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CHEMISTRY · EAPCET (EAMCET)

s-Block Elements

Previous Year Questions with answers

163 questions · **132** papers · **2010–2026** · newest paper first

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What is in this PDF: every s-Block Elements 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.

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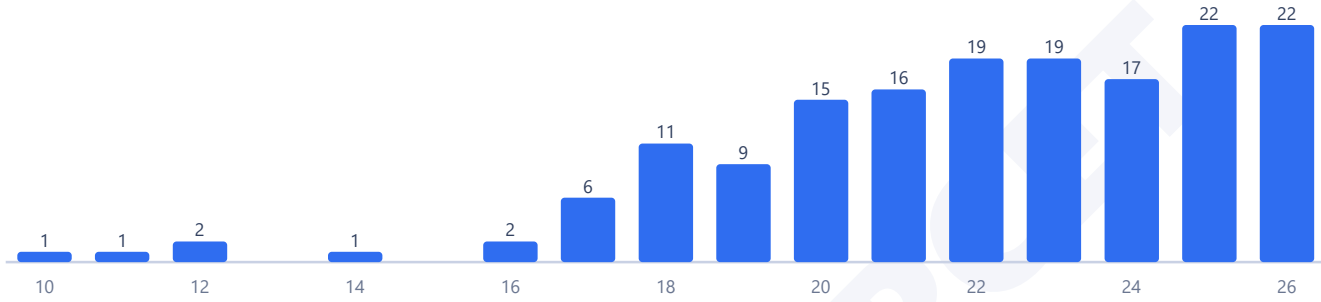
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Chapter at a glance

3.2%	163	72 of 77	163 / 0
of Chemistry questions, 2022–2026	questions, 2010–2026	papers asked it, 2022–2026	MCQ / numerical, 2010–2026

Trend. Steady: 1.3 questions per paper in 2024–2026 against 1.2 in 2022–2023.

Questions per year



Counts are the questions we hold: 163 in 132 papers. No question in this chapter was found repeated across papers.

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

Alkaline Earth Metals	86
Alkali Metals	77

How often it comes up

The s-Block Elements stands at rank 12 among the 31 chemistry chapters during the modern 2022 to 2026 period. Across our complete historical exam dataset from 2010 through 2026, the chapter delivered 163 questions across 149 papers, appearing in 132 of those tests to capture 2.7 percent of the subject with an average of 1.1 questions per paper. In the recent five-year timeframe from 2022 to 2026, it contributed 99 questions across 77 sittings, appearing in 72 papers to post 1.3 questions per paper and a 3.2 percent subject share.

The chapter has featured in every exam year since 2022, though it was absent from five papers across that five-year span. Looking at the two regional state streams between 2022 and 2026, AP examinations yielded 50 questions across 48 papers (appearing in 44 papers, 1.0 question per paper, 2.6 percent share), while TS examinations generated 49 questions across 29 papers (appearing in 28 papers, 1.7 questions per paper, 4.2 percent share).

During earlier testing between 2010 and 2021, papers included 64 questions across 72 sittings (appearing in 60 tests), delivering 0.9 questions per paper and a 2.2 percent subject share. Over the latest three exam years from 2024 to 2026, question banks carried 61 questions across 46 sittings (with 45 papers containing questions), yielding 1.3 questions per test and 3.3 percent share. 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 chapter divide between the two constituent groups of electropositive metals:

- **Alkaline Earth Metals** leads the chapter with 86 questions overall and 53 during the recent window through 2026. Frequent problem formats focus on group two solubility trends (hydroxide solubility increasing down the group while sulphate and carbonate solubilities decrease), thermal stability of carbonates and nitrates, anomalous behavior of beryllium, diagonal relationship between beryllium and aluminium, and industrial compounds of calcium including quicklime, slaked lime, plaster of Paris, and cement.

- **Alkali Metals** accounts for 77 questions across the archive, with 46 appearing between 2022 and 2026. Key themes include group one flame colours, reaction with air to yield normal oxides, peroxides, and superoxides, liquid ammonia solutions exhibiting blue colour and paramagnetism, anomalous behavior of lithium, diagonal relationship between lithium and magnesium, and industrial manufacture of sodium carbonate by the Solvay process.

What the questions look like

Examiners test exact chemical observations and periodic inversions. A classic question presents group two compounds and asks you to rank the thermal stabilities of their carbonates or the aqueous solubilities of their sulphates and hydroxides. Beryllium frequently appears because both its oxide and hydroxide are amphoteric, unlike the purely basic oxides of heavier alkaline earth metals.

Reaction sequences are equally prevalent. You will encounter questions detailing a series of transformations starting with calcium metal or limestone, asking you to identify intermediate products and evaluate statements regarding their chemical behaviour. Questions on alkali metals frequently test the Solvay ammonia-soda process, asking which substance is not consumed as an ultimate raw material or why potassium carbonate cannot be prepared by this method due to high potassium bicarbonate solubility.

How to practise it

Pay close attention to diagonal relationships. Lithium resembles magnesium rather than heavier alkali metals: both form normal oxides on heating in oxygen, both form nitrides by direct combination with dinitrogen, and their carbonates decompose thermally to release carbon dioxide. Similarly, beryllium resembles aluminium: both form covalent, hydrolysable chlorides, their oxides and hydroxides are amphoteric, and both form fluoro-complex anions.

Memorise the flame colours: lithium gives crimson red, sodium gives yellow, potassium gives pale violet, rubidium gives red violet, and caesium gives blue. For group two, calcium gives brick red, strontium gives crimson, and barium gives apple green, while beryllium and magnesium do not impart colour to the flame because their excitation energies are too high for visible excitation.

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Q1 AP EAPCET 2026 · 18 May · Shift 1 MCQ

Observe the following unbalanced reactions

$$KO_2 \xrightarrow{HOH} X + Y \uparrow + KOH$$

$$KMnO_4 \xrightarrow[\text{basic medium}]{X} Y + Z + KOH + H_2O$$

Y and Z are respectively

(A) O_2, MnO

(B) O_2, MnO_2

(C) O_3, MnO_2

(D) O_3, MnO

Answer: (B) O_2, MnO_2 · The council's preliminary key

Q2 AP EAPCET 2026 · 18 May · Shift 1 MCQ

Identify the sets in which both the metals react with water?

I. Be, Mg
II. Li, Mg
III. Na, K
IV. K, Ca

Correct answer is

(A) II, IV only

(B) II, III, IV only

(C) III, IV only

(D) I, II only

Answer: (B) II, III, IV only · Checked by our team

Q3 AP EAPCET 2026 · 18 May · Shift 2 MCQ

Which of the given statements are not correct for Li and Mg?

I. Both Li and Mg mainly give monoxides only

II. Both Li and Mg react slowly with water

III. Both Li and Mg give flame test

IV. On combustion in air Mg forms Mg_3N_2 but Li does not form Li_3N

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

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

Q4 AP EAPCET 2026 · 15 May · Shift 1 MCQ

An element X reacts with air to form monoxide and nitride. This oxide is amphoteric. It can be converted to its chloride by heating with carbon and chlorine. Which of the following is correct for X?

(A) The oxide of X has rock-salt structure
(B) X belongs to group I of the periodic table
(C) X shows diagonal relationship with aluminium
(D) Carbonate of X is thermally very stable

Answer: (C) X shows diagonal relationship with aluminium · The council's preliminary key

Q5 AP EAPCET 2026 · 15 May · Shift 2 MCQ

X, Y, Z are calcium compounds. X is a primary raw material for manufacturing cement. Y is used to recover ammonia in Solvay process and Z is employed for making casts of statues. Identify the incorrect statement from the following

(A) Y is prepared by adding water to X
(B) Y is also used as a starting material to manufacture bleaching powder
(C) Z is formed by heating gypsum at 373 K
(D) X with P_4O_{10} forms calcium phosphate

Answer: (C) Z is formed by heating gypsum at 373 K · The council's preliminary key

Q6 AP EAPCET 2026 · 14 May · Shift 1 MCQ

When lithium nitrate and calcium nitrate are heated in separate test tubes, which of the following observations would be identical for both?

(A) Evolution of colorless, non-flammable gas
(B) Evolution of brown fumes and gas that supports combustion
(C) The formation of a metal that reacts vigorously with water
(D) Gases are not liberated

Answer: (B) Evolution of brown fumes and gas that supports combustion · The council's preliminary key

Q7 AP EAPCET 2026 · 14 May · Shift 2 MCQ

Which of the following is not the raw material in Solvay process?

(A) NH_3
(B) $NaCl$
(C) $CaCl_2$
(D) $Ca(OH)_2$

Answer: (C) $CaCl_2$ · The council's preliminary key

Q8 AP EAPCET 2026 · 13 May · Shift 1 MCQ

Which one of the carbonates is unstable in air and is kept in CO_2 atmosphere to avoid decomposition?

(A) $MgCO_3$
(B) $CaCO_3$
(C) $BaCO_3$
(D) $BeCO_3$

Answer: (D) $BeCO_3$ · The council's preliminary key

Q9 AP EAPCET 2026 · 13 May · Shift 2 MCQ

Identify the incorrect statement regarding alkali metal halides (M = alkali metal)

(A) The order of melting points is $MF > MCl > MBr > MI$
(B) The order of boiling points is $MI > MBr > MCl > MF$
(C) Low solubility of LiF in water is due to its high lattice energy
(D) Low solubility of CsI is due to smaller hydration enthalpy of its two ions

Answer: (B) The order of boiling points is $MI > MBr > MCl > MF$ · The council's preliminary key

Q10 AP EAPCET 2026 · 12 May · Shift 1 MCQ

Identify the incorrect statement from the following

(A) Among the oxides of alkaline earth metals, oxide of Be is only amphoteric in nature
(B) Reducing power of alkaline earth metals is less than those of their corresponding alkali metals
(C) All alkaline earth metals combine with hydrogen upon heating and form MH_2 type of hydrides
(D) All alkaline earth metals liberate H_2 on reaction with acids

Answer: (C) All alkaline earth metals combine with hydrogen upon heating and form MH_2 **type of hydrides** · The council's preliminary key

Q11 AP EAPCET 2026 · 12 May · Shift 2 MCQ

The oxide and hydroxide of which metal are amphoteric in nature?

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(A) Li
(B) Na
(C) Mg
(D) Be

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

Q12 TS EAPCET 2026 · 11 May · Shift 1 MCQ

The pair of elements which do not give super oxides with excess of oxygen is

(A) K, Rb
(B) Na, K
(C) Li, Mg
(D) K, Ba

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

Q13 TS EAPCET 2026 · 11 May · Shift 1 MCQ

Which of the following is not correctly matched with its common name?

(A) Dead burnt plaster – $CaSO_4$
(B) Quick lime – CaO
(C) Slaked lime – $Ca(OH)_2$
(D) Gypsum – $CaSO_4 \cdot \frac{1}{2}H_2O$

Answer: (D) Gypsum – $CaSO_4 \cdot \frac{1}{2}H_2O$ · The council's preliminary key

Q14 TS EAPCET 2026 · 11 May · Shift 2 MCQ

The chemical prepared by Solvay's process is X. The chemical prepared by Castner Kellner process is Y. X and Y are respectively

(A) $NaOH, NaCl$
(B) $NaNO_3, NaOH$
(C) $NaOH, Na_2CO_3$
(D) $Na_2CO_3, NaOH$

Answer: (D) $Na_2CO_3, NaOH$ · The council's preliminary key

Q15 TS EAPCET 2026 · 11 May · Shift 2 MCQ

Given below are two statements

Statement-I: The solubility of $CaCl_2$, $MgCl_2$ in water is more than that of NaCl

Statement-II: $Ca(NO_3)_2$ on heating gives three products

The correct answer is

(A) Both statements I and 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 statements I and II are not correct

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

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Q16 TS EAPCET 2026 · 10 May · Shift 1 MCQ

The reaction of lithium with water is less vigorous than that of sodium. It is due to

I. Most negative $E^{\ominus}$ value of $Li^{+}|Li$

II. Small size of Li

III. Very high hydration energy of Li^{+}

The correct answer is

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

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

Q17 TS EAPCET 2026 · 10 May · Shift 1 MCQ

Which of the following statements are correct about salts of oxoacids of group 2 elements?

I. Their carbonates are generally insoluble in water

II. Solubility of their sulphates in water decreases from $CaSO_4$ to $BaSO_4$

III. Their nitrates undergo decomposition on heating

The correct answer is

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

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

Q18 TS EAPCET 2026 · 10 May · Shift 2 MCQ

The similarities between beryllium and aluminium are

I. The chlorides of both have Cl^{-} bridged structure in vapour phase

II. Both have strong tendency to form complexes

III. Maximum covalency of both is 6

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The correct answer is (only =)

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

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

Q19 TS EAPCET 2026 · 9 May · Shift 1 MCQ

Observe the following sequence of reactions and identify the correct statements about W, X and Z

$$\mathrm{Ca} + \mathrm{O_2} \xrightarrow{\Delta} \mathrm{X} \xrightarrow{\mathrm{H_2O}} \mathrm{Y} \xrightarrow[-\mathrm{H_2O}]{\mathrm{CO_2}} \mathrm{Z} \xrightarrow[\text{excess } \mathrm{CO_2}]{\mathrm{H_2O}} \mathrm{W}$$

I. W is soluble in water

II. Z is used as mild abrasive in toothpaste

III. X is slaked lime

The correct answer is

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

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

Q20 TS EAPCET 2026 · 9 May · Shift 1 MCQ

Given below are two statements

Statement-I: Solubility of alkaline earth metal hydroxides in water increases down the group

Statement-II: Solubility of alkaline earth metal sulphates in water increases down the group

The correct answer is

(A) Both statements I and 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 statements I and II are not correct

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

Q21 TS EAPCET 2026 · 9 May · Shift 2 MCQ

Which of the following is not the correct statement about group 1 elements?

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(A) Hydration enthalpy is highest for Li^+ ion
(B) Boiling point is highest for caesium
(C) Density of potassium is lesser than that of sodium and rubedium
(D) They have inert gas configuration in (n – 1) shell

Answer: (B) Boiling point is highest for caesium · The council's preliminary key

Q22 TS EAPCET 2026 · 9 May · Shift 2 MCQ

Which of the following statements are correct?

I. Liquid sodium metal is used as coolant in fast breeder nuclear reactor

II. LiCl is deliquescent

III. LiF and CsI have low solubility in water

The correct answer is (only)

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

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

Q23 AP EAPCET 2025 · 27 May · Shift 1 MCQ

Identify the correct statements from the following

I. All alkaline earth metals give hydrides on heating with hydrogen.

II. Calcium hydroxide is used to purify sugar

III. $BeCl_2$ is a dimer in gaseous phase.

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

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

Q24 AP EAPCET 2025 · 26 May · Shift 1 MCQ

In Solvay process, NH_3 is recovered when the solution containing NH_4Cl is treated with compound 'X'. What is 'X' ?

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(A) $Ca(OH)_2$
(B) $CaCl_2$
(C) $NaOH$
(D) $NaCl$

Answer: (A) $Ca(OH)_2$ · The council's preliminary key

Q25 AP EAPCET 2025 · 26 May · Shift 2 MCQ

Identify the correct statements from the following

A) Among alkali metal ions, Li^+ has highest hydration enthalpy

B) Boiling point of alkali metals increases from Li to Cs

C) Density of K is less than that of Na and Rb

D) Li has strong tendency to form superoxide

The correct answer is

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

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

Q26 AP EAPCET 2025 · 24 May · Shift 1 MCQ

Consider the following

Statement-I : Both $BeSO_4$ and $MgSO_4$ are readily soluble in water.

Statement-II : Among the nitrates of alkaline earth metals, only $Be(NO_3)_2$ on strong heating gives its oxide, NO_2 and O_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

Q27 AP EAPCET 2025 · 23 May · Shift 1 MCQ

The correct order of density of Be, Mg, Ca, Sr is

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(A) $Sr > Be > Mg > Ca$
(B) $Sr > Ca > Mg > Be$
(C) $Be > Mg > Ca > Sr$
(D) $Be > Mg > Sr > Ca$

Answer: (A) $Sr > Be > Mg > Ca$ · The council's preliminary key

Q28 AP EAPCET 2025 · 23 May · Shift 2 MCQ

Which chloride does not exist as hydrate ?

(A) $MgCl_2$
(B) $CaCl_2$
(C) $LiCl$
(D) KCl

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

Q29 AP EAPCET 2025 · 22 May · Shift 1 MCQ

Which of the following statements are correct regarding lithium and magnesium?

(only)

I) They react slowly with water

II) Their bicarbonates are solids

III) Their chlorides are not soluble in ethanol

IV) Their nitrates decompose easily on heating

The correct option is

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

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

Q30 AP EAPCET 2025 · 22 May · Shift 2 MCQ

Compound 'X' is prepared commercially by the electrolysis of brine solution. Which of the following is not the use of 'X' ?

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(A) Manufacture of paper
(B) Petroleum refining
(C) Antichlor
(D) Mercirising cotton fabrics

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

Q31 AP EAPCET 2025 · 21 May · Shift 1 MCQ

Which of the following statements is incorrect with reference to alkaline earth metals?

(A) Solubility of carbonates in water decreases down the group
(B) All the sulphates are thermally stable
(C) All the nitrates decompose on heating
(D) All halides are ionic in nature.

Answer: (D) All halides are ionic in nature. · The council's preliminary key

Q32 AP EAPCET 2025 · 21 May · Shift 2 MCQ

Which of the following orders are correct against the stated property ?

I) $NaO_2 < KO_2 < RbO_2 < CsO_2$ - stability

II) $Mg(OH)_2 < Ca(OH)_2 < Sr(OH)_2$ - basic strength

III) $MgCO_3 < CaCO_3 < SrCO_3$ - thermal stability

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

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

Q33 TS EAPCET 2025 · 4 May · Shift 1 MCQ

Identify the correct statements from the following

I. LiF is less soluble in water than NaF

II. Both LiCl and $MgCl_2$ are insoluble in ethanol

III. Both Li and Mg form nitrides

IV. Na_2CO_3 gives CO_2 on heating

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

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

Q34 TS EAPCET 2025 · 4 May · Shift 1 MCQ

The major ingredient (51%) in Portland cement is

(A) Ca_2SiO_4
(B) Ca_3SiO_5
(C) $Ca_3Al_2O_6$
(D) $CaSO_4.2H_2O$

Answer: (B) Ca_3SiO_5 · The council's preliminary key

Q35 TS EAPCET 2025 · 4 May · Shift 2 MCQ

Which of the following statements is not correct?

(A) Carbonates of alkaline earth metals are insoluble in water
(B) Beryllium halides are covalent in nature
(C) The super oxides of alkali metals are colourless
(D) Alkali metal halides have high negative enthalpies of formation

Answer: (C) The super oxides of alkali metals are colourless · The council's preliminary key

Q36 TS EAPCET 2025 · 4 May · Shift 2 MCQ

The order of negative standard potential values of Li, Na, K is

(A) $Li > Na > K$
(B) $K > Na > Li$
(C) $Na > K > Li$
(D) $Li > K > Na$

Answer: (D) $Li > K > Na$ · The council's preliminary key

Q37 TS EAPCET 2025 · 3 May · Shift 1 MCQ

The incorrect statement about Castner-Kellner cell process is

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(A) Sodium hydroxide is prepared
(B) Brine solution is the electrolyte
(C) Mercury acts as anode and carbon rod acts as cathode
(D) Chlorine gas liberates at anode

Answer: (C) Mercury acts as anode and carbon rod acts as cathode · The council's preliminary key

Q38 TS EAPCET 2025 · 3 May · Shift 1 MCQ

By using which process, sodium carbonate is generally prepared?

(A) Deacon's process
(B) Castner-Kellner process
(C) Nelson cell process
(D) Solvay process

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

Q39 TS EAPCET 2025 · 3 May · Shift 2 MCQ

How many of the following metals give oxides and nitrides when burnt in air?

Be, Na, Mg, Ba, Sr, Li, K

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

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

Q40 TS EAPCET 2025 · 3 May · Shift 2 MCQ

Identify the incorrect order against the property given in brackets

(A) $BeCO_3 < MgCO_3 < CaCO_3 < SrCO_3$ (Thermal stability)
(B) $BeSO_4 > MgSO_4 > CaSO_4 > SrSO_4$ (Solubility in water)
(C) $Li_2CO_3 > Na_2CO_3 > K_2CO_3 > Rb_2CO_3$ (Thermal stability)
(D) $BeCO_3 > MgCO_3 > CaCO_3 > SrCO_3$ (Solubility in water)

Answer: (C) $Li_2CO_3 > Na_2CO_3 > K_2CO_3 > Rb_2CO_3$ (Thermal stability) · The council's preliminary key

Q41 TS EAPCET 2025 · 2 May · Shift 1 MCQ

Match the following

List – 1 (Chemical)		List – 2 (Use)
A KOH	I	Coolant
B $Na(l)$	II	Antacid

C Li	III Electrochemical cells
D $Mg(OH)_2$	IV Absorbent for CO_2

The correct answer is

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

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

Q42 TS EAPCET 2025 · 2 May · Shift 1 MCQ

When burnt in excess of oxygen, sodium forms a compound X and potassium forms a compound Y. The magnetic natures of X and Y respectively are

(A) Both X and Y are paramagnetic in nature
(B) X is diamagnetic and Y is paramagnetic in nature
(C) X is paramagnetic and Y is diamagnetic in nature
(D) Both X and Y are diamagnetic in nature

Answer: (B) X is diamagnetic and Y is paramagnetic in nature · The council's preliminary key

Q43 TS EAPCET 2025 · 2 May · Shift 2 MCQ

Observe the following statements

Statement – I: Both LiF and CsI have low solubility in water

Statement – II: Low solubility of LiF in water is due to smaller hydration enthalpy of ions and that of CsI is due to its high lattice enthalpy

The correct answer is

(A) Both statements I and 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 statements I and II are not correct

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

Q44 TS EAPCET 2025 · 2 May · Shift 2 MCQ

In which of the following the s-block elements are arranged in the correct order of their melting points?

(A) $Mg > Be > Na > Li$
(B) $Li > Be > Mg > Na$
(C) $Be > Mg > Li > Na$
(D) $Li > Mg > Na > Be$

Answer: (C) $Be > Mg > Li > Na$ · The council's preliminary key

Q45 AP EAPCET 2024 · 23 May · Shift 1 MCQ

Which of the following, on thermal decomposition, form both acidic and basic oxides along with O_2?

(i) $NaNO_3$ (ii) $Ca(NO_3)_2$ (iii) $Be(NO_3)_2$ (iv) $LiNO_3$

The correct option is

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

Answer: (C) ii, iv only · The council's preliminary key

Q46 AP EAPCET 2024 · 22 May · Shift 1 MCQ

Which one of the following alkaline earth metals does not form hydride when it is heated with hydrogen directly?

(A) Be
(B) Mg
(C) Ca
(D) Sr

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

Q47 AP EAPCET 2024 · 22 May · Shift 2 MCQ

Which one of the following alkali metals is the weakest reducing agent as per their E° values?

(A) K
(B) Cs
(C) Li
(D) Na

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

Q48 AP EAPCET 2024 · 21 May · Shift 2 MCQ

Which one of the following statements is NOT correct about the compounds of alkaline earth metals?

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(A) Basic nature increases from $Mg(OH)_2$ to $Ba(OH)_2$
(B) Thermal stability decreases from $BeCO_3$ to $BaCO_3$
(C) Solubility of sulphates in water decreases from $BeSO_4$ to $BaSO_4$.
(D) Nitrates of these on heating give oxides

Answer: (B) Thermal stability decreases from $BeCO_3$ to $BaCO_3$ · The council's preliminary key

Q49 AP EAPCET 2024 · 20 May · Shift 1 MCQ

Ba, Ca, Sr form halide hydrates. Their formulae are $BaCl_2.xH_2O$, $CaCl_2.yH_2O$, $SrCl_2.zH_2O$. The values of x, y, z respectively are

(A) 2, 6, 6
(B) 8, 6, 2
(C) 8, 6, 6
(D) 6, 4, 2

Answer: (A) 2, 6, 6 · The council's preliminary key

Q50 AP EAPCET 2024 · 20 May · Shift 2 MCQ

The correct order of density of Be, Mg, Ca, Sr is

(A) $Sr > Be > Mg > Ca$
(B) $Be > Mg > Ca > Sr$
(C) $Mg > Ca > Sr > Be$
(D) $Ca > Sr > Be > Mg$

Answer: (A) $Sr > Be > Mg > Ca$ · The council's preliminary key

Q51 AP EAPCET 2024 · 19 May · Shift 2 MCQ

The correct order of decomposition temperature of $MgCO_3$ (X), $BaCO_3$ (Y), $CaCO_3$ (Z) is

(A) $Y > Z > X$
(B) $X > Y > Z$
(C) $Y > X > Z$
(D) $X > Z > Y$

Answer: (A) $Y > Z > X$ · The council's preliminary key

Q52 AP EAPCET 2024 · 18 May · Shift 1 MCQ

Lithium forms an alloy with 'X'. This alloy is used to make armour plates. What is 'X'?

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(A) Mg
(B) Pb
(C) Al
(D) Cr

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

Q53 TS EAPCET 2024 · 11 May · Shift 1 MCQ

Match the following

List – I		List – II	
	Alloy		Use
A	Li-Pb	I	In aircraft construction
B	Be-Cu	II	To make bearings for motor engines
C	Mg-Al	III	To make tetraethyl lead
D	Na-Pb	IV	To make high strength springs

The correct answer is

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

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

Q54 TS EAPCET 2024 · 11 May · Shift 1 MCQ

The hydroxide of which of the following metal reacts with both acid and alkali?

(A) Mg
(B) Na
(C) Be
(D) Ca

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

Q55 TS EAPCET 2024 · 10 May · Shift 1 MCQ

Consider the following reactions

$Cs + O_2$ (excess) $\rightarrow$ X

$Na + O_2 \rightarrow$ Y

Identify the correct statement about X and Y

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(A) Y is monoxide and X is superoxide
(B) Y is peroxide and X is peroxide
(C) Y is peroxide and X is superoxide
(D) Y is superoxide and X is peroxide

Answer: (C) Y is peroxide and X is superoxide · The council's preliminary key

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Q56 TS EAPCET 2024 · 10 May · Shift 1 MCQ

Choose the correct statements from the following

I) In vapour phase $\mathrm{BeCl_2}$ exists as chlorobridged dimer

II) $\mathrm{BeSO_4}$ is readily soluble in water

III) BeO is completely basic in nature

IV) $\mathrm{BeCO_3}$ being unstable, is kept in the atmosphere of $\mathrm{CO_2}$

V) $\mathrm{BeCO_3}$ is less soluble among all the carbonates of group 2 elements

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

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

Q57 TS EAPCET 2024 · 10 May · Shift 2 MCQ

The alloy formed by beryllium with 'X' is used in the preparation of high strength springs. 'X' is

(A) Al
(B) Zn
(C) Cu
(D) Cr

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

Q58 TS EAPCET 2024 · 9 May · Shift 1 MCQ

What is the correct stability order of $\mathrm{KO_2}$, $\mathrm{RbO_2}$, $\mathrm{CsO_2}$?

(A) $\mathrm{KO_2} < \mathrm{CsO_2} < \mathrm{RbO_2}$
(B) $\mathrm{CsO_2} < \mathrm{KO_2} < \mathrm{RbO_2}$
(C) $\mathrm{CsO_2} < \mathrm{RbO_2} < \mathrm{KO_2}$
(D) $\mathrm{KO_2} < \mathrm{RbO_2} < \mathrm{CsO_2}$

Answer: (D) $\mathrm{KO_2} < \mathrm{RbO_2} < \mathrm{CsO_2}$ · The council's preliminary key

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Q59 TS EAPCET 2024 · 9 May · Shift 1 MCQ

Assertion (A): MgO, CaO, SrO and BaO are insoluble in water

Reason (R): In aqueous medium the basic strength of MgO, CaO, SrO and BaO increases with increase in the atomic number of metal

The correct option among the following is

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

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

Q60 TS EAPCET 2024 · 9 May · Shift 2 MCQ

Identify the compound which gives CO_2 more readily on heating

(A) $CaCO_3$
(B) $NaHCO_3$
(C) Na_2CO_3
(D) Li_2CO_3

Options (4) or (2) were accepted. More than one answer was accepted. · The council's preliminary key

Q61 TS EAPCET 2024 · 9 May · Shift 2 MCQ

The major components of cement are

(A) SiO_2, Al_2O_3
(B) SiO_2, Fe_2O_3
(C) Al_2O_3, Fe_2O_3
(D) SiO_2, CaO

Answer: (D) SiO_2, CaO · The council's preliminary key

Q62 AP EAPCET 2023 · 19 May · Shift 1 MCQ

The alkaline earth metal with lowest density is

(A) Be
(B) Mg
(C) Ca
(D) Sr

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

Q63 AP EAPCET 2023 · 18 May · Shift 1 MCQ

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

(i) LiF is less soluble in water

(ii) NaCl is less ionic than CsCl

(iii) Formation of alkali metal halide is an endothermic reaction

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

Answer: (A) i & ii only · The council's preliminary key

Q64 AP EAPCET 2023 · 18 May · Shift 2 MCQ

Among the following, the incorrect statement is

(A) Cesium forms superoxide
(B) Sodium peroxide is paramagnetic
(C) Lithium chloride is deliquescent
(D) White metal is an alloy of lithium and lead

Answer: (B) Sodium peroxide is paramagnetic · The council's preliminary key

Q65 AP EAPCET 2023 · 17 May · Shift 1 MCQ

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

(i) $\mathrm{LiNO_3}$, $\mathrm{Ba(NO_3)_2}$ both will give $\mathrm{NO_2}$ on heating

(ii) $\mathrm{BaSO_4}$ is less soluble in water than $\mathrm{CaSO_4}$

(iii) Alkaline earth metals do not dissolve in liquid ammonia

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

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

Q66 AP EAPCET 2023 · 17 May · Shift 2 MCQ

For a good quality cement the ratio of silica to alumina should be in the range of

(A) 2.5 - 4.0
(B) 0.1 - 1.0
(C) 1.0 - 1.5
(D) 5.0 - 8.0

Answer: (A) 2.5 - 4.0 · The council's preliminary key

Q67 AP EAPCET 2023 · 16 May · Shift 1 MCQ

White metal is an alloy of

(A) Li & Mg
(B) Li & Pb
(C) Pb & Sn
(D) Pb & Al

Answer: (B) Li & Pb · The council's preliminary key

Q68 AP EAPCET 2023 · 15 May · Shift 2 MCQ

Match the following

List I (alkaline earth metal)	List II (density / $\mathrm{g\ cm^{-3}}$)
A. Be	I. 1.74
B. Mg	II. 1.84
C. Ca	III. 2.63
D. Sr	IV. 1.55

The correct answer is

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

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

Q69 TS EAMCET 2023 · 14 May · Shift 1 MCQ

The alkali metal with lowest $\mathrm{E^{\circ}_{M^+/M}}$(V) is X and the alkali metal with highest $\mathrm{E^{\circ}_{M^+/M}}$(V) is Y. Then X and Y are respectively

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(A) Li , Na
(B) Li, Cs
(C) Na, Li
(D) Cs, Li

Answer: (A) Li , Na · The council's preliminary key

Q70 TS EAMCET 2023 · 14 May · Shift 1 MCQ

Assertion (A): Be and Mg do not impart any colour to the flame

Reason (R): The electrons in them are strongly bound to get excited by flame

The correct option among the following is

(A) (A) and (R) are true. (R) is the correct explanation of (A)
(B) (A) and (R) are true, 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) (A) and (R) are true. (R) is the correct explanation of (A) · The council's preliminary key

Q71 TS EAMCET 2023 · 14 May · Shift 2 MCQ

Identify the incorrect reaction from the following

(A) $2NaNO_3 \rightarrow 2NaNO_2 + O_2$
(B) $2LiNO_3 \rightarrow 2LiNO_2 + O_2$
(C) $2Pb(NO_3)_2 \rightarrow 2PbO + 4NO_2 + O_2$
(D) $4LiNO_3 \rightarrow 2Li_2O + 4NO_2 + O_2$

Answer: (B) $2LiNO_3 \rightarrow 2LiNO_2 + O_2$ · The council's preliminary key

Q72 TS EAMCET 2023 · 14 May · Shift 2 MCQ

In the reactions I and II the covalencies of Be and Al in X and Y are respectively

I $Be(OH)_2 + NaOH \rightarrow X$ (excess)

II $Al(OH)_3 + NaOH \rightarrow Y$ (excess)

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

Answer: (B) 4, 4 · The council's preliminary key

Q73 TS EAMCET 2023 · 13 May · Shift 1 MCQ

Assertion (A) : Alkali metals and their salts impart characteristic flame colours

Reason (R) : Alkali metals have low ionization enthalpy values. So, electron excitation is possible

The correct option among the following is

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

Answer: (A) (A) and (R) are true. (R) is the correct explanation for (A) · The council's preliminary key

Q74 TS EAMCET 2023 · 13 May · Shift 1 MCQ

When compared with alkaline earth metals, the alkali metals have

(A) Greater hardness
(B) Higher boiling points
(C) Smaller ionic radii
(D) Lower ionization enthalpy

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

Q75 TS EAMCET 2023 · 13 May · Shift 2 MCQ

Which one of the following statements is not correct?

(A) Molecular formula of calgon is $NaAlSiO_4$
(B) Beryllium halides are soluble in organic solvents
(C) Among alkali metals, the reducing property of sodium is least in aqueous solution
(D) White metal is an alloy of Lithium

Answer: (A) Molecular formula of calgon is $NaAlSiO_4$ · The council's preliminary key

Q76 TS EAMCET 2023 · 13 May · Shift 2 MCQ

Thermal decomposition of lithium nitrate gives

(A) LiO_2, O_2, NO_2
(B) Li_2O, O_2, N_2O
(C) Li_2O, O_2, N_2
(D) Li_2O, O_2, NO_2

Answer: (D) Li_2O, O_2, NO_2 · The council's preliminary key

Q77 TS EAMCET 2023 · 12 May · Shift 1 MCQ

The nitrate of which of the following metals does not liberate NO_2 gas on heating?

(A) Pb
(B) Ba
(C) Li
(D) K

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

Q78 TS EAMCET 2023 · 12 May · Shift 1 MCQ

Match the following

List-I (Substance)	List-II (Use)
A) Na_2O_2	I. Photoelectric cells
B) D_2O	II. Antacid
C) Cs	III. Oxidising agent
D) $Mg(OH)_2$	IV. Moderator

The correct answer is

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

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

Q79 TS EAMCET 2023 · 12 May · Shift 2 MCQ

Which of the following set of metals have strong tendency to form super oxides?

(A) Li, Na, Be
(B) Be, Mg, Ca
(C) K, Rb, Cs
(D) Li, Be, Mg

Answer: (C) K, Rb, Cs · The council's preliminary key

Q80 TS EAMCET 2023 · 12 May · Shift 2 MCQ

Identify the correct statements with respect to compounds of Beryllium

I. Beryllium oxide is amphoteric in nature

II. Beryllium hydride is formed by the reaction of beryllium with hydrogen

III. Beryllium hydride is formed by the reaction of beryllium chloride with lithium aluminium hydride

IV. Beryllium sulphate is the least soluble sulphate among the sulphates of alkaline earth metals

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

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

Q81 TS EAMCET 2022 · 20 Jul · Shift 1 MCQ

Unknown inorganic compound 'A' is used for water softening. 'A' reacts with Na_2CO_3 to generate an alkaline compound 'B' whose pH = 14. 'A' on reaction with CO_2 gives cloudy ppt. 'B' + CaO reacts with unknown organic compound 'C' to give C_6H_6. A, B and C, respectively, are

(A) $Ca(OH)_2, Na_2CO_3, C_6H_5COOH$
(B) $Ca(OH)_2, NaOH, C_6H_5CH_2COOH$
(C) $Ca(OH)_2, NaOH, C_6H_5COOH$
(D) $Ca, NaOH, C_6H_5COOH$

Answer: (C) $Ca(OH)_2, NaOH, C_6H_5COOH$ · The council's preliminary key

Q82 TS EAMCET 2022 · 20 Jul · Shift 2 MCQ

Assertion (A) : The ionic radii of the alkaline earth metals are smaller than those of alkali metals in the same period.
Reason (R) : Alkali metals have higher nuclear charge than that of the alkaline earth metals.
The correct option among the following is

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

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

Q83 TS EAMCET 2022 · 19 Jul · Shift 1 MCQ

Which of the following salts can accommodate more number of H_2O molecules per molecule in their halide hydrates?

(A) $BaCl_2$
(B) $MgCl_2$
(C) $CaCl_2$
(D) $SrCl_2$

Answer: (B) $MgCl_2$ · The council's preliminary key

Q84 TS EAMCET 2022 · 18 Jul · Shift 1 MCQ

Lithium nitrate on heating gives

(A) $Li_2O + NO_2$

(B) $Li_2O + NO_2 + O_2$

(C) $LiNO_2 + O_2$

(D) $Li_2O_2 + NO_2 + O_2$

Answer: (B) $Li_2O + NO_2 + O_2$ · The council's preliminary key

Q85 TS EAMCET 2022 · 18 Jul · Shift 2 MCQ

Potassium superoxide on hydrolysis gives

(A) $K^+ + \overline{O}H + O_2$

(B) $K^+ + K_2O + O_2 + \overline{O}H$

(C) $K^+ + H_2O_2 + O_2 + \overline{O}H$

(D) $K^+ + H_2O_2 + \overline{O}H$

Answer: (C) $K^+ + H_2O_2 + O_2 + \overline{O}H$ · The council's preliminary key

Q86 AP EAPCET 2022 · 8 Jul · Shift 1 MCQ

The nitrate of which metal does not give nitrogen dioxide on strong reacting?

(A) Li

(B) Na

(C) Mg

(D) Ca

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

Q87 AP EAPCET 2022 · 8 Jul · Shift 1 MCQ

Observe the following reactions

$\text{Dimer} \xleftarrow{\text{Vapour phase}} MCl_2 \xrightarrow{1200\,K} \text{linear monomer.}$

What is M?

(A) Ca

(B) Sr

(C) Mg

(D) Be

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

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Q88 AP EAPCET 2022 · 8 Jul · Shift 2 MCQ

Which of the following salts form hydrates?
$CaCl_2$ (I), NaCl (II), LiCl (III), $BaCl_2$ (IV), KCl (V)

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

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

Q89 AP EAPCET 2022 · 8 Jul · Shift 2 MCQ

Match the following
List - I: I) $CaSO_4.2H_2O$; II) $CaSO_4.0.5H_2O$; III) $CaSO_4$
List - II: A) Knee cement ; B) Gypsum ; C) Plaster of Paris ; D) Dead burnt plaster

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

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

Q90 AP EAPCET 2022 · 7 Jul · Shift 1 MCQ

Which of the following is Indian saltpetre?

(A) $NaNO_3$
(B) KNO_3
(C) $CsNO_3$
(D) $Mg(NO_3)_2$

Answer: (B) KNO_3 · The council's preliminary key

Q91 AP EAPCET 2022 · 7 Jul · Shift 2 MCQ

Hydration enthalpy of which of the following ions is highest?

(A) Mg^{2+}
(B) Na^{+}
(C) Ca^{2+}
(D) K^{+}

Answer: (A) Mg^{2+} · The council's preliminary key

Q92 AP EAPCET 2022 · 7 Jul · Shift 2 MCQ

Identify the correct statements from the following:
(a) Alkali metals are strong reducing agents.
(b) KO_2 is a diamagnetic oxide.
(c) Lithium chloride exists as $LiCl.2H_2O$

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

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

Q93 AP EAPCET 2022 · 6 Jul · Shift 1 MCQ

$CaCO_3$ was reacted with dil HCl to form three products. One of the products formed, when passed into slaked lime gave X. What is X?

(A) $CaCl_2$
(B) $CaCO_3$
(C) $Ca(OH)_2$
(D) $Ca\,(HCO_3)_2$

Answer: (B) $CaCO_3$ · The council's preliminary key

Q94 AP EAPCET 2022 · 5 Jul · Shift 1 MCQ

Identify the correct statements from the following
(a) $BeSO_4$ is soluble in water
(b) BeO is an amphoteric oxide
(c) CO can be obtained by heating $CaCO_3$ at 1070 - 1270 K.

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

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

Q95 AP EAPCET 2022 · 5 Jul · Shift 1 MCQ

The two major constituents of Portland cement are

(A) CaO, SiO_2
(B) CaO , Al_2O_3
(C) SiO_2 , MgO
(D) CaO, MgO

Answer: (A) CaO, SiO_2 · The council's preliminary key

Q96 AP EAPCET 2022 · 5 Jul · Shift 2 MCQ

Metal 'M' in the following reaction is

$2MNO_3 \rightarrow M_2O + 2NO_2 + \frac{1}{2}O_2$

(A) Cs
(B) K
(C) Na
(D) Li

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

Q97 AP EAPCET 2022 · 4 Jul · Shift 1 MCQ

Assertion (A):- $MgSO_4$ is readily soluble in water
Reason (R):- The greater hydration enthalpy of Mg^{2+} ions overcome its lattice enthalpy.

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

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

Q98 AP EAPCET 2022 · 4 Jul · Shift 1 MCQ

Identify A and B from the following reaction
$NaNO_3 \xrightarrow{\Delta} xA + yB$

(A) $NaNO_2$, O_2
(B) Na_2O, NO_2
(C) Na_2O, NO
(D) Na, NO_2

Answer: (A) $NaNO_2$, O_2 · The council's preliminary key

Q99 AP EAPCET 2022 · 4 Jul · Shift 2 MCQ

The pair of elements that form both oxides and nitrides, when burnt in air are

(A) Na, Mg
(B) Na, Be
(C) Mg, Ca
(D) Be, Mn

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

Q100 AP EAPCET 2021 · 5 Oct · Shift 1 MCQ

$BeSO_4$ is soluble in water, whereas $BaSO_4$ is insoluble. This is because _____

(A) The lattice energy of $BeSO_4$ is more than its hydration enthalpy.
(B) The hydration enthalpy of $BeSO_4$ is more than its lattice enthalpy.
(C) The ionization enthalpy of Be is comparatively higher than Ba.
(D) In $BaSO_4$, the lattice enthalpy and hydration enthalpy are equal.

Answer: (B) The hydration enthalpy of $BeSO_4$ is more than its lattice enthalpy. · The council's preliminary key

Q101 AP EAPCET 2021 · 25 Aug · Shift 1 MCQ

Which of the following pairs of reactions give H_2 gas as a product upon hydrolysis?

(A) a) $Ba \xrightarrow{H_2O}$ products; b) $BaO_2 \xrightarrow{H_2O}$ products
(B) a) $Ca \xrightarrow{H_2O}$ products; b) $CaH_2 \xrightarrow{H_2O}$ products
(C) a) $K \xrightarrow{H_2O}$ products; b) $K_2O \xrightarrow{H_2O}$ products
(D) a) $Na \xrightarrow{H_2O}$ products; b) $Na_2O_2 \xrightarrow{H_2O}$ products

Answer: (B) a) $Ca \xrightarrow{H_2O}$ products; b) $CaH_2 \xrightarrow{H_2O}$ products · The council's preliminary key

Q102 AP EAPCET 2021 · 25 Aug · Shift 2 MCQ

The tendency of forming chloride hydrates of alkaline earth metals is in the order of _____

(A) $Ba > Sr,\ Ca > Mg$
(B) $Sr > Ba,\ Mg > Ca$
(C) $Mg > Ca,\ Sr > Ba$
(D) $Mg > Sr > Ca > Ba$

Answer: (C) $Mg > Ca,\ Sr > Ba$ · The council's preliminary key

Q103 AP EAPCET 2021 · 24 Aug · Shift 1 MCQ

Which of the following metal ion plays an important role in muscle contraction?

(A) Fe^{2+}
(B) Ca^{2+}
(C) Au^{+}
(D) Na^{+}

Answer: (B) Ca^{2+} · The council's preliminary key

Q104 AP EAPCET 2021 · 23 Aug · Shift 1 MCQ

Alkali metals are powerful reducing agents because _____

(A) They are metals
(B) They are monovalent
(C) Their ionic radii are large
(D) Their ionization energies are low

Answer: (D) Their ionization energies are low · The council's preliminary key

Q105 AP EAPCET 2021 · 23 Aug · Shift 2 MCQ

Carnallite in water dissociates to give _____ ions

(A) K^{+}, Mg^{+2} & Cl^{-}
(B) K^{+}, Mg^{+2} & Br^{-}
(C) K^{+}, Zn^{+2} & Cl^{-}
(D) K^{+}, Ba^{+2} & Br^{-}

Answer: (A) K^{+}, Mg^{+2} & Cl^{-} · The council's preliminary key

Q106 AP EAPCET 2021 · 20 Aug · Shift 1 MCQ

Which of the following does not form double salts?

(A) Li_2SO_4
(B) Na_2SO_4
(C) K_2SO_4
(D) Rb_2SO_4

Answer: (A) Li_2SO_4 · The council's preliminary key

Q107 AP EAPCET 2021 · 19 Aug · Shift 1 MCQ

Assertion (A): K, Rb and Cs form superoxides
Reason (R): The stability of superoxides increases form K to Cs due to decrease in lattice energy.

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(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

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Q108 AP EAPCET 2021 · 19 Aug · Shift 2 MCQ

In the preparation of baking soda, H_2O and CO_2 in ratio _____ is used to react with Na_2CO_3.

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

Answer: (D) $1:1$ · The council's preliminary key

Q109 TS EAMCET 2021 · 6 Aug · Shift 1 MCQ

Assertion (A): LiCl and $MgCl_2$ are soluble in ethanol
Reason (R) : Lithium and magnesium are harder than their respective group elements
The correct option among the following is

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

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

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Q110 TS EAMCET 2021 · 6 Aug · Shift 2 MCQ

The correct statements are
(I) The low solubility of LiF is due to its high lattice enthalpy
(II) LiBr is not soluble in acetone
(III) LiCl is soluble in pyridine
(IV) The order of melting points of alkali metal halides is MF > MCl > MBr > MI

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

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

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Q111 TS EAMCET 2021 · 5 Aug · Shift 1 MCQ

Powdered Berilium burns in air to give

(A) $BeO;\ Be_2N_2$
(B) $Be_2O_3;\ Be_3N_2$
(C) $BeO;\ Be_3N_2$
(D) $BeO;\ Be_2N$

Answer: (C) $BeO;\ Be_3N_2$ · The council's preliminary key

Q112 TS EAMCET 2021 · 5 Aug · Shift 2 MCQ

The alkaline earth metal sulphate, which has its hydration enthalpy greater than its lattice energy is

(A) $BeSO_4$
(B) $BaSO_4$
(C) $CaSO_4$
(D) $SrSO_4$

Answer: (A) $BeSO_4$ · The council's preliminary key

Q113 TS EAMCET 2021 · 5 Aug · Shift 2 MCQ

A metal 'M' readily gives MSO_4, which is soluble in water. It forms its oxide MO which is amphoteric. It forms an insoluble hydroxide $M(OH)_2$, which is soluble in NaOH solution. The M is

(A) Be
(B) Ba
(C) Ca
(D) Mg

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

Q114 TS EAMCET 2021 · 4 Aug · Shift 1 MCQ

The correct order of electrical conductivity of alkali metals ions in their aqueous solution for Cs^+, K^+, Na^+ and Li^+ is

(A) $Cs^+ > K^+ > Na^+ > Li^+$
(B) $K^+ > Cs^+ > Li^+ > Na^+$
(C) $Cs^+ > K^+ > Li^+ > Na^+$
(D) $Li^+ > Na^+ > K^+ > Cs^+$

Answer: (A) $Cs^+ > K^+ > Na^+ > Li^+$ · The council's preliminary key

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Q115 TS EAMCET 2021 · 4 Aug · Shift 2 MCQ

Which one of the following options is correct pertaining to the below transformations?

$\mathrm{Na} + \mathrm{NH_3}(l) \longrightarrow \text{Coloured solution} \xrightarrow{\text{on standing}} \mathrm{X} + \mathrm{Y}$

(A) Colour of the solution: Yellow; X: $\mathrm{NaNH_2}$; Y: $\frac{1}{2}\mathrm{H_2}$

(B) Colour of the solution: Orange; X: $\mathrm{NaN_3}$; Y: $\frac{9}{2}\mathrm{H_2}$

(C) Colour of the solution: Blue; X: $\mathrm{NaNH_2}$; Y: $\frac{1}{2}\mathrm{H_2}$

(D) Colour of the solution: Red; X: $\mathrm{NaN_3}$; Y: $\frac{9}{2}\mathrm{H_2}$

Answer: (C) Colour of the solution: Blue; X: $\mathrm{NaNH_2}$; Y: $\frac{1}{2}\mathrm{H_2}$ · The council's preliminary key

Q116 AP EAMCET 2020 · 7 Oct · Shift 1 MCQ

When sodium is dissolved in liquid ammonia, a deep blue coloured solution obtained. This colour of the solution is due to

(A) Ammoniated electrons

(B) Sodium ions

(C) Sodium amide

(D) Ammoniated sodium ions

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

Q117 AP EAMCET 2020 · 7 Oct · Shift 1 MCQ

Which metal among the following is most sensitive towards oxidation?

(A) Fe

(B) Cr

(C) Ca

(D) Al

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

Q118 AP EAMCET 2020 · 7 Oct · Shift 1 MCQ

To a mixture of LiCl, $\mathrm{AlCl_3}$ & NaCl, ether is added. Which of these will be extracted into ether?

(A) $\mathrm{LiCl}, \mathrm{NaCl}$

(B) $\mathrm{LiCl}, \mathrm{AlCl_3}$

(C) $\mathrm{AlCl_3}, \mathrm{NaCl}$

(D) $\mathrm{LiCl}, \mathrm{AlCl_3}, \mathrm{NaCl}$

Answer: (B) $\mathrm{LiCl}, \mathrm{AlCl_3}$ · The council's preliminary key

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Q119 AP EAMCET 2020 · 22 Sep · Shift 1 MCQ

A chemical A is used for the preparation of washing soda to recover ammonia. When CO_2 is bubbled through an aqueous solution of A, the solution turns milky. It is used in white washing due to disinfectant nature. What is the chemical formula of A?

(A) $Ca(HCO_3)_2$
(B) CaO
(C) $Ca(OH)_2$
(D) $CaCO_3$

Answer: (C) $Ca(OH)_2$ · The council's preliminary key

Q120 AP EAMCET 2020 · 22 Sep · Shift 2 MCQ

Choose the correct statement from the following:

(A) Beryllium is not readily attacked by acids because of the presence of an oxide film on the surface of the metal
(B) BeO is an amphoteric oxide
(C) Beryllium exhibits coordination number more than four
(D) Beryllium oxide is purely acidic in nature

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

Q121 AP EAMCET 2020 · 18 Sep · Shift 2 MCQ

Choose the alkali metal with highest reactivity among the following

(A) Cs
(B) Li
(C) Na
(D) Rb

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

Q122 AP EAMCET 2020 · 17 Sep · Shift 1 MCQ

Two metals A & B having similar ionic radii, react with oxygen to give only monoxides, and react with nitrogen to give nitrides. Then, A & B respectively are

(A) Li and Na
(B) Na and Ca
(C) Li and Mg
(D) Na and Be

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

Q123 AP EAMCET 2020 · 17 Sep · Shift 2 MCQ

Which of the following substances has highest value of standard molar enthalpy of formation at 298K?

(A) $NaF_{(s)}$
(B) $NaCl_{(s)}$
(C) $NaBr_{(s)}$
(D) $NaI_{(s)}$

Answer: (A) $NaF_{(s)}$ · The council's preliminary key

Q124 TS EAMCET 2020 · 14 Sep · Shift 1 MCQ

Which alkali metal emits blue color light in flame test?

(A) Cs
(B) Li
(C) Na
(D) K

Answer: (A) Cs · Official TGCHE final key

Q125 TS EAMCET 2020 · 14 Sep · Shift 2 MCQ

Which of the following statement(s) are correct, when alkali metals burn in the presence of oxygen?
I) Lithium forms monoxide
II) Sodium forms peroxide
III) Potassium, rubidium and cesium forms superoxide

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

Answer: (D) I, II, and III · Official TGCHE final key

Q126 TS EAMCET 2020 · 11 Sep · Shift 1 MCQ

What is the increasing order of hydration enthalpies of alkali metal ions?

(A) $Rb^+ < Cs^+ < K^+ < Na^+ < Li^+$
(B) $Cs^+ < Rb^+ < K^+ < Li^+ < Na^+$
(C) $Cs^+ < Rb^+ < K^+ < Na^+ < Li^+$
(D) $Cs^+ < Rb^+ < Na^+ < K^+ < Li^+$

Answer: (C) $Cs^+ < Rb^+ < K^+ < Na^+ < Li^+$ · Official TGCHE final key

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Q127 TS EAMCET 2020 · 11 Sep · Shift 2 MCQ

The carbonates of alkaline earth metals decompose on heating to give
(i) CO_2
(ii) Metal oxide
(iii) H_2O
(iv) CO

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

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

Q128 TS EAMCET 2020 · 10 Sep · Shift 1 MCQ

Predict the feasibility of the given reactions in aqueous solution
(i) $Be(OH)_2 + 2OH^- \longrightarrow [Be(OH)_4]^{2-}$
(ii) $Be(OH)_2 + 2H^+ \longrightarrow [Be(OH)_4]^{2+}$

(A) Only (i) is feasible
(B) Only (ii) is feasible
(C) (i) and (ii) are feasible
(D) (i) and (ii) are not feasible

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

Q129 TS EAMCET 2020 · 10 Sep · Shift 2 MCQ

Which halide of alkaline earth metal is covalent in nature and can be soluble in organic solvent, such as ethanol?

(A) $SrCl_2$
(B) $CaCl_2$
(C) $BeCl_2$
(D) $MgCl_2$

Answer: (C) $BeCl_2$ · Official TGCHE final key

Q130 TS EAMCET 2020 · 9 Sep · Shift 1 MCQ

Which of the reactions represents "slaking of lime"?

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(A) $CaCO_3 \rightleftharpoons CaO + CO_2$
(B) $CaO + CO_2 \rightarrow CaCO_3$
(C) $CaO + H_2O \rightarrow Ca(OH)_2$
(D) $CaO + SiO_2 \rightarrow CaSiO_3$

Answer: (C) $CaO + H_2O \rightarrow Ca(OH)_2$ · Official TGCHE final key

Q131 TS EAMCET 2019 · 6 May · Shift 1 MCQ

Which gas/gases evolve(s) when sodium metal is reacted with water at room temperature?

(A) Oxygen only
(B) Hydrogen only
(C) Sodium vapour and Hydrogen
(D) Hydrogen and Water vapour

Answer: (B) Hydrogen only · Checked by our team

Q132 TS EAMCET 2019 · 4 May · Shift 2 MCQ

The frequency of the radiation emitted by alkali metals in the flame test follows the order

(A) Li > Na > K > Cs
(B) Li > K > Na > Cs
(C) K > Na > Li > Cs
(D) K > Cs > Na > Li

Answer: (D) K > Cs > Na > Li · Official TGCHE final key

Q133 TS EAMCET 2019 · 3 May · Shift 1 MCQ

Which of the following products are formed on hydrolysis of NaO_2 ?
a) NaOH
b) H_2O_2
c) O_2
d) H_2O

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

Answer: (D) a, b, c · Official TGCHE final key

Q134 TS EAMCET 2019 · 3 May · Shift 2 MCQ

Identify X and Y respectively in the following reactions *(see the figure above)*

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Question Number : 135 Question Id : 75123644455 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Identify X and Y respectively in the following reactions

$Mg(s) \xrightarrow[\Delta]{air} MgO + B$

$B \xrightarrow{H_2O} X$ [Sparingly soluble]

$B \xrightarrow{H_2O} Y$ [A compound with pungent odour]

క్రింది చర్యలలో X మరియు Y లను వరుసగా గుర్తించుము.

$Mg(ఘ) \xrightarrow[\Delta]{గాలి} MgO + B$

$B \xrightarrow{H_2O} X$ [అల్ప ద్రావణీయత]

$B \xrightarrow{H_2O} Y$ [ఘాటైన వాసన గల సమ్మేళనము]

Options :

1. MgO ; C
2. $Mg(OH)_2$; MgO
3. MgO ; NH_3
4. $Mg(OH)_2$; NH_3

(A) MgO ; C

(B) $Mg(OH)_2$; MgO

(C) MgO ; NH_3

(D) $Mg(OH)_2$; NH_3

Answer: (D) $Mg(OH)_2$; NH_3 · Official TGCHE final key

Q135 AP EAMCET 2019 · 23 Apr · Shift 1 MCQ

Identify correct statements from the following:

i. Beryllium oxide is an amphoteric oxide.

ii. Group II elements dissolve in liquid ammonia to form deep blue-black solutions.

iii. The hydration enthalpy of group II ions decreases from Be^{2+} to Ba^{2+}.

(A) i, ii only

(B) ii, iii only

(C) i, iii only

(D) i, ii, iii

Answer: (D) i, ii, iii · Official APSCHE final key

Q136 AP EAMCET 2019 · 22 Apr · Shift 1 MCQ

A compound (MO_2) of group I element (M) hydrolyses to form M^+, OH^-, X and Y. When X reacts with I_2 in basic medium, the products formed are I^-, water and Y. Then X and Y are respectively

(A) H_2O_2, O_2
(B) H_2O_2, O_3
(C) H_2, O_2
(D) O_2, H_2

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

Q137 AP EAMCET 2019 · 22 Apr · Shift 2 MCQ

Which of the following metal ions form the stable super oxide?

(A) Li^+
(B) Mg^{2+}
(C) Na^+
(D) K^+

Answer: (D) K^+ · Official APSCHE final key

Q138 AP EAMCET 2019 · 20 Apr · Shift 1 MCQ

Identify the correct statements from the following.
I) Tendency to form halide hydrates gradually increases from Be to Ba down the group.
II) Tendency to form stable super oxides increases from Li to Cs down the group.
III) Low solubility of LiF is due to its high lattice energy.
IV) Solubility of carbonates of group-2 elements increases down the group.

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

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

Q139 AP EAMCET 2019 · 20 Apr · Shift 2 MCQ

Compound A is prepared by the electrolysis of aqueous solution of B using Castner-Kellner cell with mercury as cathode and carbon as anode. A and B respectively are

(A) $NaOH, NaCl$
(B) $NaCl, NaOH$
(C) $NaHCO_3, NaOH$
(D) Na_2CO_3, NH_3

Answer: (A) $NaOH, NaCl$ · Official APSCHE final key

Q140 TS EAMCET 2018 · 7 May · Shift 1 MCQ

Highest melting point among the following is displayed by

(A) Be
(B) Ca
(C) Sr
(D) Ba

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

Q141 TS EAMCET 2018 · 5 May · Shift 1 MCQ

BeH_2 can be prepared by the reaction of

(A) $BeCl_2$ with $LiAlH_4$
(B) Be with H_2
(C) Be with water
(D) Be with liquid ammonia

Answer: (A) $BeCl_2$ with $LiAlH_4$ · The council's preliminary key

Q142 TS EAMCET 2018 · 5 May · Shift 2 MCQ

Which pair of elements on combustion in air give superoxides?

(A) Li, Cs
(B) K, Rb
(C) Li, Rb
(D) K, Li

Answer: (B) K, Rb · The council's preliminary key

Q143 TS EAMCET 2018 · 4 May · Shift 1 MCQ

When sodium (Na) metal is dissolved in liquid ammonia (NH_3), it imparts a blue color to the solution. This blue coloration is due to

(A) Liquid NH_3
(B) $[Na(NH_3)_x]^+$
(C) $NaNH_2$
(D) $[\overline{e}(NH_3)_x]^-$

Answer: (D) $[\overline{e}(NH_3)_x]^-$ · The council's preliminary key

Q144 TS EAMCET 2018 · 4 May · Shift 2 MCQ

Calcium on heating in N_2 yields an ionic compound A, which reacts with water to gi[ve] $Ca(OH)_2$ and a gas B. Identify A and B.

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(A) CaN_2, NO
(B) Ca_3N_2, NH_3
(C) CaN_2, NH_3
(D) Ca_3N_2, NO

Answer: (B) Ca_3N_2, NH_3 · The council's preliminary key

Q145 AP EAMCET 2018 · 24 Apr · Shift 1 MCQ

Observe the following compounds.
$CaCO_3$ (i), $MgSO_4$ (ii), $BaCl_2$ (iii), $Sr(NO_3)_2$ (iv), $MgBr_2$ (v), $MgCl_2$ (vi)
The oxoacid salts of group II elements from the above list are

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

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

Q146 AP EAMCET 2018 · 24 Apr · Shift 2 MCQ

Identify the answer in which, the trends corresponding to hydroxides of group 2 elements (from $Mg(OH)_2$ to $Ba(OH)_2$) are correctly shown
Columns: basic character; chemical stability; solubility

(A) basic character increases; chemical stability increases; solubility decreases
(B) basic character decreases; chemical stability decreases; solubility decreases
(C) basic character decreases; chemical stability increases; solubility increases
(D) basic character increases; chemical stability increases; solubility increases

Answer: (D) basic character increases; chemical stability increases; solubility increases · The council's preliminary key

Q147 AP EAMCET 2018 · 23 Apr · Shift 1 MCQ

Be and Al show similarities in properties due to diagonal relationship except in the property X given below. What is X?

(A) Both form basic oxides and hydroxides
(B) Ions of both have strong tendency to form complexes
(C) In vapour phase chlorides of both have Cl^- bridged chloride structure
(D) Chlorides of both are soluble in organic solvents

Answer: (A) Both form basic oxides and hydroxides · The council's preliminary key

Q148 AP EAMCET 2018 · 23 Apr · Shift 2 MCQ

A compound (M_2O_2) of group I element (M) hydrolyses to form M^+, OH^- and X. Another compound $(M'O_2)$ of group I element (M') hydrolyses to form $(M')^+$, OH^-, X and Y. What are X and Y respectively?

(A) H_2O_2, O_2
(B) H_2O_2, O_3
(C) O_2, H_2
(D) H_2, H_2O_2

Answer: (A) H_2O_2, O_2 · The council's preliminary key

Q149 AP EAMCET 2018 · 22 Apr · Shift 1 MCQ

Which of the following nitrates on heating does **not** give its oxide?

(A) $LiNO_3$
(B) $NaNO_3$
(C) $Ba(NO_3)_2$
(D) $Be(NO_3)_2$

Answer: (B) $NaNO_3$ · The council's preliminary key

Q150 AP EAMCET 2018 · 22 Apr · Shift 2 MCQ

What are X, Y and Z in the following reactions?

$CaCO_3 \overset{\Delta}{\rightleftharpoons} CO_2 + X$

$X + H_2O \longrightarrow Y$

$Y + Cl_2 \longrightarrow Z$

Options give X, Y, Z in order:

(A) X = CaO, Y = $Ca(OH)_2$, Z = $CaOCl_2 \cdot H_2O$
(B) X = CaO, Y = $Ca(OCl)_2$, Z = $Ca(OH)_2$
(C) X = $Ca(OCl)_2$, Y = $Ca(OH)_2$, Z = CaO
(D) X = $Ca(OH)_2$, Y = CaO, Z = $Ca(OCl)_2$

Answer: (A) X = CaO, Y = $Ca(OH)_2$, Z = $CaOCl_2 \cdot H_2O$ · The council's preliminary key

Q151 AP EAMCET 2017 · 26 Apr · Shift 1 MCQ

Which one of the following statements is not correct?

(A) Alkali metals react with water liberating oxygen gas
(B) The hydration enthalpies of alkali metal ions decrease down the group
(C) KO_2 is paramagnetic
(D) Lithium halides are some what Covalent in nature.

Answer: (A) Alkali metals react with water liberating oxygen gas · The council's preliminary key

Q152 AP EAMCET 2017 · 26 Apr · Shift 2 MCQ

Which one of the following ions participates in the production of ATP from the oxidation of glucose?

(A) Na^+
(B) Co^{2+}
(C) Fe^{3+}
(D) K^+

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

Q153 AP EAMCET 2017 · 25 Apr · Shift 1 MCQ

Compounds of alkaline earth metals are less soluble in water than the corresponding alkali metal compounds due to

(A) Their high ionisation enthalpy
(B) Their low electronegativity
(C) Their low hydration enthalpy
(D) Their high lattice enthalpy

Answer: (D) Their high lattice enthalpy · The council's preliminary key

Q154 AP EAMCET 2017 · 25 Apr · Shift 2 MCQ

Identify the correct statement from the following.

(A) Gypsum contains a lower percentage of calcium than in Plaster of Paris
(B) Gypsum is obtained by heating Plaster of Paris
(C) Plaster of Paris is obtained by hydration of gypsum
(D) Plaster of Paris is obtained by partial oxidation of gypsum

Answer: (A) Gypsum contains a lower percentage of calcium than in Plaster of Paris · The council's preliminary key

Q155 AP EAMCET 2017 · 24 Apr · Shift 1 MCQ

Gypsum is added to clinker during cement manufacture to

(A) decrease the rate of setting of cement
(B) bind the particles of calcium silicate
(C) facilitate the formation of colloidal gel
(D) to get the fine powder

Answer: (A) decrease the rate of setting of cement · The council's preliminary key

Q156 AP EAMCET 2017 · 24 Apr · Shift 2 MCQ

The correct variation of the following properties of group 1 elements (M) (Li to Cs) is
(see the figure above)



Question Number : 132 Question Id : 1017173972 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The correct variation of the following properties of group 1 elements (M) (Li to Cs) is

గ్రూప్ 1 మూలకాల (M) (Li నుండి Cs), క్రింది ధర్మాల సరియైన మార్పు

Options :

1.

Hydration enthalpy of M^+ M^+ యొక్క హైడ్రేషన్ ఎంథాల్పీ	Ionization enthalpy of M M యొక్క అయనీకరణ ఎంథాల్పీ	Melting point of M M యొక్క ద్రవీభవన స్థానం
increases పెరుగును	increases పెరుగును	increases పెరుగును

2.

Hydration enthalpy of M^+ M^+ యొక్క హైడ్రేషన్ ఎంథాల్పీ	Ionization enthalpy of M M యొక్క అయనీకరణ ఎంథాల్పీ	Melting point of M M యొక్క ద్రవీభవన స్థానం
decreases తగ్గును	decreases తగ్గును	decreases తగ్గును

3.

Hydration enthalpy of M^+ M^+ యొక్క హైడ్రేషన్ ఎంథాల్పీ	Ionization enthalpy of M M యొక్క అయనీకరణ ఎంథాల్పీ	Melting point of M M యొక్క ద్రవీభవన స్థానం
decreases తగ్గును	decreases తగ్గును	increases పెరుగును

4.

Hydration enthalpy of M^+ M^+ యొక్క హైడ్రేషన్ ఎంథాల్పీ	Ionization enthalpy of M M యొక్క అయనీకరణ ఎంథాల్పీ	Melting point of M M యొక్క ద్రవీభవన స్థానం
increases పెరుగును	decreases తగ్గును	decreases తగ్గును

(A) Hydration enthalpy of M^+: increases; Ionization enthalpy of M: increases; Melting point of M: increases
(B) Hydration enthalpy of M^+: decreases; Ionization enthalpy of M: decreases; Melting point of M: decreases
(C) Hydration enthalpy of M^+: decreases; Ionization enthalpy of M: decreases; Melting point of M: increases
(D) Hydration enthalpy of M^+: increases; Ionization enthalpy of M: decreases; Melting point of M: decreases

Answer: (B) Hydration enthalpy of M^+: decreases; Ionization enthalpy of M: decreases; Melting point of M: decreases · The council's preliminary key

Q157 TS EAMCET 2016 · 15 May · Offline MCQ

Which one of the following will not give flame test ?

(A) Ca
(B) Ba
(C) Sr
(D) Be

Answer: (D) Be · Official TGCHE final key

Q158 AP EAMCET 2016 · 29 Apr · Offline MCQ

Consider the following statements.
I) Cs^+ ion is more highly hydrated than other alkali metal ions
II) Among the alkali metals, only lithium forms a stable nitride by direct combination with nitrogen
III) Among alkali metals Li, Na, K, Rb, the metal, Rb has the highest melting point
IV) Among alkali metals Li, Na, K, Rb only Li forms peroxide when heated with oxygen
The correct statement is

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

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

Q159 AP EAMCET 2014 · 22 May · Offline MCQ

KO_2 exhibits paramagnetic behaviour. This is due to the paramagnetic nature of _____.

(A) KO^-
(B) K^+
(C) O_2
(D) O_2^-

Answer: (D) O_2^- · The council's preliminary key

Q160 AP EAMCET 2012 · 12 May · Offline MCQ

In photoelectric effect, if the energy required to overcome the attractive forces on the electron, (work functions) of Li, Na and Rb are 2.41 eV, 2.30 eV and 2.09 eV respectively, the work function of 'K' could approximately be in eV

(A) 2.52
(B) 2.20
(C) 2.35
(D) 2.01

Answer: (B) 2.20 · Official APSCHE final key

Q161 AP EAMCET 2012 · 12 May · Offline MCQ

Which of the following is NOT correct ?

(A) LiOH is a weaker base than NaOH
(B) Salts of Be undergo hydrolysis
(C) $Ca(HCO_3)_2$ is soluble in water
(D) Hydrolysis of beryllium carbide gives acetylene

Answer: (D) Hydrolysis of beryllium carbide gives acetylene · Official APSCHE final key

Q162 AP EAMCET 2011 · 8 May · Offline MCQ

The reactivity of Ca, Sr, Mg and Ba with water follow the order :

(A) Sr > Ba > Mg > Ca
(B) Ba > Sr > Ca > Mg
(C) Ca > Mg > Ba > Sr
(D) Sr > Ca > Mg > Ba

Answer: (B) Ba > Sr > Ca > Mg · The council's preliminary key

Q163 AP EAMCET 2010 · 30 May · Offline MCQ

Solvay process is used in the manufacture of :

(A) K_2CO_3
(B) $KHCO_3$
(C) Na_2CO_3
(D) $CaCl_2$

Answer: (C) Na_2CO_3 · Official APSCHE final key

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