EdLoop

EdLoop EAPCET

CHEMISTRY · EAPCET (EAMCET)

Hydrogen

Previous Year Questions with answers

108 questions · **102** papers · **2011–2026** · 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 Hydrogen 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/

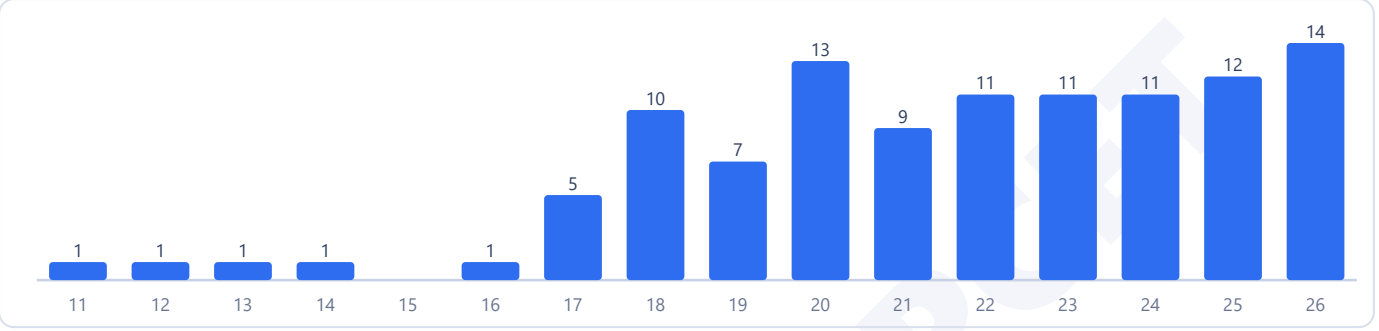
EdLoop Free

Chapter at a glance

1.9%	108	56 of 77	108 / 0
of Chemistry questions, 2022–2026	questions, 2011–2026	papers asked it, 2022–2026	MCQ / numerical, 2011–2026

Trend. Steady: 0.8 questions per paper in 2024–2026 against 0.7 in 2022–2023.

Questions per year



Counts are the questions we hold: 108 in 102 papers. No question in this chapter was found repeated across papers.

Most-asked topics in this chapter (2011–2026)

Hydrogen & Its Compounds	**108**

How often it comes up

Hydrogen holds position 26 among the 31 chemistry chapters in the modern 2022 to 2026 examination span. Across our complete repository of entrance papers spanning 2010 through 2026, the chapter contributed 108 questions across 149 papers, appearing in 102 of those examinations to record a 1.8 percent subject share and 0.7 questions per paper. In the recent five-year timeframe from 2022 to 2026, it provided 59 questions across 77 sittings, appearing in 56 papers to maintain 0.8 questions per paper and a 1.9 percent subject share.

The chapter has featured in every exam year since 2022, though it was absent from twenty-one papers across that five-year span. Looking at state results between 2022 and 2026, AP tests delivered 34 questions across 48 papers (appearing in 32 papers, 0.7 questions per paper, 1.8 percent share), while TS tests gathered 25 questions across 29 papers (appearing in 24 papers, 0.9 questions per paper, 2.2 percent share).

During earlier testing between 2010 and 2021, papers included 49 questions across 72 sittings (appearing in 46 tests), representing 0.7 questions per paper and a 1.7 percent subject share. Across the latest three exam years from 2024 to 2026, question writers set 37 questions across 46 sittings (with 34 papers containing questions), yielding 0.8 questions per test and 2.0 percent share. Comparing early testing with the last three years shows the share is about the same, and comparing the recent five-year window with the last three years shows the share is about the same.

Most-asked topics

The syllabus organizes under one comprehensive thematic heading:

- **Hydrogen & Its Compounds** encompasses all 108 questions across the entire archive, including 59 questions in the recent window through 2026. Subtopics include methods of preparing high-purity dihydrogen (such as electrolysis of warm aqueous barium hydroxide using nickel electrodes), water-gas and coal gasification, interstitial and saline hydrides, water hardness classification and softening techniques (Clarks method, Calgon process, permutit and synthetic ion-exchange resins), heavy water physical constants and reactions, and hydrogen peroxide synthesis, structure, and redox behaviour.

What the questions look like

Questions in Hydrogen are direct, descriptive, and closely aligned with NCERT statements. A frequent question format asks for the method that yields ultra-high purity dihydrogen exceeding ninety-nine point nine five percent by volume, where electrolysis of warm aqueous barium hydroxide is the standard correct choice. Another common style tests the water-gas shift reaction, where carbon monoxide in syngas reacts with steam in the presence of iron chromate catalyst to increase dihydrogen yield.

Water softening questions are equally regular. You will match methods with reagents, such as associating Clarks method with slaked lime, the Calgon process with sodium hexametaphosphate, or distinguishing between temporary hardness caused by calcium and magnesium bicarbonates and permanent hardness caused by chlorides and sulphates. For hydrogen peroxide, examiners frequently quiz its open-book non-planar structure, dihedral angles in gas versus crystal phases, and its dual oxidizing and reducing functions.

How to practise it

Memorise the classification of binary hydrides: ionic or saline hydrides formed by electropositive s-block metals (stoichiometric, solid, conducting in molten state); covalent or molecular hydrides formed by p-block non-metals, divided into electron-deficient (such as diborane from group 13), electron-precise (such as methane from group 14), and electron-rich (such as ammonia and water from groups 15, 16, and 17); and metallic or interstitial hydrides formed by d- and f-block metals, which are non-stoichiometric and conduct heat and electricity.

Note the hydride gap where transition metals of groups seven, eight, and nine do not form hydrides, with group six forming only chromium hydride. In water softening, note that boiling and Clarks lime process remove only temporary bicarbonate hardness, whereas washing soda, Calgon, and ion-exchange resins remove both temporary and permanent hardness.

EdLoop EAPCET

Q1 AP EAPCET 2026 · 18 May · Shift 2 MCQ

The total number of electrons, protons and neutrons present in the three isotopes of hydrogen is

(A) 3
(B) 5
(C) 6
(D) 9

Answer: (D) 9 · The council's preliminary key

Q2 AP EAPCET 2026 · 15 May · Shift 2 MCQ

Which of the following statements are correct regarding the methods used to remove hardness of water?

I. Temporary hardness, caused by the presence of magnesium and calcium bicarbonates, can be removed by boiling water

II. In Clark's process, a calculated amount of lime is added to hard water to precipitate out calcium carbonate

III. Calgon softens water by forming a stable, soluble complex with Ca^{2+} and Mg^{2+} ions

Correct answer is

(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

Q3 AP EAPCET 2026 · 15 May · Shift 2 MCQ

$NaBH_4$ reacts with I_2 and gives a salt and two gases Y, Z. The gas Y is toxic in nature. Z is a combustible gas. The correct statements regarding Y, Z are

I. Y with NaH forms a compound which acts as a good reducing agent

II. Y on hydrolysis gives a monobasic acid

III. Z is used in Haber's process

The correct answer is

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

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

EdLoop EAPCET

Q4 AP EAPCET 2026 · 14 May · Shift 1 MCQ

The interstitial hydrides of which set of metals have same lattice as that of the parent metals?

(A) Yb, Ti
(B) V, Zr
(C) Ni, Pd
(D) Ce, Cr

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

Q5 AP EAPCET 2026 · 14 May · Shift 2 MCQ

Permanent hardness of water cannot be removed by

(A) Using Na_2CO_3
(B) Using Calgon
(C) Using $NaAlSiO_4$
(D) Boiling

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

Q6 AP EAPCET 2026 · 13 May · Shift 1 MCQ

In gas phase structure of H_2O_2, the dihedral angle is

(A) 94.5°
(B) 101.9°
(C) 111.5°
(D) 90.2°

Answer: (C) 111.5° · The council's preliminary key

Q7 AP EAPCET 2026 · 13 May · Shift 2 MCQ

Which of the following statement is not correct about H_2O_2?

(A) The dihedral angle in solid phase of it is 111.5°
(B) 1 mL of 30% H_2O_2 solution will give 100 mL of oxygen at STP
(C) Urea acts as stabiliser during its storage
(D) It acts both as an oxidising and reducing agent in both acidic and alkaline medium

Answer: (A) The dihedral angle in solid phase of it is 111.5° · The council's preliminary key

Q8 AP EAPCET 2026 · 12 May · Shift 1 MCQ

High purity ($> 99.95\%$) dihydrogen is obtained by the process

(A) The electrolysis of warm $Ba(OH)_2$ between nickel electrodes
(B) The electrolysis of brine solution using Nelson cell
(C) The reaction of steam on CH_4 at 1270K in the presence of Ni catalyst
(D) The coal gasification process

Answer: (A) The electrolysis of warm $Ba(OH)_2$ between nickel electrodes · The council's preliminary key

Q9 TS EAPCET 2026 · 11 May · Shift 1 MCQ

Identify the correct statements from the following

I. Hydrogen bonding is present in liquid water and solid water (ice)

II. Hydrogenation of vegetable oils give a fat called vanaspati

III. Water present in $BaCl_2.2H_2O$ belongs to the type "interstitial water"

The correct answer is

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

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

Q10 TS EAPCET 2026 · 11 May · Shift 2 MCQ

Which of the following reactions give hydrogen gas?

I. Reaction of tin with steam

II. Passage of steam over hot coke

III. Passage of air over hot coke

The correct answer is

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

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

Q11 TS EAPCET 2026 · 10 May · Shift 1 MCQ

The set of elements which can form electron rich hydrides is

EdLoop EAPCET

(A) B, N, O
(B) N, O, F
(C) C, Si, N
(D) Be, B, C

Answer: (B) N, O, F · The council's preliminary key

Q12 TS EAPCET 2026 · 10 May · Shift 2 MCQ

Match the following

List-1 (Method of removal of hardness of water)	List-2 (Chemical used)
A Calgon method	I RSO_3H
B Ion exchange method	II $Ca(OH)_2$
C Clark's method	III $NaAlSiO_4$
D Synthetic resin method	IV $Na_6(PO_3)_6$

The correct answer is

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

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

Q13 TS EAPCET 2026 · 9 May · Shift 1 MCQ

Identify the correct statements from the following

I. Group 15 elements form electron rich hydrides

II. Density of heavy water is higher than that of water

III. Water containing soluble salts of magnesium and calcium is called 'soft water'

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

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

Q14 TS EAPCET 2026 · 9 May · Shift 2 MCQ

Which of the following represents the water-gas shift reaction?

(s = solid, g = gas, l = liquid, catalyst = catalyst)

EdLoop EAPCET

(A) $C(s) + H_2O(g) \xrightarrow{1270\,K} CO(g) + H_2(g)$

(B) $CH_4(g) + H_2O(g) \xrightarrow[Ni]{1270\,K} CO(g) + 3H_2(g)$

(C) $CO(g) + H_2O(g) \xrightarrow[catalyst]{673\,K} CO_2(g) + H_2(g)$

(D) $CH_4(g) + 2O_2(g) \rightarrow CO_2(g) + 2H_2O(l)$

Answer: (C) $CO(g) + H_2O(g) \xrightarrow[catalyst]{673\,K} CO_2(g) + H_2(g)$ · The council's preliminary key

Q15 AP EAPCET 2025 · 27 May · Shift 1 MCQ

Consider the following

Statement I : H_2O_2 acts as an oxidsing as well as reducing agent in both acidic and basic media.

Statement-II : 10V H_2O_2 sample means it contains 6%, (w/v) H_2O_2.

The correct answer is

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

(B) Statement-I is correct, but statement-II is not correct

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

(D) Both statement-I and statement-II are not correct.

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

Q16 AP EAPCET 2025 · 26 May · Shift 1 MCQ

Identify the hydride which is not correctly matched with the example given in brackets ?

(A) Saline hydride - (NaH)

(B) Electron rich hydride - (H_2O)

(C) Electron deficient hydride - (B_2H_6)

(D) Electron precise hydride - (HF)

Answer: (D) Electron precise hydride - (HF) · The council's preliminary key

Q17 AP EAPCET 2025 · 26 May · Shift 2 MCQ

Which of the following property is less for D_2O than H_2O ?

(A) Dielectric constant

(B) Viscosity

(C) Density

(D) Melting point

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

Q18 AP EAPCET 2025 · 24 May · Shift 1 MCQ

Observe the following reactions

I. $N_2(g) + 3H_2(g) \xrightarrow[773\ K,\ 200\ atm]{X} 2NH_3(g)$

II. $CO(g) + H_2O(g) \xrightarrow[673\ K]{Y} CO_2(g) + H_2(g)$

III. $CH_4(g) + H_2O(g) \xrightarrow[1270\ K]{Z} CO(g) + 3H_2(g)$

Catalysts X, Y, Z respectively are

(A) Iron, sodium arsenite, cobalt

(B) Iron, zinc, cobalt

(C) Cobalt, zinc, nickel

(D) Iron, iron chromate, nickel

Answer: (D) Iron, iron chromate, nickel · The council's preliminary key

Q19 AP EAPCET 2025 · 23 May · Shift 1 MCQ

Which set of elements form electron precise hydrides ?

(A) B, Al, Ga

(B) C, Si, Ge

(C) N, P, As

(D) B, C, N

Answer: (B) C, Si, Ge · The council's preliminary key

Q20 AP EAPCET 2025 · 22 May · Shift 1 MCQ

The incorrect statement in the following is

(A) Ionic hydrides are crystalline in nature

(B) Group 14 elements form electron precise hydrides

(C) Covalent hydrides are non-volatile compounds

(D) Generally, saline hydrides react violently with water

Answer: (C) Covalent hydrides are non-volatile compounds · The council's preliminary key

Q21 AP EAPCET 2025 · 22 May · Shift 2 MCQ

4 mL of 'X volume' H_2O_2 on heating gives 80 mL of oxygen at STP. The value of X is

(A) 10

(B) 20

(C) 15

(D) 40

Answer: (B) 20 · The council's preliminary key

Q22 TS EAPCET 2025 · 4 May · Shift 2 MCQ

A sample of water contains $Mg(HCO_3)_2$ and $Ca(HCO_3)_2$. On boiling this water, these hydrogen carbonates are removed as precipitates. The precipitates are

(A) $MgCO_3$, $CaCO_3$
(B) $Mg(OH)_2$, $Ca(OH)_2$
(C) $Mg(OH)_2$, $CaCO_3$
(D) $MgCO_3$, $Ca(OH)_2$

Answer: (C) $Mg(OH)_2$, $CaCO_3$ · The council's preliminary key

Q23 TS EAPCET 2025 · 4 May · Shift 2 MCQ

Observe the following reactions

I. $CO(g) + H_2(g) \xrightarrow{X} HCHO(g)$

II. $CO(g) + 3H_2(g) \xrightarrow{Y} CH_4(g) + H_2O(g)$

The catalysts X and Y in the above reactions are respectively

(A) Cu, Cu
(B) Ni, Ni
(C) Cu, Ni
(D) Ni, Cu

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

Q24 TS EAPCET 2025 · 3 May · Shift 1 MCQ

Identify the electron rich hydrides from the following

(A) B_2H_6, AlH_3
(B) NaH, MgH_2
(C) HCl, H_2S
(D) CH_4, SiH_4

Answer: (C) HCl, H_2S · The council's preliminary key

Q25 TS EAPCET 2025 · 3 May · Shift 2 MCQ

Temperature of maximum density of H_2O is y K and D_2O is x K. $(x - y)$ (in K) is nearly

(A) 7.0
(B) 3.5
(C) 4.0
(D) 8.5

Answer: (A) 7.0 · The council's preliminary key

Q26 TS EAPCET 2025 · 2 May · Shift 2 MCQ

Match the following

List – 1 (Reactions)	List – 2 (Methods)
A $Mg(HCO_3)_2 \rightarrow Mg(OH)_2 \downarrow + 2CO_2 \uparrow$	I Clark's method
B $M^{2+} + Na_4P_6O_{18}^{2-} \rightarrow [Na_2MP_6O_{18}]^{2-} + 2Na^+$	II Ion exchange method
C $Ca(HCO_3)_2 + Ca(OH)_2 \rightarrow 2CaCO_3 + 2H_2O$	III Boiling
D $2NaZ + Ca^{2+}(aq) \rightarrow 2Na^+ + CaZ$ (Z= Zeolite)	IV Calgon's method

The correct answer is

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

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

Q27 AP EAPCET 2024 · 23 May · Shift 1 MCQ

Which of the following sets are correctly matched?

(i) B_2H_6 - electron deficient hydride

(ii) NH_3 - electron precise hydride

(iii) H_2O - electron rich hydride

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

Answer: (A) i, iii only · The council's preliminary key

Q28 AP EAPCET 2024 · 22 May · Shift 1 MCQ

Identify the incorrect statement

(A) Saline hydrides on electrolysis liberate dihydrogen gas at anode
(B) CH_4 is electron precise hydride
(C) Chromium hydride conducts heat and electricity
(D) Hydrides of group 15 elements behave as Lewis acids

Answer: (D) Hydrides of group 15 elements behave as Lewis acids · The council's preliminary key

Q29 AP EAPCET 2024 · 22 May · Shift 2 MCQ

Identify the correct statements from the following

i. Reaction of hydrogen with fluorine occurs even in dark

ii. Manufacture of ammonia by Haber process is an endothermic reaction

iii. HF is electron rich hydride

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

Answer: (A) i, iii only · The council's preliminary key

Q30 AP EAPCET 2024 · 21 May · Shift 1 MCQ

The equation that represents 'coal gasification' is

(A) $\mathrm{CO\,(g) + H_2O\,(g) \xrightarrow[\text{catalyst}]{673\ K} CO_2\,(g) + H_2\,(g)}$
(B) $\mathrm{C\,(s) + H_2O\,(g) \xrightarrow{1270\ K} CO\,(g) + H_2\,(g)}$
(C) $\mathrm{2C\,(s) + O_2\,(g) + 4N_2\,(g) \xrightarrow{1273\ K} 2CO\,(g) + 4N_2\,(g)}$
(D) $\mathrm{CH_4\,(g) + H_2O\,(g) \xrightarrow[Ni]{1270\ K} CO\,(g) + 3H_2\,(g)}$

Answer: (B) $\mathrm{C\,(s) + H_2O\,(g) \xrightarrow{1270\ K} CO\,(g) + H_2\,(g)}$ · The council's preliminary key

---

Q31 AP EAPCET 2024 · 21 May · Shift 1 MCQ

The method for preparation of water gas is

(A) Burning coke in excess of air
(B) Oxidation of C in limited supply of oxygen
(C) Passing steam over hot coke
(D) Passing air over hot coke

Answer: (C) Passing steam over hot coke · The council's preliminary key

---

Q32 AP EAPCET 2024 · 20 May · Shift 2 MCQ

The hydrides of which group elements are examples of electron precise hydrides?

(A) Group 14 elements
(B) Group 13 elements
(C) Group 15 elements
(D) Group 16 elements

Answer: (A) Group 14 elements · The council's preliminary key

---

Q33 AP EAPCET 2024 · 19 May · Shift 2 MCQ

The correct statements among the following are

i. Saline hydrides produce H_2 gas when reacted with water

ii. Presently ~77% of the industrial dihydrogen is produced from coal

iii. Commercially marketed H_2O_2 contains 3% H_2O_2

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

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

Q34 AP EAPCET 2024 · 18 May · Shift 1 MCQ

Aluminium carbide on reaction with D_2O gives $Al(OD)_3$ and 'X'. What is 'X'?

(A) C_2D_2
(B) C_3D_4
(C) C_2D_4
(D) CD_4

Answer: (D) CD_4 · The council's preliminary key

Q35 TS EAPCET 2024 · 11 May · Shift 1 MCQ

Identify the pair of hydrides which have polymeric structure

(A) LiH, NaH
(B) BeH_2, MgH_2
(C) NH_3, CH_4
(D) B_2H_6, H_2O

Answer: (B) BeH_2, MgH_2 · The council's preliminary key

Q36 TS EAPCET 2024 · 10 May · Shift 2 MCQ

The proper conditions of storing H_2O_2 are

(A) Placing in wax lined plastic bottle and kept in dark
(B) Placing in wax lined plastic bottle and exposed to light
(C) Placing in wax lined plastic bottle containing traces of base
(D) Placing in metal vessel and exposed to light

Answer: (A) Placing in wax lined plastic bottle and kept in dark · The council's preliminary key

Q37 TS EAPCET 2024 · 9 May · Shift 2 MCQ

The dihedral angles in gaseous and solid phases of H_2O_2 molecule respectively are

(A) $90.2^\circ, 111.5^\circ$
(B) $111.5^\circ, 90.2^\circ$
(C) $101.9^\circ, 94.8^\circ$
(D) $94.8^\circ, 101.9^\circ$

Answer: (B) $111.5^\circ, 90.2^\circ$ · The council's preliminary key

Q38 AP EAPCET 2023 · 19 May · Shift 1 MCQ

Given below are two statements

Assertion (A) : Protium and deuterium differ in their rates of reactions

Reason (R) : They have different enthalpies of bond dissociation

The correct answer is

(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: (A) Both (A) and (R) are correct and (R) is the correct explanation of (A) · The council's preliminary key

Q39 AP EAPCET 2023 · 17 May · Shift 1 MCQ

The following methods can not be used to remove permanent hardness of water

(A) Treatment with washing soda
(B) Ion – exchange method
(C) Treating with Calgon
(D) Adding calculated amount of lime

Answer: (D) Adding calculated amount of lime · The council's preliminary key

Q40 AP EAPCET 2023 · 17 May · Shift 2 MCQ

Which of the following statement(s) is/are correct

a) NaH is non-volatile hydride

b) MgH_2 is polymeric hydride

c) NH_3 is an electron precise hydride

d) H_2O is an electron rich hydride

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

Answer: (A) a, b & d only · The council's preliminary key

Q41 AP EAPCET 2023 · 16 May · Shift 1 MCQ

Among the following the correct statements are

I. LiH, BeH_2 and MgH_2 are saline hydrides with significant covalent character

II. Saline hydrides are volatile

III. Electron – precise hydrides are Lewis bases

IV. The formula for chromium hydride is CrH

The correct option is

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

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

Q42 AP EAPCET 2023 · 16 May · Shift 2 MCQ

Among the following, the correct statement is

(A) Tritium is radioactive and emits low energy γ – rays
(B) H^+ does not exist freely
(C) Tritium is about one atom per 10^8 atoms of protium
(D) Hydrogen is very reactive compared to halogen

Answer: (B) H^+ does not exist freely · The council's preliminary key

---

Q43 AP EAPCET 2023 · 15 May · Shift 2 MCQ

Among the following, the correctly matched pair is

(A) electron deficient hydride – SiH_4
(B) saline hydride – CrH
(C) electron precise hydride – HF
(D) electron rich hydride – NH_3

Answer: (D) electron rich hydride – NH_3 · The council's preliminary key

EdLoop EAPCET

Q44 TS EAMCET 2023 · 14 May · Shift 1 MCQ

The hydrides of which group elements of the periodic table form electron precise hydrides?

(A) group 12
(B) group 13
(C) group 14
(D) group 16

Answer: (C) group 14 · The council's preliminary key

Q45 TS EAMCET 2023 · 13 May · Shift 1 MCQ

Identify the correct statements about the hydrides

I. In saline hydrides oxidation state of hydrogen is +1

II. La H is an example of interstitial hydride

III. NH_3, H_2O have the tendency to form hydrogen bonds

IV. Electrolysis of molten sodium hydride liberates H_2 gas at cathode

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

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

Q46 TS EAMCET 2023 · 13 May · Shift 2 MCQ

Identify the correct statements from the following

A. In photosynthesis reaction, water is oxidized to oxygen

B. An example for interstitial hydride is MgH_2

C. Sodium hexa metaphosphate is used in the removal of permanent hardness of water

(A) A, B, C
(B) A & B only
(C) B & C only
(D) A & C only

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

Q47 TS EAMCET 2023 · 12 May · Shift 1 MCQ

Consider the following statements about the hydrides

I) Sodium hydride with water liberates oxygen gas

II) Methane, silane are examples of electron precise hydrides

EdLoop EAPCET

III) Ammonia and water molecules are examples of electron deficient hydrides

IV) Hydrides of beryllium and magnesium are polymeric in structure

The correct statements are

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

Answer: (C) II & IV only · The council's preliminary key

Q48 TS EAMCET 2023 · 12 May · Shift 2 MCQ

The chemical name of calgon is

(A) Sodium hexametaphosphite
(B) Potassium hexametaphosphate
(C) Calcium hexametaphosphate
(D) Sodium hexametaphosphate

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

---

Q49 TS EAMCET 2022 · 20 Jul · Shift 1 MCQ

Deionized water is obtained by passing hard water through

(A) Zeolite
(B) Cationic exchanger only
(C) Anionic exchanger only
(D) Both cationic and anionic exchanger one after the other

Answer: (D) Both cationic and anionic exchanger one after the other · The council's preliminary key

---

Q50 TS EAMCET 2022 · 20 Jul · Shift 2 MCQ

$\mathrm{CaC_2} + 2\ \mathrm{D_2O} \longrightarrow$ "P" $+ \mathrm{Ca(OD)_2}$

In the above reaction product " P " is

(A) $\mathrm{C_2H_2}$
(B) $\mathrm{C_2H_4}$
(C) $\mathrm{CD_4}$
(D) $\mathrm{C_2D_2}$

Answer: (D) $\mathrm{C_2D_2}$ · The council's preliminary key

---

Q51 TS EAMCET 2022 · 19 Jul · Shift 1 MCQ

The freezing point of heavy water at 1 atm pressure is

(A) $0\ ^{\circ}C$
(B) $3.8\ ^{\circ}C$
(C) $4.8\ ^{\circ}C$
(D) $1\ ^{\circ}C$

Answer: (B) $3.8\ ^{\circ}C$ · The council's preliminary key

Q52 TS EAMCET 2022 · 19 Jul · Shift 2 MCQ

The correct statements among the following are
a) BeH_2 and MgH_2 are polymeric in nature.
b) LiH is unreactive to oxygen, at moderate temperatures.
c) BeH_2 and MgH_2 possesses significant covalent character.
d) the stability of alkali hydrides follows the order LiH < NaH < KH < RbH < CsH.

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

Answer: (D) a, b, c only · The council's preliminary key

Q53 TS EAMCET 2022 · 18 Jul · Shift 1 MCQ

On passing electric current over molten ionic hydrides of s-block elements,

(A) H_2 is liberated at the anode
(B) H_2 is liberated at the cathode
(C) No reaction takes place
(D) Metal oxidises at the cathode

Answer: (A) H_2 **is liberated at the anode** · The council's preliminary key

Q54 TS EAMCET 2022 · 18 Jul · Shift 2 MCQ

The most effective water softening method is

(A) Lime – soda process
(B) Permutit process
(C) Ion – exchange process
(D) Boiling followed by filtration

Answer: (C) Ion – exchange process · The council's preliminary key

Q55 AP EAPCET 2022 · 8 Jul · Shift 1 MCQ

The number of hydrogen molecules possible from its isotopes is

(A) 3
(B) 6
(C) 1
(D) 4

Answer: (B) 6 · The council's preliminary key

Q56 AP EAPCET 2022 · 7 Jul · Shift 1 MCQ

In long form of periodic table, the d-block element which forms interstitial hydride is

(A) Mo
(B) W
(C) Ni
(D) Cr

Options (4) or (3) were accepted. More than one answer was accepted. · The council's preliminary key

Q57 AP EAPCET 2022 · 7 Jul · Shift 2 MCQ

Match the following:
List - I (Type of hydride): A) Electron precise; B) Saline; C) Electron deficient; D) Electron rich
List - II (Example): i) SiH_4; ii) H_2O; iii) MgH_2; iv) B_2H_6

(A) A - (ii) , B - (iii) , C - (i) , D - (iv)
(B) A - (i) , B - (iii) , C - (iv) , D - (ii)
(C) A - (iv) , B - (ii) , C - (iii) , D - (i)
(D) A - (ii) , B - (i) , C - (iv) , D - (iii)

Answer: (B) A - (i) , B - (iii) , C - (iv) , D - (ii) · The council's preliminary key

Q58 AP EAPCET 2022 · 5 Jul · Shift 2 MCQ

Indentify the correct statements from the following:

(I) The formula of Calgon is $Na_6(PO_3)_6$

(II) Exhausted permutit is regenerated by aqueous KCl solution.

(III) Calcium stearate is soluble in water.

(IV) In ice crystals, each oxygen is surrounded by four oxygen atoms.

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

Answer: (B) I & IV only · The council's preliminary key

EdLoop EAPCET

Q59 AP EAPCET 2022 · 4 Jul · Shift 2 MCQ

The empirical formula of Calgon is

(A) Na_2PO_3
(B) NaP_2O_3
(C) $NaPO_3$
(D) Na_3PO_3

Answer: (C) $NaPO_3$ · The council's preliminary key

Q60 AP EAPCET 2021 · 24 Aug · Shift 1 MCQ

Hydride gap corresponds to elements of _____

(A) Group 7,8,9
(B) Group 13
(C) Group 15,16,17
(D) Group 14

Answer: (A) Group 7,8,9 · The council's preliminary key

Q61 AP EAPCET 2021 · 24 Aug · Shift 2 MCQ

The volume strength (in L) of $3\,N$ H_2O_2 is approximately _____

(A) 3
(B) 8
(C) 17
(D) 9

Answer: (C) 17 · The council's preliminary key

Q62 AP EAPCET 2021 · 19 Aug · Shift 1 MCQ

Which metal oxide among the following gives H_2O_2 on treatment with dilute acid?

(A) BaO_2
(B) RbO_2
(C) MnO_2
(D) Al_2O_3

Answer: (A) BaO_2 · The council's preliminary key

Q63 AP EAPCET 2021 · 19 Aug · Shift 2 MCQ

Assertion(A): The colour of old lead paintings can be restored by washing them with a dilute solution of H_2O_2.
Reason(R): Hydrogen peroxide reduces PbS to Pb

EdLoop EAPCET

(A) Both A and R are true and R is a correct explanation for A
(B) Both A and R are true but R is not a correct explanation for A
(C) A is true, R is false
(D) A is false, R is true

Answer: (C) A is true, R is false · The council's preliminary key

---

Q64 TS EAMCET 2021 · 6 Aug · Shift 1 MCQ

The compound used as a moderator in nuclear reactors is

(A) BeD_2
(B) D_2O_2
(C) D_2O
(D) NaD

Answer: (C) D_2O · The council's preliminary key

Q65 TS EAMCET 2021 · 6 Aug · Shift 2 MCQ

The ratio of the viscosity (in centipoise) of D_2O to that of H_2O at $25^\circ C$ is

(A) 1
(B) 1.1
(C) 1.24
(D) 0.9

Answer: (C) 1.24 · The council's preliminary key

Q66 TS EAMCET 2021 · 5 Aug · Shift 1 MCQ

Match the following.
Column-1 (Reaction) Column-2 (Main product)
A) SO_3 + heavy water $\rightarrow$ I) C_2D_2
B) CaC_2 + heavy water (excess) $\rightarrow$ II) CD_4
C) Al_4C_3 + heavy water (large excess) $\rightarrow$ III) D_2SO_3
IV) C_2D_4
V) D_2SO_4
The correct match is

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

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

EdLoop EAPCET

Q67 TS EAMCET 2021 · 5 Aug · Shift 2 MCQ

The sum of the total number of neutrons present in protium, deuterium and tritium is

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

Answer: (B) 3 · The council's preliminary key

Q68 TS EAMCET 2021 · 4 Aug · Shift 2 MCQ

The major products during the removal of temporary hardness of water are

(A) $Mg(OH)_2$; $Ca(OH)_2$
(B) $MgCO_3$; $CaCO_3$
(C) $Mg(OH)_2$; $CaCO_3$
(D) $MgCO_3$; $Ca(OH)_2$

Answer: (C) $Mg(OH)_2$; $CaCO_3$ · The council's preliminary key

Q69 AP EAMCET 2020 · 23 Sep · Shift 1 MCQ

Which of the following statements is not true for hydrogen?
1) It exists as a diatomic molecule
2) It has one electron in the outermost shell
3) It can lose an electron to form a cation which can freely exist
4) It cannot form ionic compounds

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

Answer: (C) 3 · The council's preliminary key

Q70 AP EAMCET 2020 · 22 Sep · Shift 1 MCQ

The correct order of increasing ionic character among LiH, NaH, KH, RbH, CsH is

(A) $LiH < NaH < CsH < KH < RbH$
(B) $LiH < NaH < KH < RbH < CsH$
(C) $RbH < CsH < NaH < KH < LiH$
(D) $NaH < CsH < RbH < LiH < KH$

Answer: (B) $LiH < NaH < KH < RbH < CsH$ · The council's preliminary key

EdLoop EAPCET

Q71 AP EAMCET 2020 · 21 Sep · Shift 2 MCQ

Elements of which of the following group(s) of periodic-table do not form hydrides?

(A) Groups- 7, 8, 9
(B) Group- 13
(C) Groups- 15, 16, 17
(D) Group- 14

Answer: (A) Groups- 7, 8, 9 · The council's preliminary key

Q72 AP EAMCET 2020 · 18 Sep · Shift 2 MCQ

A commercial sample of H_2O_2 marked as 100 volume hydrogen peroxide means

(A) 1 ml of H_2O_2 will give 100 ml of O_2 at STP
(B) 1 L of H_2O_2 will give 100 ml of O_2 at STP
(C) 1 L of H_2O_2 will give 22.4 L of O_2 at STP
(D) 1 ml of H_2O_2 will give 1 $mole$ of O_2 at STP

Answer: (A) 1 ml of H_2O_2 will give 100 ml of O_2 at STP · The council's preliminary key

Q73 AP EAMCET 2020 · 17 Sep · Shift 1 MCQ

In which of the following reactions of H_2O_2 acts as an oxidizing agent (either in acidic, alkaline or neutral media)?

i. $2\,Fe^{2+} + H_2O_2 \longrightarrow$
ii. $2\,MnO_4^- + 6\,H^+ + 5\,H_2O_2 \longrightarrow$
iii. $I_2 + H_2O_2 + 2\,OH^- \longrightarrow$
iv. $Mn^{2+} + H_2O_2 \longrightarrow$

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

Answer: (B) (i), (iv) · The council's preliminary key

Q74 AP EAMCET 2020 · 17 Sep · Shift 2 MCQ

Hydrogen peroxide is _____

EdLoop EAPCET

(A) An oxidizing agent
(B) A reducing agent
(C) Both an oxidizing and a reducing agent
(D) Neither oxidizing nor reducing agent

Answer: (C) Both an oxidizing and a reducing agent · The council's preliminary key

Q75 TS EAMCET 2020 · 11 Sep · Shift 2 MCQ

Dihydrogen can be prepared by which of the following reactions
(i) Reaction of granulated Zn with dil. HCl
(ii) Reaction of Zn with aq. NaOH
(iii) By heating calcium hydrogen carbonate

(A) (i) and (iii) only
(B) (i), (ii) and (iii)
(C) (i) and (ii) only
(D) (ii) and (iii) only

Answer: (C) (i) and (ii) only · Official TGCHE final key

Q76 TS EAMCET 2020 · 10 Sep · Shift 1 MCQ

What is the % strength of 22.4 volume of H_2O_2 solution?

(A) 3.4%
(B) 2.5%
(C) 5%
(D) 6.8%

Answer: (D) 6.8% · Official TGCHE final key

Q77 TS EAMCET 2020 · 10 Sep · Shift 1 MCQ

Hard water contains ion of

(A) Zinc
(B) Magnesium and calcium
(C) Iron
(D) Iron and manganese

Answer: (B) Magnesium and calcium · Official TGCHE final key

Q78 TS EAMCET 2020 · 10 Sep · Shift 2 MCQ

With reference to the redox properties of hydrogen peroxide (H_2O_2), which of these reactions are feasible?
(i) $2Fe^{2+} + 2H^+ + H_2O_2 \rightarrow 2Fe^{3+} + 2H_2O$

(ii) $2MnO_4^- + 6H^+ + 5H_2O_2 \rightarrow 2Mn^{2+} + 8H_2O + 5O_2$
(iii) $2Fe^{2+} + H_2O_2 \rightarrow 2Fe^{3+} + 2OH^-$
(iv) $2MnO_4^- + 3H_2O_2 \rightarrow 2MnO_2 + 2H_2O + 3O_2 + 2OH^-$

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

Answer: (C) (i), (ii), (iii) and (iv) · Official TGCHE final key

Q79 TS EAMCET 2020 · 10 Sep · Shift 2 MCQ

Which among the following is/are primary component(s) of the synthesis gas?

(A) Carbon monoxide and Hydrogen
(B) Nitrogen and Hydrogen
(C) Methane and Hydrogen
(D) Carbon monoxide

Answer: (A) Carbon monoxide and Hydrogen · Official TGCHE final key

Q80 TS EAMCET 2020 · 9 Sep · Shift 1 MCQ

Hydrogen peroxide is stored away from light because it can get decomposed when exposed to light as

(A) H_2O and O_2
(B) H_2 and O_2
(C) H_2O and H_2
(D) H_2O and O_3

Answer: (A) H_2O and O_2 · Official TGCHE final key

Q81 TS EAMCET 2020 · 9 Sep · Shift 2 MCQ

Match the following methods for treating hardness of water with their corresponding reagents used
A) Treatment with washing soda
B) Calgon's method
C) Clark's method
D) Zeolite / Permutit process
I) $Ca(OH)_2$
II) Na_2CO_3
III) $NaAlSiO_4$
IV) $Na_6P_6O_{18}$
The correct match is

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

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

Q82 TS EAMCET 2019 · 4 May · Shift 1 MCQ

If one wants to make methanol out of synthesis gas, what should be the ratio of the gaseous components in the synthesis gas?

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

Answer: (A) 1:2 · Official TGCHE final key

Q83 TS EAMCET 2019 · 4 May · Shift 2 MCQ

Which one of the following gives highest volume of O_2 at STP on complete decomposition?

(A) 2 mL of 100 vol. H_2O_2
(B) 500 mL of 30 vol. H_2O_2
(C) 1 L of 10 vol. H_2O_2
(D) 100 mL of 20 vol. H_2O_2

Answer: (B) 500 mL of 30 vol. H_2O_2 · Official TGCHE final key

Q84 AP EAMCET 2019 · 23 Apr · Shift 1 MCQ

Three vessels (A, B, C) contain H_2O_2 solution. In vessel A, 500 mL of 10 vol H_2O_2 is present. 100 mL of 30 vol H_2O_2 is present in vessel B. Vessel C is filled with 250 mL of 2M H_2O_2. The weight (in g) of H_2O_2 present in these vessels follows the order

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

Answer: (A) C > A > B · Official APSCHE final key

Q85 AP EAMCET 2019 · 21 Apr · Shift 1 MCQ

KO_2, reacts with water to form A, B and C. B forms C when it reacts with iodine in basic medium. What are B and C respectively?

(A) KOH, H_2O_2
(B) K_2O_2, H_2O_2
(C) KOH, O_2
(D) H_2O_2, O_2

Answer: (D) H_2O_2, O_2 · Official APSCHE final key

Q86 AP EAMCET 2019 · 21 Apr · Shift 2 MCQ

Which of the following is water-gas shift reaction?

(A) $C(s) + H_2O(g) \xrightarrow{1270\ K} CO(g) + H_2(g)$
(B) $CH_4(g) + H_2O(g) \xrightarrow{1270\ K} CO(g) + 3H_2(g)$
(C) $CO(g) + H_2O(g) \xrightarrow[\text{iron chromate}]{673\ K} CO_2(g) + H_2(g)$
(D) $2H_2O(l) \xrightarrow[\text{traces of acid/base}]{\text{electrolysis}} 2H_2(g) + O_2(g)$

Answer: (C) $CO(g) + H_2O(g) \xrightarrow[\text{iron chromate}]{673\ K} CO_2(g) + H_2(g)$ · Official APSCHE final key

Q87 AP EAMCET 2019 · 20 Apr · Shift 1 MCQ

Which one of the following properties has same value for H_2 and D_2?

(A) density
(B) enthalpy of bond dissociation
(C) bond length
(D) melting point

Answer: (C) bond length · Official APSCHE final key

Q88 AP EAMCET 2019 · 20 Apr · Shift 2 MCQ

Identify the correct statements from the following
I) B_2H_6 is an electron deficient hydride
II) NH_3 is an electron rich hydride
III) NaH is a covalent hydride
IV) $YbH_{2.55}$ is an interstitial hydride

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

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

Q89 TS EAMCET 2018 · 7 May · Shift 1 MCQ

Assertion (A): Ferricyanide ion oxidises H_2O_2 to H_2O in basic medium
Reason (R): Oxidation product of H_2O_2 is O_2
Which of the following is true?

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

Answer: (D) (A) is false, but (R) is true · The council's preliminary key

Q90 TS EAMCET 2018 · 5 May · Shift 1 MCQ

Identify the reactions in which H_2 is liberated
a) $Zn + NaOH_{(aq)} \longrightarrow$
b) $HCOOH \xrightarrow[\text{conc. } H_2SO_4]{373\,K}$
c) $CH_{4(g)} + H_2O_{(g)} \xrightarrow[Ni]{1270\,K}$
d) $Zn + H^+_{(aq)} \longrightarrow$
e) $C_{(s)} + H_2O_{(g)} \xrightarrow{1270\,K}$

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

Answer: (A) a, c, d, e · The council's preliminary key

Q91 TS EAMCET 2018 · 4 May · Shift 2 MCQ

The natural relative abundance of isotopes of hydrogen is

(A) ^1_1H = 99.985%; ^2_1D = 0.015%
(B) ^1_1H = 99.985%; ^2_1D = 0.015%; $^3_1T = 10^{-16}$%
(C) ^1_1H = 99.100%; ^2_1D = 0.900%
(D) ^1_1H = 99.900%; ^2_1D = 0.010%; $^3_1T = 10^{-15}$%

Answer: (B) ^1_1H = 99.985%; ^2_1D = 0.015%; $^3_1T = 10^{-16}$% · The council's preliminary key

Q92 AP EAMCET 2018 · 24 Apr · Shift 1 MCQ

Identify the correct statements from the following.
i. The number of hydrogen bonded water molecules in copper sulphate pentahydrate is one
ii. Lanthanum and zirconium form non-stoichiometric hydrides.
iii. In solid form of H_2O, each oxygen is surrounded by six oxygens in octahedral positions at a distance of 276 pm.

(A) i, ii, iii
(B) i, ii
(C) ii, iii
(D) i, iii

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

Q93 AP EAMCET 2018 · 24 Apr · Shift 2 MCQ

The correct statements from the following are :
i. $Ca(OH)_2$ is used in Clark's method of removal of temporary hardness of water
ii. 100 mL of 10 vol H_2O_2, on complete decomposition liberates 1L of oxygen at STP.
iii. Urea can be added to the solution of H_2O_2 as stabilizer.

(A) i, ii
(B) ii, iii
(C) i, iii
(D) i, ii, iii

Answer: (D) i, ii, iii · The council's preliminary key

Q94 AP EAMCET 2018 · 23 Apr · Shift 1 MCQ

Match the following
List - I
A) Electron deficient hydride
B) Electron precise hydride
C) Electron rich hydride
D) Saline hydride
List - II
I) CH_4
II) B_2H_6
III) CaH_2
IV) $NiH_{0.6}$
V) PH_3
The correct answer is

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

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

EdLoop EAPCET

Q95 AP EAMCET 2018 · 23 Apr · Shift 2 MCQ

In which of the following reactions, oxygen is not liberated?

(A) Reaction of HOCl with H_2O_2
(B) Reaction of acidified $KMnO_4$ with H_2O_2
(C) Reaction of iodine with H_2O_2 in basic medium
(D) Reaction of lead sulphide with H_2O_2

Answer: (D) Reaction of lead sulphide with H_2O_2 · The council's preliminary key

Q96 AP EAMCET 2018 · 22 Apr · Shift 1 MCQ

Which of the following statements are correct?
a) NaH(s) reacts violently with water to form NaOH and H_2
b) An example for electron rich hydride is NH_3
c) Nickel forms saline hydride

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

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

Q97 AP EAMCET 2018 · 22 Apr · Shift 1 MCQ

The environmental friendly chemical now-a-days used for bleaching the paper in the presence of a suitable catalyst is

(A) Chlorine
(B) Sulphur dioxide
(C) Hydrogen peroxide
(D) Bleaching powder

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

Q98 AP EAMCET 2018 · 22 Apr · Shift 2 MCQ

Identify the correct statements from the following
a) Zn reacts with dilute HCl and aqueous NaOH solution separately and liberates hydrogen
b) Ti and Zr form interstitial hydrides
c) The viscosity of H_2O is more than the viscosity of D_2O

EdLoop EAPCET

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

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

Q99 TS EAMCET 2017 · 12 May · Offline MCQ

Reaction of calgon with hard water containing Ca^{2+} ions produce

(A) $[Na_2CaP_6O_{18}]^{2-}$
(B) $Ca_2(PO_4)_3$
(C) $CaCO_3$
(D) $CaSO_4$

Answer: (A) $[Na_2CaP_6O_{18}]^{2-}$ · The council's preliminary key

Q100 AP EAMCET 2017 · 25 Apr · Shift 1 MCQ

Identify the statements which are **not** correct from the following:
a) In the structure of ice each oxygen atom is surrounded by 4 other 'O' atoms
b) Temporary hardness of water is due to dissolved $NaHCO_3$
c) In the reaction of acidified $KMnO_4$ and H_2O_2, H_2O_2 acts as oxidising agent
d) $3\ gL^{-1}$ H_2O_2 is equal in strength to 100 volume H_2O_2

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

Answer: (B) b, c, d · The council's preliminary key

Q101 AP EAMCET 2017 · 25 Apr · Shift 2 MCQ

Two litres of 15 volume solution of H_2O_2 on complete decomposition liberated x litres of O_2 at STP. What is the value of x (in litres)?

(A) 15
(B) 3.0
(C) 1.5
(D) 30

Answer: (D) 30 · The council's preliminary key

Q102 AP EAMCET 2017 · 24 Apr · Shift 1 MCQ

How many millilitres of $3\%\ \left(\frac{w}{v}\right)$ H_2O_2 solution is required to get 150 mL of oxygen at STP?

(A) 10
(B) 20
(C) 30
(D) 15

Answer: (D) 15 · The council's preliminary key

Q103 AP EAMCET 2017 · 24 Apr · Shift 2 MCQ

In which of the following reactions, O_2 is not liberated ?

(A) $MnO_4^- + H_2O_2 + H^+ \longrightarrow$
(B) $H_2O_2 + I_2 + OH^- \longrightarrow$
(C) $HOCl + H_2O_2 \longrightarrow$
(D) $Fe^{2+}(aq) + H^+(aq) + H_2O_2 \longrightarrow$

Answer: (D) $Fe^{2+}(aq) + H^+(aq) + H_2O_2 \longrightarrow$ · The council's preliminary key

Q104 AP EAMCET 2016 · 29 Apr · Offline MCQ

Calgon is

(A) Na_2HPO_4
(B) Na_3PO_4
(C) $Na_6P_6O_{18}$
(D) NaH_2PO_4

Answer: (C) $Na_6P_6O_{18}$ · The council's preliminary key

Q105 AP EAMCET 2014 · 22 May · Offline MCQ

Temporary hardness of water is removed in Clark's process by adding _____.

(A) Caustic Soda
(B) Calgon
(C) Borax
(D) Lime

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

Q106 AP EAMCET 2013 · 10 May · Offline MCQ

Observe the following statements :

1. Heavy water is harmful for the growth of animals
2. Heavy water reacts with Al_4C_3 and forms deuterated acetylene
3. $BaCl_2.2D_2O$ is an example of interstitial deuterate

EdLoop EAPCET

The correct statements are :

(A) 1 & 3
(B) 1 & 2
(C) 1, 2 & 3
(D) 2 & 3

Answer: (A) 1 & 3 · The council's preliminary key

Q107 AP EAMCET 2012 · 12 May · Offline MCQ

The product(s) formed when H_2O_2 reacts with disodium hydrogen phosphate is (are)

(A) P_2O_5, Na_3PO_4
(B) $Na_2HPO_4 \cdot H_2O_2$
(C) $NaH_2PO_4 \cdot H_2O$
(D) $Na_2HPO_4 \cdot H_2O$

Answer: (B) $Na_2HPO_4 \cdot H_2O_2$ · Official APSCHE final key

---

Q108 AP EAMCET 2011 · 8 May · Offline MCQ

Calcium carbide is hydrolyzed using heavy water. What are the products formed ?

(A) $Ca(OH)_2, C_2D_2$
(B) $Ca(OD)_2, C_2D_2$
(C) $Ca(OD)_2, CD_4$
(D) $Ca(OH)_2, CD_4$

Answer: (B) $Ca(OD)_2, C_2D_2$ · The council's preliminary key

EdLoop EAPCET