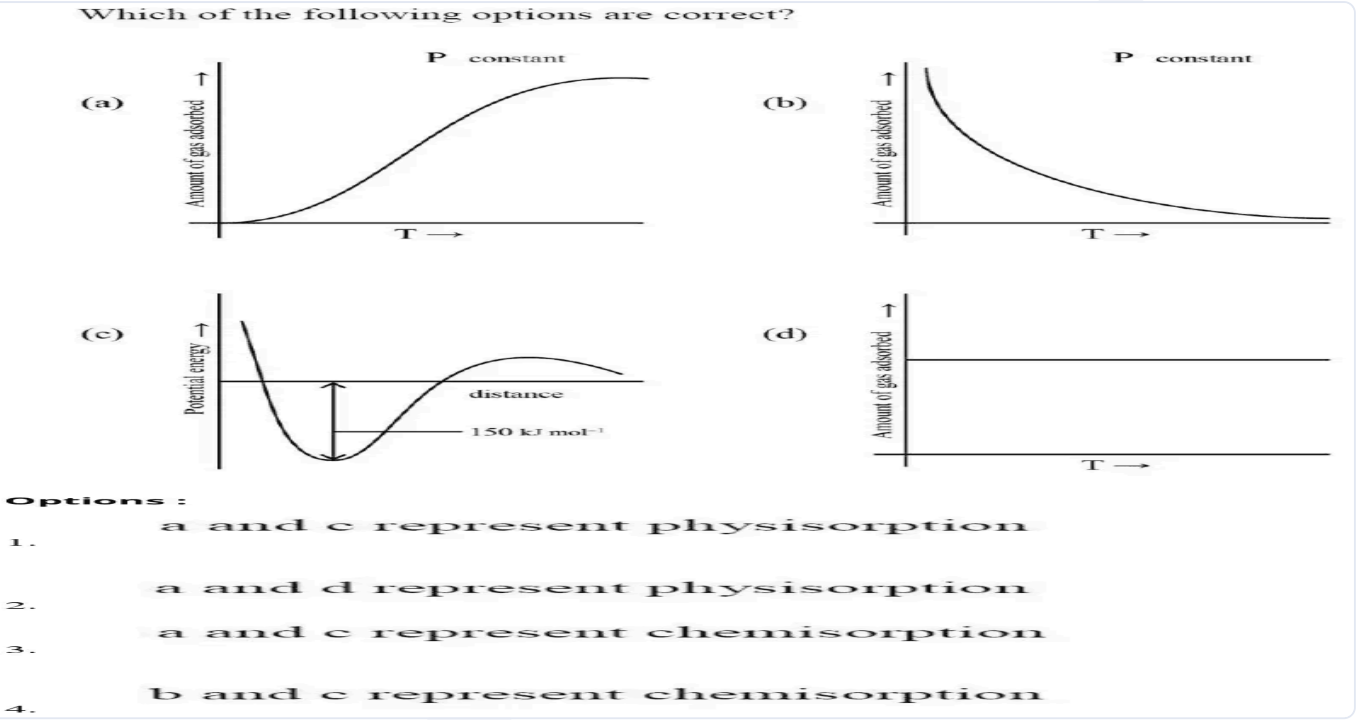
Which of the following statements is false during adsorption of gas molecule on a metal surface?

(A) Enthalpy change is positive
(B) Entropy change is negative
(C) Both enthalpy and entropy simultaneously decreases
(D) Free energy change is negative

Answer: (A) Enthalpy change is positive · The council's preliminary key

Q131 TS EAMCET 2021 · 4 Aug · Shift 1 MCQ

Which of the following options are correct?
(see the figure above)



(A) a and c represent physisorption
(B) a and d represent physisorption
(C) a and c represent chemisorption
(D) b and c represent chemisorption

Answer: (C) a and c represent chemisorption · The council's preliminary key

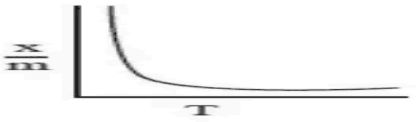
Q132 TS EAMCET 2021 · 4 Aug · Shift 2 MCQ

Which plot is the adsorption isobar for chemisorption?

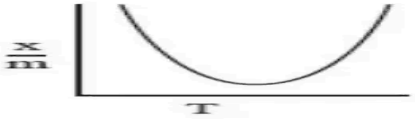
Which plot is the adsorption isobar for chemisorption?

Options :

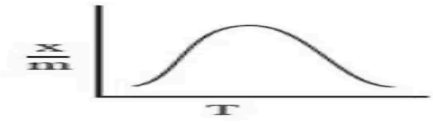
1.



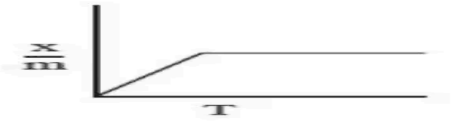
2.



3.



4.



(A) *see figure*

(B) *see figure*

(C) *see figure*

(D) *see figure*

Answer: (C) · The council's preliminary key

Q133 AP EAMCET 2020 · 7 Oct · Shift 1 MCQ

Which among the following can be explained by adsorption theory?

(A) Homogeneous catalysis

(B) Heterogeneous catalysis

(C) Enzyme catalysis

(D) Acid base Catalysis

Answer: (B) Heterogeneous catalysis · The council's preliminary key

Q134 AP EAMCET 2020 · 7 Oct · Shift 1 MCQ

In an electrophoresis set up, colloidal solution of glycine having pH of 5.97 is kept at constant T and P. What will happen if few drops of base are added to it.

(A) Cataphoresis

(B) Anaphoresis

(C) Precipitation

(D) Decomposition

Answer: (B) Anaphoresis · The council's preliminary key

Q135 AP EAMCET 2020 · 23 Sep · Shift 1 MCQ

When an iron rod is subjected towards an atmosphere having very high content of moisture, which of the process is predominant?

(A) Chemisorption
(B) Physisorption
(C) Sorption
(D) Luminescence

Answer: (A) Chemisorption · The council's preliminary key

Q136 AP EAMCET 2020 · 23 Sep · Shift 1 MCQ

Which of the following metal is used as a catalyst in Haber's process of ammonia synthesis?

(A) Cobalt
(B) Copper
(C) Zinc
(D) Iron

Answer: (D) Iron · The council's preliminary key

Q137 AP EAMCET 2020 · 23 Sep · Shift 1 MCQ

During electro-osmosis of $Fe(OH)_3$ sol, which of the following occurs?

(A) Sol particle move towards anode
(B) Sol particles move towards cathode
(C) The dispersion medium moves towards anode
(D) The dispersion medium moves towards cathode

Answer: (C) The dispersion medium moves towards anode · The council's preliminary key

Q138 AP EAMCET 2020 · 22 Sep · Shift 2 MCQ

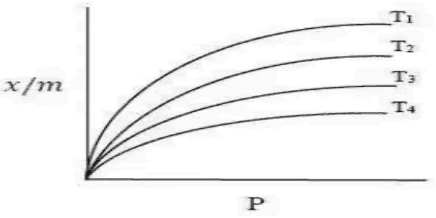
The Freundlich adsorption isotherm varies with temperature according to the figure given below. Choose the correct option accordingly

(see the figure above)

Orientation : Vertical

The Freundlich adsorption isotherm varies with temperature according to the figure given below. Choose the correct option accordingly

ఫ్రాయిండ్లిచ్ అధిశోషణ సమోష్ణక రేఖ, ఉష్ణోగ్రతతో చెందు మార్పు క్రింది చిత్రములో చూపబడినది. దానికి సంబంధించి క్రింద వానిలో సరి అయినది ఎంచుకోండి



Options :

1. $T_1 = 303\ K,\ T_2 = 298\ K,\ T_3 = 244\ K,\ T_4 = 195\ K$
2. $T_1 = 303\ K,\ T_2 = 195\ K,\ T_3 = 244\ K,\ T_4 = 298\ K$
3. $T_1 = 195\ K,\ T_2 = 244\ K,\ T_3 = 298\ K,\ T_4 = 303\ K$
4. $T_1 = 195\ K,\ T_2 = 303\ K,\ T_3 = 244\ K,\ T_4 = 298\ K$

AP EAMCET 2020

AP EAMCET 2020

(A) $T_1 = 303\ K,\ T_2 = 298\ K,\ T_3 = 244\ K,\ T_4 = 195\ K$
(B) $T_1 = 303\ K,\ T_2 = 195\ K,\ T_3 = 244\ K,\ T_4 = 298\ K$
(C) $T_1 = 195\ K,\ T_2 = 244\ K,\ T_3 = 298\ K,\ T_4 = 303\ K$
(D) $T_1 = 195\ K,\ T_2 = 303\ K,\ T_3 = 244\ K,\ T_4 = 298\ K$

Answer: (C) $T_1 = 195\ K,\ T_2 = 244\ K,\ T_3 = 298\ K,\ T_4 = 303\ K$ · The council's preliminary key

Q139 AP EAMCET 2020 · 21 Sep · Shift 1 MCQ

The charge on colloidal particles is due to _____

(A) Presence of electrolyte
(B) Very small size of particles
(C) Adsorption of ions from the solution
(D) Can't be determined

Answer: (C) Adsorption of ions from the solution · The council's preliminary key

Q140 AP EAMCET 2020 · 21 Sep · Shift 2 MCQ

A charcoal cube having side length 10 cm is chopped lengthwise into 5 equal pieces. Then, the effective adsorption power _____

(A) Increases by 2.33 times
(B) decreases by 2.33 times
(C) Increases by 2.14 times
(D) decreases by 2.14 times

Answer: (A) Increases by 2.33 times · The council's preliminary key

Q141 AP EAMCET 2020 · 18 Sep · Shift 1 MCQ

Which of the following is not a characteristic of chemisorption?

(A) Adsorption is highly specific
(B) Heat of adsorption is around 400 $kJ.mol^{-1}$
(C) The process is irreversible
(D) It forms multimolecular layer

Answer: (D) It forms multimolecular layer · The council's preliminary key

Q142 AP EAMCET 2020 · 18 Sep · Shift 1 MCQ

An example for hydrophobic sol among the following is _____

(A) Gum solution
(B) Arsenic sulphide solution
(C) Starch solution
(D) Protein solution

Answer: (B) Arsenic sulphide solution · The council's preliminary key

Q143 AP EAMCET 2020 · 17 Sep · Shift 2 MCQ

In a plot of $\log\left(\frac{x}{m}\right)$ vs $\log p$, for the adsorption of a gas on solid, a straight line is obtained. The slope of that straight line is _____

(A) $\frac{1}{n}$
(B) K
(C) n
(D) $\log K$

Answer: (A) $\frac{1}{n}$ · The council's preliminary key

Q144 TS EAMCET 2020 · 14 Sep · Shift 1 MCQ

The charge of "SnO_2-sol" in alkaline and acidic medium are respectively
(Hint: SnO_2 is amphoteric oxide)

(A) Positive and Positive
(B) Negative and Negative
(C) Positive and Negative
(D) Negative and Positive

Answer: (D) Negative and Positive · Official TGCHE final key

Q145 TS EAMCET 2020 · 14 Sep · Shift 2 MCQ

Which of the followings is true for spontaneous adsorption?

(A) $\Delta G > 0,\ \Delta S > 0,\ \Delta H < 0$
(B) $\Delta G > 0,\ \Delta S > 0,\ \Delta H > 0$
(C) $\Delta G < 0,\ \Delta S < 0,\ \Delta H < 0$
(D) $\Delta G < 0,\ \Delta S > 0,\ \Delta H < 0$

Answer: (C) $\Delta G < 0,\ \Delta S < 0,\ \Delta H < 0$ · Official TGCHE final key

Q146 TS EAMCET 2020 · 11 Sep · Shift 2 MCQ

To resist the coagulation of 100 cc gold-sol; 1 cc of 10 % NaCl is added to it in the presence of 10^{-4} g gelatin. The gold number of gelatin is

(A) 0.00001
(B) 0.0001
(C) 0.001
(D) 0.01

Answer: (D) 0.01 · Official TGCHE final key

Q147 TS EAMCET 2020 · 10 Sep · Shift 1 MCQ

The gold numbers of gelatin, haemoglobin and sodium acetate are 5×10^{-3}, 5×10^{-2} and 7×10^{-1}, respectively. The protective actions will be in the order

(A) Gelatin < haemoglobin < sodium acetate
(B) Gelatin > haemoglobin > sodium acetate
(C) Haemoglobin > gelatin > sodium acetate
(D) Sodium acetate > gelatin > haemoglobin

Answer: (B) Gelatin > haemoglobin > sodium acetate · Official TGCHE final key

Q148 TS EAMCET 2020 · 10 Sep · Shift 2 MCQ

Which of the following statements is correct for chemisorption?

(A) Chemisorption is reversible
(B) Multilayer adsorption takes place
(C) Adsorption increases with temperature
(D) The heat of adsorption is generally less than 40 kJ mol^{-1}

Answer: (C) Adsorption increases with temperature · Official TGCHE final key

Q149 TS EAMCET 2020 · 9 Sep · Shift 1 MCQ

In an adsorption experiment, a graph between $\log(x/m)$ vs $\log P$ was found to be linear with a slope of 45°. The intercept on the $\log(x/m)$ axis was found to be 0.3. The amount of the gas adsorbed per gram of charcoal under a pressure of 1 atm is

(A) 1
(B) 2
(C) 3
(D) 4

Answer: (B) 2 · Official TGCHE final key

Q150 TS EAMCET 2020 · 9 Sep · Shift 2 MCQ

Which of the following reaction is auto catalytic?

(A) $C_6H_5COCl + C_6H_6 \xrightarrow{AlCl_3} C_6H_5COC_6H_5 + HCl + AlCl_3$
(B) $4NH_3 + 5O_2 \xrightarrow{pt} 4NO + 6H_2O$
(C) $CH_2{=}CH_2 + H_2 \xrightarrow{[RhCl(PPh_3)_3]} CH_3 - CH_3$
(D) $5C_2O_4^{2-} + 2MnO_4^- + 16H^+ \rightarrow 10CO_2 + 2Mn^{2+} + 8H_2O$

Answer: (D) $5C_2O_4^{2-} + 2MnO_4^- + 16H^+ \rightarrow 10CO_2 + 2Mn^{2+} + 8H_2O$ · Official TGCHE final key

Q151 TS EAMCET 2019 · 6 May · Shift 1 MCQ

Which of the following statements is/are not correct?
A) Adsorption is accompanied by decrease in enthalpy as well as decrease in entropy of the system.
B) Gases which can react strongly with adsorbent show chemisorption.
C) When the value of the slope of the Freundlich isotherm is non-zero, adsorption is independent of pressure.
D) Gold number of potato starch is 0.15.

(A) A, D
(B) B, C
(C) A, C
(D) C, D

Answer: (D) C, D · Official TGCHE final key

Q152 TS EAMCET 2019 · 4 May · Shift 1 MCQ

Identify the correct statements from the following.
a. A closed vessel containing 90% CO_2 and 10% O_2 is an aerosol.
b. Milk is an emulsion.
c. Smoke is an aerosol.
d. Peptisation is a method of purification of colloidal solution.
e. Ultrafilteration is a method of purification of colloidal solution.

EdLoop EAPCET

(A) a, b, c
(B) a, c, d
(C) b, c, e
(D) a, b, e

Answer: (C) b, c, e · Official TGCHE final key

Q153 TS EAMCET 2019 · 4 May · Shift 2 MCQ

The most effective coagulating agent among the following for Sb_2S_3 sol is

(A) Na_2SO_4
(B) $Al_2(SO_4)_3$
(C) NH_4Cl
(D) NaCl

Answer: (B) $Al_2(SO_4)_3$ · Official TGCHE final key

Q154 TS EAMCET 2019 · 3 May · Shift 1 MCQ

Which one of the following is used as an eye lotion?

(A) milk of magnesia
(B) silver sol
(C) colloidal antimony
(D) chromium salt sol

Answer: (B) silver sol · Official TGCHE final key

Q155 TS EAMCET 2019 · 3 May · Shift 2 MCQ

The mass of Haemoglobin in mg required to protect from coagulation of 50 mL of a gold sol on adding 5 mL of 10% NaCl solution is: (gold number of Haemoglobin = 0.03)

(A) 0.03
(B) 0.75
(C) 0.30
(D) 0.15

Answer: (D) 0.15 · Official TGCHE final key

Q156 AP EAMCET 2019 · 23 Apr · Shift 1 MCQ

Which one of the following statements is **not** correct?

(A) The process of settling down of colloidal particles is coagulation
(B) The mass in milligrams of lyophilic sol which protects the coagulation of 10 mL of a gold sol on adding 1mL of 10 % NaCl solution is its gold number
(C) The layer of positive or negative charge acquired by selective adsorption of ion on the surface of a colloidal particle is electrokinetic potential
(D) The potential difference between the fixed layer on the colloidal particles and the diffused layer of opposite charge is zeta potential

Answer: (C) The layer of positive or negative charge acquired by selective adsorption of ion on the surface of a colloidal particle is electrokinetic potential · Official APSCHE final key

Q157 AP EAMCET 2019 · 22 Apr · Shift 1 MCQ

What is X in the following reaction?
$CO + 2H_2 \xrightarrow{X} CH_3OH$

(A) $623K/300atm$
(B) $KMnO_4/H^{\oplus}$
(C) Zn/Δ
(D) $ZnO-Cr_2O_3$, 200-300 atm, 573-673 K

Answer: (D) $ZnO-Cr_2O_3$, 200-300 atm, 573-673 K · Official APSCHE final key

Q158 AP EAMCET 2019 · 22 Apr · Shift 2 MCQ

300 mL of gold sol is mixed with 30 mL of 10% NaCl solution. The mass of Haemoglobin in mg required to protect the gold sol from coagulation is (gold number of Haemoglobin is 0.03)

(A) 0.3
(B) 0.09
(C) 0.03
(D) 0.9

Answer: (D) 0.9 · Official APSCHE final key

Q159 AP EAMCET 2019 · 21 Apr · Shift 1 MCQ

Which one of the following statements is correct for adsorption of solutes on solids in solutions?

(A) The extent of adsorption increases with an increase in temperature.
(B) The extent of adsorption decreases with an increase of surface area of the adsorbate.
(C) The extent of adsorption decreases with an increase in temperature.
(D) The extent of adsorption does not depend on the amount of the solute in solution.

Answer: (C) The extent of adsorption decreases with an increase in temperature. · Official APSCHE final key

EdLoop EAPCET

Q160 AP EAMCET 2019 · 21 Apr · Shift 2 MCQ

$H_2C = CH_2 + O_2 \xrightarrow{\text{aqueous medium}} CH_3CHO$

What is the catalyst used in the above green reaction?

(A) Pd (II)
(B) Pt
(C) ZnO
(D) Rh

Answer: (A) Pd (II) · Official APSCHE final key

Q161 AP EAMCET 2019 · 21 Apr · Shift 2 MCQ

Match the following.
List - I (Reaction)
A) $N_2(g) + 3H_2(g) \longrightarrow 2NH_3(g)$
B) $2H_2(g) + O_2(g) \longrightarrow 2H_2O(l)$
C) $CO(g) + 3H_2(g) \longrightarrow CH_4(g) + H_2O(g)$
D) $CO(g) + 2H_2(g) \longrightarrow CH_3OH(g)$
List - II (Catalyst)
I) Ni
II) Pt
III) $ZnO - Cr_2O_3$
IV) Fe
The correct answer is

(A) A-III, B-II, C-I, D-IV
(B) A-IV, B-III, C-II, D-I
(C) A-IV, B-II, C-I, D-III
(D) A-IV, B-I, C-III, D-II

Answer: (C) A-IV, B-II, C-I, D-III · Official APSCHE final key

Q162 AP EAMCET 2019 · 20 Apr · Shift 1 MCQ

Identify the correct statements from the following.
I) Sulphur sol is an example of a multimolecular colloid.
II) Tyndall effect is observed when the diameter of the dispersed particles is not much smaller than the wavelength of the light used.
III) The process of removing a dissolved substance from a colloidal solution by means of diffusion through a suitable membrane is called peptization.
IV) Eosin, gelatin are examples of negatively charged sols.

EdLoop EAPCET

(A) I, II, III
(B) I, II, IV
(C) I, III, IV
(D) II, III, IV

Answer: (B) I, II, IV · Official APSCHE final key

Q163 AP EAMCET 2019 · 20 Apr · Shift 2 MCQ

Which of the following statements is **not** correct?

(A) Both physical and chemical adsorptions are exothermic
(B) Physical adsorption takes place with decrease of free energy whereas chemical adsorption occurs with increase of free energy
(C) Physical adsorption requires low activation energy but chemical adsorption requires high activation energy
(D) The magnitude of chemical adsorption increases and that of physical adsorption decreases with rise in temperature

Answer: (B) Physical adsorption takes place with decrease of free energy whereas chemical adsorption occurs with increase of free energy · Official APSCHE final key

---

Q164 TS EAMCET 2018 · 7 May · Shift 1 MCQ

In the Freundlich isotherm ($\frac{x}{m} = k\,\mathrm{P}^{1/n}$) plot of $\log \frac{x}{m}$ vs $\log p$, the intercept is (where x, m, p and k are mass of the gas, mass of adsorbent, pressure and constant which depend on the nature of the adsorbent, respectively)

(A) k
(B) log k
(C) e^{k}
(D) $\ln \frac{1}{k}$

Answer: (B) log k · The council's preliminary key

Q165 TS EAMCET 2018 · 5 May · Shift 1 MCQ

If the value of $\frac{1}{n}$ is equal to 1 in Freundlich adsorption isotherm, then $\frac{x}{m} =$
(x = mass of adsorbate, m = mass of the absorbent, P = pressure of the gas)

(A) $\frac{k}{P}$
(B) kP
(C) k
(D) 0

Answer: (B) kP · The council's preliminary key

Q166 TS EAMCET 2018 · 5 May · Shift 2 MCQ

Fog is a dispersion of

(A) liquid in liquid
(B) solid in gas
(C) gas in solid
(D) liquid in gas

Answer: (D) liquid in gas · The council's preliminary key

Q167 TS EAMCET 2018 · 4 May · Shift 1 MCQ

The following graph is obtained for physisorption of a gas as a function of pressure at different temperatures.

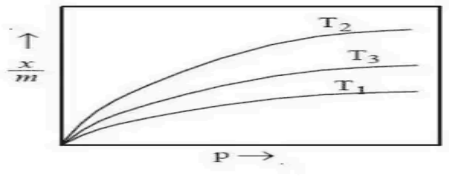
(see the figure above)

The correct order of temperatures is

Question Number : 147 Question Id : 4928631747 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct : 1 Wrong : 0

The following graph is obtained for physisorption of a gas as a function of pressure a different temperatures.

వివిధ ఉష్ణోగ్రతల వద్ద, ఒక వాయువు భౌతిక అధిశోషణం, దాని పీడన పరంగా, గావించినపుడు లభించి గ్రాఫ్ క్రింద ఇవ్వబడింది.



The correct order of temperatures is

ఉష్ణోగ్రతల సరియైన క్రమము

Options :

1. $T_3 < T_2 < T_1$
2. $T_2 < T_3 < T_1$
3. $T_2 < T_1 < T_3$
4. $T_1 < T_3 < T_2$

(A) $T_3 < T_2 < T_1$
(B) $T_2 < T_3 < T_1$
(C) $T_2 < T_1 < T_3$
(D) $T_1 < T_3 < T_2$

Answer: (B) $T_2 < T_3 < T_1$ · The council's preliminary key

Q168 TS EAMCET 2018 · 4 May · Shift 2 MCQ

Identify the correct statements from the following

a) In the oxidation of oxalic acid with $KMnO_4$ in acid medium, Mn^{2+} acts as auto catalyst

b) CdS colloidal solution can be precipitated by the addition of Cl^- ions

c) The gold numbers of three protective colloids (A, B, C) is 0.03, 25 and 0.25 respectively. Their protective power follows the order A > C > B
d) Physisorption is an irreversible process

(A) a, d
(B) b, c
(C) a, c
(D) a, b, c

Answer: (C) a, c · The council's preliminary key

Q169 AP EAMCET 2018 · 24 Apr · Shift 1 MCQ

Which one of the following is present in gas mask?

(A) Silica gel
(B) V_2O_5
(C) Activated charcoal
(D) Fluorescein

Answer: (C) Activated charcoal · The council's preliminary key

---

Q170 AP EAMCET 2018 · 24 Apr · Shift 2 MCQ

Which one of the following statements is correct ?

(A) The difference in the initial and final concentrations of the adsorbate gives the value of 'x' in Freundlich equation (x = mass of adsorbate)
(B) The mass of adsorbent gives the value of 'n' in Freundlich equation
(C) Chemisorption decreases with increase of surface area of the adsorbent
(D) Enthalpy of adsorption is $20\ \mathrm{kJ\ mol^{-1}}$ in chemisorption

Answer: (A) The difference in the initial and final concentrations of the adsorbate gives the value of 'x' in Freundlich equation (x = mass of adsorbate) · The council's preliminary key

---

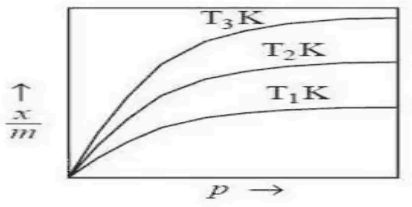
Q171 AP EAMCET 2018 · 23 Apr · Shift 1 MCQ

Freundlich adsorption isotherms for the physical adsorption of a gas at temperature T_1, T_2 and T_3 are shown in the graph given below. The correct relationship between T_1, T_2 and T_3 is
(see the figure above)

Question Number : 144 Question Id : 4557344144 Question Type : MCQ Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Freundlich adsorption isotherms for the physical adsorption of a gas at temperature T_1, T_2 and T_3 are shown in the graph given below. The correct relationship between T_1, T_2 and T_3 is

క్రింది రేఖాపటంలో T_1, T_2, T_3 ఉష్ణగ్రత వద్ద వాయువు భౌతిక అధిశోషణానికి సంబంధించిన ఫ్రాయిండ్లిష్ సమోష్ణ రేఖలు చూపబడ్డాయి T_1, T_2, T_3 ల మధ్య సరియైన సంబంధం



Options :

1. $T_1 < T_2 < T_3$
2. $T_3 < T_1 < T_2$
3. $T_3 < T_2 < T_1$
4. $T_2 < T_1 < T_3$

(A) $T_1 < T_2 < T_3$
(B) $T_3 < T_1 < T_2$
(C) $T_3 < T_2 < T_1$
(D) $T_2 < T_1 < T_3$

Answer: (C) $T_3 < T_2 < T_1$ · The council's preliminary key

Q172 AP EAMCET 2018 · 23 Apr · Shift 2 MCQ

In which one of the following processes the reactants and catalyst exist in three different states?

(A) Haber's process
(B) Ostwald's process
(C) Hydrogenation of Vegetable oil
(D) Contact process

Answer: (C) Hydrogenation of Vegetable oil · The council's preliminary key

Q173 AP EAMCET 2018 · 22 Apr · Shift 1 MCQ

Which one of the following statements is **not** correct?

(A) A mixture of dinitrogen and dioxygen at room temperature is an example for aerosol
(B) Lyophilic sols are more stable compared to lyophobic sols
(C) Formation of micelles is possible only above Kraft temperature
(D) An example for a soap is sodium stearate and an example for detergent is sodium lauryl sulphate

Answer: (A) A mixture of dinitrogen and dioxygen at room temperature is an example for aerosol · The council's preliminary key

Q174 AP EAMCET 2018 · 22 Apr · Shift 2 MCQ

The temperature above which, formation of micelles takes place is called

(A) Boyle's temperature
(B) Kraft temperature
(C) Critical temperature
(D) Inversion temperature

Answer: (B) Kraft temperature · The council's preliminary key

Q175 TS EAMCET 2017 · 12 May · Offline MCQ

Which of the following is true for spontaneous adsorption of H_2 gas without dissociation on solid surface

(A) Process is exothermic and $\Delta S < 0$
(B) Process is endothermic and $\Delta S > 0$
(C) Process is exothermic and $\Delta S > 0$
(D) Process is endothermic and $\Delta S < 0$

Answer: (A) Process is exothermic and $\Delta S < 0$ · The council's preliminary key

Q176 AP EAMCET 2017 · 26 Apr · Shift 1 MCQ

Colloidal solution of gold is in different colours like red, purple, blue and golden because of

(A) Size difference in the particles of gold
(B) Variable oxidation states of gold
(C) Presence of impurities
(D) Difference in the concentration of gold particles

Answer: (A) Size difference in the particles of gold · The council's preliminary key

Q177 AP EAMCET 2017 · 26 Apr · Shift 2 MCQ

Which one of the following is correct?

(A) As_2S_3 is a positively charged sol.
(B) The refractive indices of the dispersed phase and the dispersion medium differ greatly in magnitude to observe Tyndall effect.
(C) Ultra microscope provides information about the size and shape of colloidal particles
(D) Finest gold sol is green in colour.

Answer: (B) The refractive indices of the dispersed phase and the dispersion medium differ greatly in magnitude to observe Tyndall effect. · The council's preliminary key

EdLoop EAPCET

Q178 AP EAMCET 2017 · 26 Apr · Shift 2 MCQ

Potassium permanganate on heating gives potassium manganate, oxygen and X. For which of the following reactions, X is used as a catalyst.

(A) $2KClO_3 \xrightarrow{\Delta} 2KCl + 3O_2$

(B) $2SO_2 + O_2 \longrightarrow 2SO_3$

(C) $4HCl + O_2 \longrightarrow 2Cl_2 + 2H_2O$

(D) $4NH_3 + 5O_2 \longrightarrow 4NO + 6H_2O$

Answer: (A) $2KClO_3 \xrightarrow{\Delta} 2KCl + 3O_2$ · The council's preliminary key

Q179 AP EAMCET 2017 · 25 Apr · Shift 1 MCQ

Match the following:

List - I

a) Starch

b) Cane sugar

c) Zeolite

d) Maltose to glucose

List - II

i) Shape selective catalyst

ii) Maltase

iii) Diastase

iv) Invertase

v) Zymase

The correct answer is:

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

(B) a-iii, b-i, c-iv, d-v

(C) a-iv, b-v, c-i, d-ii

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

Answer: (A) a-iii, b-iv, c-i, d-ii · The council's preliminary key

Q180 AP EAMCET 2017 · 25 Apr · Shift 2 MCQ

Which one of the following statements is **not** correct?

EdLoop EAPCET

(A) A mixture of noble gases can be separated by adsorption on coconut charcoal at different temperatures
(B) Animal charcoal removes colours of impure coloured solutions by adsorption process
(C) Adsorption of reactants on the solid surface of the catalysts increases the rate of reaction
(D) Silica gel and alumina gel are used as adsorbents to increase moisture in air in the rooms

Answer: (D) Silica gel and alumina gel are used as adsorbents to increase moisture in air in the rooms · The council's preliminary key

Q181 AP EAMCET 2017 · 24 Apr · Shift 1 MCQ

Identify the correct statement (s) from the following
a) Protective power of a lyophilic sol is more if its gold number is more
b) In the coagulation of negative sols, the coagulating power of cations follow the order $Na^{+} > Ba^{2+} > Al^{3+}$
c) Cloud is a solid in gas type of colloid
d) Physical adsorption is non-specific and multilayered at high pressure.

(A) a, c, d
(B) a, d
(C) d
(D) b

Answer: (C) d · The council's preliminary key

Q182 AP EAMCET 2017 · 24 Apr · Shift 1 MCQ

The catalysts commonly used in contact process and Deacon's process are respectively

(A) V_2O_5, Fe_2O_3
(B) V_2O_5, $CuCl_2$
(C) $CuCl_2$, MnO_2
(D) MnO_2, Fe_2O_3

Answer: (B) V_2O_5, $CuCl_2$ · The council's preliminary key

Q183 AP EAMCET 2017 · 24 Apr · Shift 2 MCQ

Which one of the following statements is not correct ?

(A) The adsorption is independent of pressure when $\frac{1}{n} = 0$ in Freundlich adsorption isotherm equation.

(B) The adsorption varies directly with pressure when $\frac{1}{n} = 1$ in Freundlich adsorption isotherm equation.

(C) The extent of adsorption increases with increase in temperature.

(D) The extent of adsorption depends on the nature of adsorbent and adsorbate.

Answer: (C) The extent of adsorption increases with increase in temperature. · The council's preliminary key

---

Q184 TS EAMCET 2016 · 15 May · Offline MCQ

Which one of the following is an emulsion ?

(A) Milk

(B) Soap lather

(C) Butter

(D) Vanishing Cream

Options (1) or (3) or (4) were accepted. More than one answer was accepted. · Official TGCHE final key

---

Q185 AP EAMCET 2016 · 29 Apr · Offline MCQ

Which is <u>not</u> the correct statement in respect of chemisorption?

(A) Highly specific adsorption

(B) Irreversible adsorption

(C) Multilayered adsorption

(D) High enthalpy of adsorption

Answer: (C) Multilayered adsorption · The council's preliminary key

---

Q186 AP EAMCET 2014 · 22 May · Offline MCQ

Assertion (A) : van der Waals' forces are responsible for chemisorption.
Reason (R) : High temperature is favourable for chemisorption.
The correct answer is

(A) (A) is not correct but (R) is correct

(B) (A) and (R) are correct and (R) is the correct explanation of (A)

(C) (A) and (R) are correct but (R) is not the correct explanation of (A)

(D) (A) is correct but (R) is not correct

Answer: (A) (A) is not correct but (R) is correct · The council's preliminary key

EdLoop EAPCET

Q187 AP EAMCET 2013 · 10 May · Offline MCQ

Match the following :
List-I
A) Solid dispersed in liquid
B) Liquid dispersed in liquid
C) Gas dispersed in liquid
D) Liquid dispersed in solid
List-II
I) Emulsion
II) Foam
III) Gel
IV) Sol
V) Aerosol
The correct match is :

(A) A-IV, B-I, C-II, D-III
(B) A-III, B-I, C-V, D-II
(C) A-III, B-I, C-II, D-IV
(D) A-IV, B-I, C-V, D-III

Answer: (A) A-IV, B-I, C-II, D-III · The council's preliminary key

Q188 AP EAMCET 2012 · 12 May · Offline MCQ

The catalyst and promoter respectively used in the Haber's process of industrial synthesis of ammonia are

(A) Mo, V_2O_5
(B) V_2O_5, Fe
(C) Fe, Mo
(D) Mo, Fe

Answer: (C) Fe, Mo · Official APSCHE final key

Q189 AP EAMCET 2012 · 12 May · Offline MCQ

Gelly is a colloidal solution of

(A) Solid in liquid
(B) Liquid in solid
(C) Liquid in liquid
(D) Solid in solid

Answer: (B) Liquid in solid · Official APSCHE final key

Q190 AP EAMCET 2011 · 8 May · Offline MCQ

According to Langmuir adsorption isotherm, the amount of gas adsorbed by unit surface area is : (a, b, k and n are constants; P = pressure of gas)

(A) $k.\mathrm{P}^{n}$

(B) $\frac{1+b\mathrm{P}}{a\mathrm{P}}$

(C) $k\mathrm{P}^{1/n}$

(D) $\frac{a\mathrm{P}}{1+b\mathrm{P}}$

Answer: (D) $\frac{a\mathrm{P}}{1+b\mathrm{P}}$ · The council's preliminary key

Q191 AP EAMCET 2010 · 30 May · Offline MCQ

A micelle formed during the cleansing action by 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) Aggregated particles of soap and dirt · Official APSCHE final key

EdLoop EAPCET