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CHEMISTRY · EAPCET (EAMCET)

Periodic Table & Periodicity

Previous Year Questions with answers

235 questions · **140** papers · **2010–2026** · newest paper first

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What is in this PDF: every Periodic Table & Periodicity 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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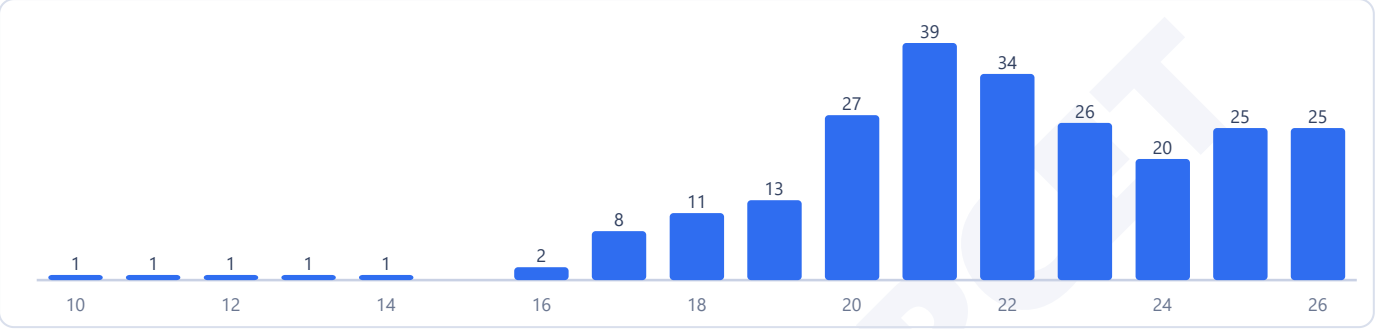
Chapter at a glance

4.2%	235	77 of 77	235 / 0
of Chemistry questions, 2022–2026	questions, 2010–2026	papers asked it, 2022–2026	MCQ / numerical, 2010–2026

Trend. Falling: 1.5 questions per paper in 2024–2026 against 1.9 in 2022–2023.

Questions per year



Counts are the questions we hold: 235 in 140 papers. 2 questions in this chapter came back in more than one paper.

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

Periodic Trends	198
Periodic Table	37

How often it comes up

Periodic Table & Periodicity holds rank 7 among all 31 chemistry chapters during the recent 2022 to 2026 examination period. Across our complete historical compilation spanning 2010 through 2026, the chapter contributed 235 questions across 149 papers, appearing in 140 of those sessions to capture 3.9 percent of the total chemistry questions with 1.6 questions per paper. In the modern five-year window from 2022 to 2026, it expanded its footprint to 130 questions across 77 sittings, delivering 1.7 questions per paper and a 4.2 percent subject share.

The chapter holds an unblemished record across both state engineering entrance streams, appearing in every paper between 2022 and 2026. Across state lines during this period, AP examinations accounted for 77 questions across 48 papers (1.6 questions per paper, 4.0 percent share), while TS examinations generated 53 questions across 29 papers (1.8 questions per paper, 4.6 percent share).

In earlier testing from 2010 through 2021, papers featured 105 questions across 72 sittings (appearing in 63 tests), which worked out to 1.5 questions per paper and a 3.6 percent subject share. Over the latest three exam years from 2024 to 2026, examiners included 70 questions across 46 sittings, maintaining 1.5 questions per test and 3.8 percent share. Tracking trend dynamics reveals that the share early versus the last three years is about the same, and the share recent versus the last three years is about the same. Every shift reliably includes one or two periodicity questions.

Most-asked topics

Questions in this foundational chapter center on two core themes:

- **Periodic Trends** forms the vast majority of the chapter with 198 questions overall and 110 in the recent window through 2026. Subtopics include first and successive ionisation enthalpies, anomalies arising from half-filled and fully filled subshells, electron gain enthalpy trends including halogen and chalcogen reversals, electronegativity scales, covalent and ionic radii across isoelectronic species, and acid-base character of oxides and hydroxides.

- **Periodic Table** accounts for 37 questions across the archive, with 20 occurring between 2022 and 2026. Items focus on electronic configurations of transuranic elements, IUPAC nomenclature for superheavy elements with atomic numbers above one hundred, classification into s, p, d, and f blocks, and representative element groupings.

What the questions look like

Exam questions test precise recognition of periodic irregularities. A prominent format presents four elements and asks candidates to arrange them in order of first or second ionisation enthalpy, emphasizing standard anomalies such as nitrogen exceeding oxygen, beryllium exceeding boron, or noble gas peaks. Another common pattern tests electron gain enthalpy, where chlorine has a more negative value than fluorine, or sulphur has a more negative value than oxygen due to interelectronic repulsions in compact second-period shells.

Examiners also frequently set matching lists where elements are paired with their periodic properties, blocks, or oxide acidity. For superheavy elements, questions test electronic configurations, asking which lighter homologue shares the valence subshell structure of element 114 (flerovium).

How to practise it

Pay careful attention to exceptions in general periodic trends. While ionisation enthalpy generally increases across a period from left to right, beryllium has higher first ionisation enthalpy than boron because removing an electron from a stable s subshell requires extra energy compared to a lone p electron. Similarly, nitrogen has higher first ionisation enthalpy than oxygen because the half-filled p subshell possesses enhanced exchange stability.

For isoelectronic ions, remember that ionic radius decreases steadily with increasing nuclear charge. For example, oxide, fluoride, sodium, magnesium, and aluminium ions all have ten electrons, but aluminium has thirteen protons pulling the electron cloud closest, giving it the smallest ionic radius. Rehearse electronegativity values from the Pauling scale where carbon and sulphur share approximately two point five, and phosphorus and hydrogen share two point two.

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Q1 AP EAPCET 2026 · 18 May · Shift 1 MCQ

Which of the following statements are correct?

I. In third period, two elements have higher ionization enthalpy than the element immediately following them in the same period

II. Electronegativity of carbon is higher than that of phosphorus

III. An element X belongs to group 14 and period 3. The number of electrons present in it is 14

The 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

Q2 AP EAPCET 2026 · 18 May · Shift 2 MCQ

In which of the following, elements are not in correct order with respect to the property mentioned in brackets?

(A) $\mathrm{S} < \mathrm{P} < \mathrm{N} < \mathrm{O}$ (Electronegativity)
(B) $\mathrm{Br} < \mathrm{Ge} < \mathrm{Ga} < \mathrm{Ca}$ (Atomic radius)
(C) $\mathrm{Al} < \mathrm{Mg} < \mathrm{S} < \mathrm{P}$ (First ionization enthalpy)
(D) $\mathrm{Mg} < \mathrm{Ca} < \mathrm{K} < \mathrm{Cs}$ (Metallic nature)

Answer: (A) $\mathrm{S} < \mathrm{P} < \mathrm{N} < \mathrm{O}$ **(Electronegativity)** · The council's preliminary key

Q3 AP EAPCET 2026 · 18 May · Shift 2 MCQ

The nature of chromium oxide formed by the thermal decomposition of ammonium dichromate is

(A) acidic
(B) basic
(C) neutral
(D) amphoteric

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

Q4 AP EAPCET 2026 · 15 May · Shift 1 MCQ

Which of the following is not the correct order of atomic radius of the elements given?

(A) $\mathrm{Br} < \mathrm{Ge} < \mathrm{Ga} < \mathrm{Ca}$
(B) $\mathrm{Cr} < \mathrm{V} < \mathrm{Ti} < \mathrm{Sc}$
(C) $\mathrm{F} < \mathrm{Cl} < \mathrm{K} < \mathrm{Cs}$
(D) $\mathrm{O} < \mathrm{P} < \mathrm{K} < \mathrm{Ge}$

Answer: (D) $\mathrm{O} < \mathrm{P} < \mathrm{K} < \mathrm{Ge}$ · The council's preliminary key

Q5 AP EAPCET 2026 · 15 May · Shift 2 MCQ

The amount of energy released (in $k\ cal\ mol^{-1}$) when 7.1 g of gaseous chlorine atoms are completely converted to $\mathrm{Cl}^-(g)$ ions is
(Given; $\Delta_{eg}H(\mathrm{Cl}) = -3.6\ eV$, $1\ eV = 23\ k\ cal\ mol^{-1}$, $At.Wt;\ \mathrm{Cl} = 35.5u$)

(A) 15.66
(B) 16.56
(C) 31.32
(D) 33.12

Answer: (B) 16.56 · The council's preliminary key

Q6 AP EAPCET 2026 · 14 May · Shift 1 MCQ

Match the following

List – I (Pair of elements having similar values of property mentioned in List - II)	List – II (Property)
A. Co, Ni	I. Electronegativity
B. K, Ba	II. Electron gain enthalpy
C. N, Cl	III. Metallic radius
D. Ar, Kr	IV. Standard reduction potential (-ve)

The correct answer is

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

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

Q7 AP EAPCET 2026 · 14 May · Shift 1 MCQ

The number of amphoteric oxides in the following is

$\mathrm{CO_2}$, $\mathrm{GeO_2}$, $\mathrm{SnO_2}$, $\mathrm{PbO_2}$, CO, GeO, SnO, PbO

The correct answer is

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

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

Q8 AP EAPCET 2026 · 14 May · Shift 2 MCQ

Which of the following sets contain atomic numbers of only representative elements?

I. 3, 33, 53, 87

II. 2, 10, 22, 36

III. 9, 35, 51, 88

IV. 17, 25, 37, 48

The correct answer is

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

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

Q9 AP EAPCET 2026 · 13 May · Shift 1 MCQ

Which of the following statement is not correct?

(A) The increasing order of first ionization enthalpy of Be, B, C is B < Be < C
(B) The IUPAC name of element Livermorium is ununhexium
(C) The element Tennessene belongs to group 16 in periodic table
(D) Al_2O_3, As_2O_3 are amphoteric oxides

Answer: (C) The element Tennessene belongs to group 16 in periodic table · The council's preliminary key

Q10 AP EAPCET 2026 · 13 May · Shift 2 MCQ

Which of the following statements is not correct regarding third period elements?

(A) Cl has the highest electron gain enthalpy
(B) Ar has the highest first ionization enthalpy
(C) Mg has higher ionization enthalpy than Al
(D) P has a lower first ionization enthalpy than S

Answer: (D) P has a lower first ionization enthalpy than S · The council's preliminary key

Q11 AP EAPCET 2026 · 13 May · Shift 2 MCQ

Which pair of oxides is acidic in nature?

(A) GeO, GeO_2
(B) CO, CO_2
(C) SnO, SnO_2
(D) PbO, PbO_2

Answer: (A) GeO, GeO_2 · The council's preliminary key

Q12 AP EAPCET 2026 · 12 May · Shift 1 MCQ

Observe the following pairs of elements

I. P, H

II. C, S

III. N, Cl

Which pairs contain the elements having same electronegativity?

(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

Q13 AP EAPCET 2026 · 12 May · Shift 2 MCQ

Which of the following sets are correctly matched?

	Order	Property
I.	K > Li > C > F	Atomic radius
II.	F > C > Li > K	First ionization enthalpy
III.	F > C > K > Li	Electronegativity

The correct answer is

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

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

Q14 TS EAPCET 2026 · 11 May · Shift 1 MCQ

Which of the following statements are not correct?

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I. The process of adding an electron to a gaseous atom is always exothermic

II. The process of removing an electron from a gaseous atom is always endothermic

III. The first ionization enthalpy of oxygen is greater than nitrogen

IV. In group I elements lithium is the least electropositive

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

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

Q15 TS EAPCET 2026 · 11 May · Shift 1 MCQ

Identify the correct orders with respect to the given property

I. $\mathrm{B} < \mathrm{Al} < \mathrm{Mg} < \mathrm{K}$ – metallic character

II. $\mathrm{Si} < \mathrm{P} < \mathrm{C} < \mathrm{N}$ – electronegativity

III. $\mathrm{Si} < \mathrm{C} < \mathrm{N} < \mathrm{F}$ – non-metallic character

IV. $\mathrm{Al} < \mathrm{Mg} < \mathrm{S} < \mathrm{P}$ – first ionization enthalpy

The correct answer is

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

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

Q16 TS EAPCET 2026 · 11 May · Shift 2 MCQ

Which of the following is an endothermic process?

(A) $\mathrm{Xe(g) + e^- \rightarrow Xe^-(g)}$
(B) $\mathrm{O(g) + e^- \rightarrow O^-(g)}$
(C) $\mathrm{Cl(g) + e^- \rightarrow Cl^-(g)}$
(D) $\mathrm{I(g) + e^- \rightarrow I^-(g)}$

Answer: (A) $\mathrm{Xe(g) + e^- \rightarrow Xe^-(g)}$ · The council's preliminary key

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Q17 TS EAPCET 2026 · 11 May · Shift 2 MCQ

Three separate vessels (A, B and C) each contain 100 mL of distilled water. Some quantity of $\mathrm{P_4O_{10}}$ (s), $\mathrm{SiCl_4}$ (l) and $\mathrm{Ca_3N_2}$ (s) are added into A, B and C vessels respectively. The pH range in A, B and C respectively are

(A) $0-7\,;\,0-7\,;\,0-7$
(B) $0-7\,;\,0-7\,;\,7-14$
(C) $7-14\,;\,7-14\,;\,0-7$
(D) $0-7\,;\,7-14\,;\,7-14$

Answer: (B) $0-7\,;\,0-7\,;\,7-14$ · The council's preliminary key

Q18 TS EAPCET 2026 · 10 May · Shift 1 MCQ

The correct orders of second ionization enthalpies of the given elements are

I. $\mathrm{Li} > \mathrm{B} > \mathrm{Be} > \mathrm{Mg}$

II. $\mathrm{P} > \mathrm{Mg} > \mathrm{Al} > \mathrm{Na}$

III. $\mathrm{O} > \mathrm{F} > \mathrm{N} > \mathrm{C}$

The correct answer is

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

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

Q19 TS EAPCET 2026 · 10 May · Shift 1 MCQ

Identify the element, which does not belong to fifth period of long form of periodic table

(A) Pd
(B) Pt
(C) Cd
(D) Ag

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

Q20 TS EAPCET 2026 · 10 May · Shift 2 MCQ

Identify the correct statements from the following

I. Si and Ge have same electronegativity value

II. The electronic configuration of the element Ds is $[\mathrm{Rn}]5\mathrm{f}^{14}6\mathrm{d}^{10}7\mathrm{s}^{2}7\mathrm{p}^{3}$

III. The p-block elements are classified into six groups

The correct answer is

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

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

Q21 TS EAPCET 2026 · 10 May · Shift 2 MCQ

In which of the following, elements are arranged in the correct order of their first electron gain enthalpy values?

(A) $S < O < Br < I$
(B) $O < S < I < Br$
(C) $I < S < O < Br$
(D) $Br < I < O < S$

Answer: (B) $O < S < I < Br$ · The council's preliminary key

Q22 TS EAPCET 2026 · 9 May · Shift 1 MCQ

Identify the pairs, in which electron gain enthalpy of the first element is more than that of second element

I. F, Br

II. Na, Li

III. S, O

The correct answer is

(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

Q23 TS EAPCET 2026 · 9 May · Shift 1 MCQ

Match the following

List-1 (Element)		List-2 (Block)
A Hf	I	s-block
B Ra	II	p-Block
C Am	III	d-Block
D At	IV	f-Block

The correct answer is

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

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

Q24 TS EAPCET 2026 · 9 May · Shift 2 MCQ

The element with atomic number 114 has outer shell electron configuration as that of element 'X'. What is X?

(A) Ar
(B) Ge
(C) Se
(D) Ti

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

Q25 TS EAPCET 2026 · 9 May · Shift 2 MCQ

Consider the following oxides

$SO_2, P_2O_5, SO_3, Al_2O_3, K_2O, MgO$

The most acidic and most basic oxides are respectively

(A) SO_3, MgO
(B) SO_3, K_2O
(C) P_2O_5, K_2O
(D) P_2O_5, SO_2

Answer: (B) SO_3, K_2O · The council's preliminary key

Q26 AP EAPCET 2025 · 27 May · Shift 1 MCQ

Observe the following data.

Ion	Q^{a+}	X^{b+}	Y^{c+}	Z^{d+}
Radius (pm)	53	66	40	100

$Q^{a+}, X^{b+}, Y^{c+}, Z^{d+}$ are respectively

(A) $Mg^{2+}, Al^{3+}, Na^{+}, Si^{4+}$
(B) $Al^{3+}, Si^{4+}, Mg^{2+}, Na^{+}$
(C) $Mg^{2+}, Si^{4+}, Al^{3+}, Na^{+}$
(D) $Al^{3+}, Mg^{2+}, Si^{4+}, Na^{+}$

Answer: (D) $Al^{3+}, Mg^{2+}, Si^{4+}, Na^{+}$ · The council's preliminary key

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Q27 AP EAPCET 2025 · 27 May · Shift 1 MCQ

The number of amphoteric oxides from the following is

CO_2, GeO_2, SnO_2, PbO_2, CO, GeO, SnO, PbO

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

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

Q28 AP EAPCET 2025 · 26 May · Shift 1 MCQ

Among the ions Mg^{2+}, O^{2-}, Al^{3+}, F^-, Na^+ and N^{3-}, the ion with largest size and ion with smallest size are respectively

(A) N^{3-}, Mg^{2+}
(B) O^{2-}, F^-
(C) Al^{3+}, N^{3-}
(D) N^{3-}, Al^{3+}

Answer: (D) N^{3-}, Al^{3+} · The council's preliminary key

Q29 AP EAPCET 2025 · 26 May · Shift 2 MCQ

Which of the following orders is not correct for the given property ?

(A) $Li < Na < K$ - metallic radius
(B) $Br < F < Cl$ - electron gain enthalpy
(C) $C < N < O$ - first ionization enthalpy
(D) $Mg^{2+} < Na^+ < F^-$ - ionic radius

Answer: (C) $C < N < O$ **- first ionization enthalpy** · The council's preliminary key

Q30 AP EAPCET 2025 · 26 May · Shift 2 MCQ

The correct order of electronegativity of group 13 elements is

(A) $B > Ga > Al > Tl > In$
(B) $B > Al > Tl > Ga > In$
(C) $B > Al > Ga > In > Tl$
(D) $B > Tl > In > Ga > Al$

Answer: (D) $B > Tl > In > Ga > Al$ · The council's preliminary key

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Q31 AP EAPCET 2025 · 24 May · Shift 1 MCQ

The order of negative electron gain enthalpy of Li, Na, S, Cl is

(A) $\mathrm{Na} > \mathrm{S} > Cl > \mathrm{Li}$
(B) $Cl > \mathrm{S} > \mathrm{Li} > \mathrm{Na}$
(C) $Cl > \mathrm{Li} > \mathrm{S} > \mathrm{Na}$
(D) $\mathrm{Li} > \mathrm{Na} > \mathrm{S} > Cl$

Answer: (B) $Cl > \mathrm{S} > \mathrm{Li} > \mathrm{Na}$ · The council's preliminary key

Q32 AP EAPCET 2025 · 23 May · Shift 1 MCQ

Electronic configurations of four elements A, B, C, D are given below

A) $1s^2\,2s^2\,2p^6\,3s^1$

B) $1s^2\,2s^2\,2p^6\,3s^2\,3p^1$

C) $1s^2\,2s^2\,2p^6\,3s^2$

D) $1s^2\,2s^2\,2p^6\,3s^2\,3p^2$

The correct order of first ionization enthalpy of these elements is

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

Answer: (D) $D > C > B > A$ · The council's preliminary key

Q33 AP EAPCET 2025 · 23 May · Shift 2 MCQ

The period and group numbers of the element having maximum elctronegativity in the long form of periodic table, respectively, are

(A) 2, 17
(B) 3, 17
(C) 1, 18
(D) 2, 16

Answer: (A) 2, 17 · The council's preliminary key

Q34 AP EAPCET 2025 · 22 May · Shift 1 MCQ

The correct order of atomic radii of C, Al and S is

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(A) $\mathrm{C} < \mathrm{Al} < \mathrm{S}$
(B) $\mathrm{S} < \mathrm{Al} < \mathrm{C}$
(C) $\mathrm{Al} < \mathrm{S} < \mathrm{C}$
(D) $\mathrm{C} < \mathrm{S} < \mathrm{Al}$

Answer: (D) $\mathrm{C} < \mathrm{S} < \mathrm{Al}$ · The council's preliminary key

Q35 AP EAPCET 2025 · 22 May · Shift 2 MCQ

The correct order of the non-metallic character among the elements B, C, N, F and Si is

(A) $\mathrm{B} > \mathrm{C} > \mathrm{Si} > \mathrm{N} > \mathrm{F}$
(B) $\mathrm{Si} > \mathrm{C} > \mathrm{B} > \mathrm{N} > \mathrm{F}$
(C) $\mathrm{F} > \mathrm{N} > \mathrm{C} > \mathrm{B} > \mathrm{Si}$
(D) $\mathrm{F} > \mathrm{N} > \mathrm{C} > \mathrm{Si} > \mathrm{B}$

Answer: (C) $\mathrm{F} > \mathrm{N} > \mathrm{C} > \mathrm{B} > \mathrm{Si}$ · The council's preliminary key

Q36 AP EAPCET 2025 · 21 May · Shift 1 MCQ

Match the following

List-I (Atomic number, Z)	List-II (Block)
A) 112	I) s
B) 116	II) p
C) 88	III) d
D) 100	IV) f

The corect answer is

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

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

Q37 AP EAPCET 2025 · 21 May · Shift 2 MCQ

Which of the following orders is not correct about the property shown against it?

(A) $\mathrm{N} > \mathrm{O} > \mathrm{P} > \mathrm{S}$ - First ionisation enthalpy
(B) $\mathrm{F} > \mathrm{Cl} > \mathrm{O} > \mathrm{S}$ - Negative electron gain enthlapy
(C) $\mathrm{Fe}^{3+} < \mathrm{Fe}^{2+} < \mathrm{Fe}$ - Size
(D) $\mathrm{O} > \mathrm{N} > \mathrm{S} > \mathrm{P}$ - Non-metallic character

Answer: (B) $\mathrm{F} > \mathrm{Cl} > \mathrm{O} > \mathrm{S}$ **- Negative electron gain enthlapy** · The council's preliminary key

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Q38 TS EAPCET 2025 · 4 May · Shift 1 MCQ

Match the following

List – 1 (Element)	List – 2 (Block)
A Cd	I f-block
B Eu	II s-block
C Se	III d-block
D Ba	IV p-block

The correct answer is

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

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

Q39 TS EAPCET 2025 · 4 May · Shift 1 MCQ

In long form of periodic table an element 'E' has atomic number 78. The period and group number of the element are x and y respectively. $(x + y)$ is equal to

(A) 18
(B) 15
(C) 17
(D) 16

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

Q40 TS EAPCET 2025 · 4 May · Shift 2 MCQ

Identify the correct orders regarding atomic radii

i. $\mathrm{Cl} > \mathrm{F} > \mathrm{Li}$

ii. $\mathrm{P} > \mathrm{C} > \mathrm{N}$

iii. $\mathrm{Tm} > \mathrm{Sm} > \mathrm{Eu}$

iv. $\mathrm{Sr} > \mathrm{Ca} > \mathrm{Mg}$

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

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

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Q41 TS EAPCET 2025 · 4 May · Shift 2 MCQ

Match the following

List – 1 (Elements)	List – 2 (Group)
A Mn, Tc, Re	I 12
B Zn, Cd, Hg	II 4
C Ti, Zr, Hf	III 17
D Ga, In, Tl	IV 7
	V 13

The correct answer is

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

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

Q42 TS EAPCET 2025 · 3 May · Shift 1 MCQ

Match the following

List – 1 (Element)	List – 2 $(\Delta_{eg}H)$ (in $\mathrm{kJ\,mol^{-1}}$)
A O	I -200
B F	II -349
C Cl	III -141
D S	IV -328
	V $+48$

The correct answer is

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

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

Q43 TS EAPCET 2025 · 3 May · Shift 1 MCQ

Observe the following data (Δ_iH_1, Δ_iH_2 and $\Delta_{eg}H$ represent the first, second ionisation enthalpies and electron gain enthalpy respectively).

Element	Δ_iH_1 (kJ mol^{-1})	Δ_iH_2 (kJ mol^{-1})	$\Delta_{eg}H$ (kJ mol^{-1})
I	520	7300	-60

II	490	3051	-48
III	1681	3374	-328
IV	2372	5251	$+48$

Using the data identify the most reactive metal.

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

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

Q44 TS EAPCET 2025 · 3 May · Shift 2 MCQ

In second period of the modern periodic table, two elements X and Y have higher first ionization enthalpy values than the preceding and succeeding elements. X and Y are respectively

(A) B, C
(B) Al, S
(C) Be, N
(D) Na, S

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

Q45 TS EAPCET 2025 · 2 May · Shift 1 MCQ

In which of the following options, elements are correctly arranged in the increasing order of their atomic radius?

(A) $\mathrm{Si} < \mathrm{P} < \mathrm{Na} < \mathrm{N} < \mathrm{F}$
(B) $\mathrm{Na} < \mathrm{Si} < \mathrm{P} < \mathrm{N} < \mathrm{F}$
(C) $\mathrm{F} < \mathrm{N} < \mathrm{P} < \mathrm{Si} < \mathrm{Na}$
(D) $\mathrm{N} < \mathrm{F} < \mathrm{Si} < \mathrm{P} < \mathrm{Na}$

Answer: (C) $\mathrm{F} < \mathrm{N} < \mathrm{P} < \mathrm{Si} < \mathrm{Na}$ · The council's preliminary key

Q46 TS EAPCET 2025 · 2 May · Shift 1 MCQ

A, B, C, D and E are elements with atomic numbers 13, 11, 9, 7 and 16 respectively. Among these elements, ion of an element X has largest size and ion of an element Y has smallest size. X and Y are respectively
(Assume that all ions have nearest inert gas configuration)

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

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

Q47 TS EAPCET 2025 · 2 May · Shift 1 MCQ

The correct order of atomic radii of group 13 elements is

(A) $\mathrm{Al} > \mathrm{Tl} > \mathrm{Ga} > \mathrm{In}$
(B) $\mathrm{Al} > \mathrm{Ga} > \mathrm{In} > \mathrm{Tl}$
(C) $\mathrm{Tl} > \mathrm{In} > \mathrm{Ga} > \mathrm{Al}$
(D) $\mathrm{Tl} > \mathrm{In} > \mathrm{Al} > \mathrm{Ga}$

Answer: (D) $\mathrm{Tl} > \mathrm{In} > \mathrm{Al} > \mathrm{Ga}$ · The council's preliminary key

Q48 TS EAPCET 2025 · 2 May · Shift 1 MCQ

Observe the following oxides. The number of amphoteric oxides from the given list is

$$\mathrm{CO}, \mathrm{B_2O_3}, \mathrm{SnO_2}, \mathrm{PbO_2}, \mathrm{Ga_2O_3}, \mathrm{SnO}, \mathrm{PbO}, \mathrm{CO_2}$$

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

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

Q49 TS EAPCET 2025 · 2 May · Shift 2 MCQ

Atomic numbers of three elements $\mathrm{E_1}$, $\mathrm{E_2}$ and $\mathrm{E_3}$ of periodic table are Z_1, 50 and Z_2 respectively. From the position of the elements shown in figure, the value of $(Z_2 - Z_1)$ is

(see the figure above)

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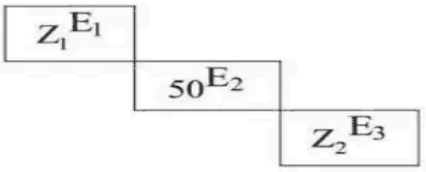
Atomic numbers of three elements E_1, E_2 and E_3 of periodic table are Z_1, 50 and Z_2 respectively. From the position of the elements shown in figure, the value of $(Z_2 - Z_1)$ is

ఆవర్తన పట్టిక లోని మూడు మూలకాలు E_1, E_2 మరియు E_3 ల పరమాణు సంఖ్యలు వరుసగా Z_1, 50 మరియు Z_2. చిత్రంలో చూపిన విధంగా మూలకాల స్థానాన్ని బట్టి $(Z_2 - Z_1)$ విలువ



Options :

1. 52
2. 46
3. 64
4. 34

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(A) 52
(B) 46
(C) 64
(D) 34

Answer: (A) 52 · The council's preliminary key

Q50 TS EAPCET 2025 · 2 May · Shift 2 MCQ

Electron gain enthalpy values ($\Delta_{eg}H$) (in $\mathrm{kJ\,mol^{-1}}$) of elements X, Y and Z are -349, -200 and -295 respectively. X, Y and Z are respectively

(A) Cl, I, S
(B) Cl, S, I
(C) S, Se, Te
(D) Na, K, Rb

Answer: (B) Cl, S, I · The council's preliminary key

Q51 AP EAPCET 2024 · 23 May · Shift 1 MCQ

Match the following

List-I Symbol of element		List-II Group number
A	Mc	I 16
B	Lv	II 17
C	Fl	III 15
D	Ts	IV 14

The correct answer is

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

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

Q52 AP EAPCET 2024 · 22 May · Shift 1 MCQ

In which of the following sets, elements are not correctly arranged with the property shown in brackets?

(A) $\mathrm{S} > \mathrm{Se} > \mathrm{O}$ (Electron gain enthalpy)
(B) $\mathrm{F} > \mathrm{O} > \mathrm{Cl}$ (Electronegativity)
(C) $\mathrm{Na} > \mathrm{Li} > \mathrm{Al}$ (Metallic radius)
(D) $\mathrm{Na} > \mathrm{K} > \mathrm{Ba}$ (Metallic nature)

Answer: (D) $\mathrm{Na} > \mathrm{K} > \mathrm{Ba}$ **(Metallic nature)** · The council's preliminary key

Q53 AP EAPCET 2024 · 22 May · Shift 2 MCQ

Two statements are given below

Statement I: Nitrogen has more ionization enthalpy and electronegativity than beryllium

Statement II: $\mathrm{CrO_3}$, $\mathrm{B_2O_3}$ are acidic oxides

Correct answer is

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

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

Q54 AP EAPCET 2024 · 21 May · Shift 1 MCQ

The correct order of atomic radii of given elements is

(A) $\mathrm{B} < \mathrm{Be} < \mathrm{Mg}$
(B) $\mathrm{Mg} < \mathrm{Be} < \mathrm{B}$
(C) $\mathrm{Be} < \mathrm{B} < \mathrm{Mg}$
(D) $\mathrm{B} < \mathrm{Mg} < \mathrm{Be}$

Answer: (A) $\mathrm{B} < \mathrm{Be} < \mathrm{Mg}$ · The council's preliminary key

Q55 AP EAPCET 2024 · 21 May · Shift 2 MCQ

The correct order of atomic radii of N, F, Al, Si is

(A) $F > N > Si > Al$

(B) $F > N > Al > Si$

(C) $Al > Si > F > N$

(D) $Al > Si > N > F$

Answer: (D) $Al > Si > N > F$ · The council's preliminary key

Q56 AP EAPCET 2024 · 20 May · Shift 1 MCQ

Match the following

List-I		List-II
A Ionization enthalpy	I	$P < Si < Mg < Na$
B Metallic character	II	$I < N < O < F$
C Electron gain enthalpy	III	$B < Be < C < O < N$
D Electro negativity	IV	$I < Br < F < Cl$

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

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

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

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

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

Q57 AP EAPCET 2024 · 20 May · Shift 1 MCQ

Which of the following oxides is acidic in nature?

(A) GeO_2

(B) CO

(C) PbO_2

(D) SnO

Answer: (A) GeO_2 · The council's preliminary key

Q58 AP EAPCET 2024 · 20 May · Shift 2 MCQ

Match the following

List I		List II
A Technicium	I	Non-metal
B Fluorine	II	Transition metal
C Tellurium	III	Lanthanoid
D Dysprosium	IV	Metalloid

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

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

Q59 AP EAPCET 2024 · 19 May · Shift 2 MCQ

If the first ionisation enthalpy of Li, Be and C respectively are 520, 899, 1086 $\mathrm{kJ\ mol^{-1}}$, the first ionisation enthalpy (in $\mathrm{kJ\ mol^{-1}}$) of B will be

(A) 487
(B) 950
(C) 801
(D) 1402

Answer: (C) 801 · The council's preliminary key

Q60 AP EAPCET 2024 · 18 May · Shift 1 MCQ

Match the following

List I Element		List II Electron gain enthalpy (in kJ $\mathrm{mol^{-1}}$)
A F	I	-141
B Cl	II	-328
C O	III	-200
D S	IV	-349

The correct answer is

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

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

Q61 TS EAPCET 2024 · 11 May · Shift 1 MCQ

If first ionization enthalpy $(\Delta_i H)$ values of Na, Mg and Si are respectively 496, 737 and 786 $\mathrm{kJ\,mol^{-1}}$, the first ionization enthalpy value of Al $\left(\mathrm{in\ kJ\,mol^{-1}}\right)$ will be

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(A) 575
(B) 760
(C) 400
(D) 790

Answer: (A) 575 · The council's preliminary key

Q62 TS EAPCET 2024 · 11 May · Shift 1 MCQ

Among the oxides SiO_2, SO_2, Al_2O_3 and P_2O_3, the correct order of acidic strength is

(A) $SiO_2 < SO_2 < Al_2O_3 < P_2O_3$
(B) $SO_2 < P_2O_3 < Al_2O_3 < SiO_2$
(C) $Al_2O_3 < SiO_2 < P_2O_3 < SO_2$
(D) $Al_2O_3 < P_2O_3 < SiO_2 < SO_2$

Answer: (C) $Al_2O_3 < SiO_2 < P_2O_3 < SO_2$ · The council's preliminary key

Q63 TS EAPCET 2024 · 10 May · Shift 1 MCQ

In which of the following ionic pairs, second ion is smaller in size than the first ion?

(A) Al^{3+}, Mg^{2+}
(B) F^-, Na^+
(C) O^{2-}, N^{3-}
(D) Mg^{2+}, Na^+

Answer: (B) F^-, Na^+ · The council's preliminary key

Q64 TS EAPCET 2024 · 10 May · Shift 2 MCQ

The set containing the elements with positive electron gain enthalpies is

(A) S, Se, Te
(B) Kr, Xe, Rn
(C) Cl, Br, I
(D) K, Rb, Cs

Answer: (B) Kr, Xe, Rn · The council's preliminary key

Q65 TS EAPCET 2024 · 10 May · Shift 2 MCQ

Assertion (A): The ionic radii of Na^+ and F^- are same

Reason (R): Both Na^+ and F^- are isoelectronic species

The correct answer is

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(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

Q66 TS EAPCET 2024 · 10 May · Shift 2 MCQ

Carbon on reaction with hot conc. H_2SO_4, gives two oxides along with H_2O. What is the nature of these two oxides?

(A) Both are acidic
(B) Both are basic
(C) Both are neutral
(D) Both are amphoteric

Answer: (A) Both are acidic · The council's preliminary key

Q67 TS EAPCET 2024 · 9 May · Shift 1 MCQ

Which of the following has the least electron gain enthalpy?

(A) Chlorine
(B) Iodine
(C) Oxygen
(D) Sulphur

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

Q68 TS EAPCET 2024 · 9 May · Shift 1 MCQ

Observe the oxides $CO, B_2O_3, SiO_2, CO_2, Al_2O_3, PbO_2, Tl_2O_3$

The number of acidic oxides in the list is

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

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

Q69 TS EAPCET 2024 · 9 May · Shift 2 MCQ

Identify the pair of elements in which the difference in atomic radii is maximum

(A) C, N
(B) O, F
(C) P, S
(D) Li, Be

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

Q70 TS EAPCET 2024 · 9 May · Shift 2 MCQ

Match the following

List – I (Element)		List – II (Block)	
A	Ra	I	p – block
B	Uuq	II	s – block
C	Ds	III	f – block
D	Fm	IV	d – block

The correct answer is

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

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

Q71 AP EAPCET 2023 · 19 May · Shift 1 MCQ

The number of metalloids in the following elements are

$\mathrm{Si, Mn, B, F, Cu, Ag, K, Sb, As, Na, Ge}$

(A) 4
(B) 5
(C) 6
(D) 7

Answer: (B) 5 · Checked by our team

Q72 AP EAPCET 2023 · 18 May · Shift 1 MCQ

The number of following pairs of elements which exhibit diagonal relationship is :

i. B & Si ii. Be & Al iii. Li & Mg iv. Al & S

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

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

Q73 AP EAPCET 2023 · 18 May · Shift 1 MCQ

The correct order of atomic radii of B, Be, N and C is

(A) $\mathrm{Be} < \mathrm{B} < \mathrm{C} < \mathrm{N}$
(B) $\mathrm{N} < \mathrm{B} < \mathrm{C} < \mathrm{Be}$
(C) $\mathrm{N} < \mathrm{C} < \mathrm{B} < \mathrm{Be}$
(D) $\mathrm{Be} < \mathrm{C} < \mathrm{B} < \mathrm{N}$

Answer: (C) $\mathrm{N} < \mathrm{C} < \mathrm{B} < \mathrm{Be}$ · The council's preliminary key

Q74 AP EAPCET 2023 · 18 May · Shift 2 MCQ

The ion with smallest radius among the following is

(A) Ca^{2+}
(B) K^{+}
(C) Ti^{4+}
(D) Sc^{3+}

Answer: (C) Ti^{4+} · The council's preliminary key

Q75 AP EAPCET 2023 · 18 May · Shift 2 MCQ

The correct order of the metallic nature of the following elements is

(A) $\mathrm{Si} > \mathrm{Al} > \mathrm{Na} > \mathrm{Hg}$
(B) $\mathrm{Na} > \mathrm{Mg} > \mathrm{Al} > \mathrm{Si}$
(C) $\mathrm{Al} > \mathrm{Mg} > \mathrm{Na} > \mathrm{Si}$
(D) $\mathrm{Mg} > \mathrm{Na} > \mathrm{Al} > \mathrm{Si}$

Answer: (B) $\mathrm{Na} > \mathrm{Mg} > \mathrm{Al} > \mathrm{Si}$ · The council's preliminary key

Q76 AP EAPCET 2023 · 17 May · Shift 1 MCQ

Which of the following statements are correct?

I. P is having least negative electron gain enthalpy among P, S, Cl, and F

II. In Eu, Yb Lanthanoid contraction is not observed

III. $\mathrm{Ce(OH)_3}$ is most basic among lanthanoid hydroxides

IV. The radii of Na and Na^{+} are 95 pm, 186 pm respectively

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

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

Q77 AP EAPCET 2023 · 17 May · Shift 1 MCQ

The correct order of electron gain enthalpy of N, O, Cl, Al is

(A) $\mathrm{Cl} < \mathrm{N} < \mathrm{O} < \mathrm{Al}$
(B) $\mathrm{Al} < \mathrm{N} < \mathrm{O} < \mathrm{Cl}$
(C) $\mathrm{O} < \mathrm{N} < \mathrm{Al} < \mathrm{Cl}$
(D) $\mathrm{N} < \mathrm{O} < \mathrm{Cl} < \mathrm{Al}$

Answer: (B) $\mathrm{Al} < \mathrm{N} < \mathrm{O} < \mathrm{Cl}$ · The council's preliminary key

Q78 AP EAPCET 2023 · 17 May · Shift 2 MCQ

Which one of the following indicates correct order of atomic size of the given elements?

(A) $\mathrm{Li} > \mathrm{B} > \mathrm{F} > \mathrm{N}$
(B) $\mathrm{N} > \mathrm{F} > \mathrm{Li} > \mathrm{B}$
(C) $\mathrm{F} > \mathrm{N} > \mathrm{B} > \mathrm{Li}$
(D) $\mathrm{Li} > \mathrm{B} > \mathrm{N} > \mathrm{F}$

Answer: (D) $\mathrm{Li} > \mathrm{B} > \mathrm{N} > \mathrm{F}$ · The council's preliminary key

Q79 AP EAPCET 2023 · 17 May · Shift 2 MCQ

In which one of the following pairs, both oxides are acidic?

(A) $\mathrm{CO}, \mathrm{CO_2}$
(B) $\mathrm{SnO}, \mathrm{PbO_2}$
(C) $\mathrm{GeO}, \mathrm{SiO_2}$
(D) $\mathrm{SnO}, \mathrm{PbO}$

Answer: (C) $\mathrm{GeO}, \mathrm{SiO_2}$ · The council's preliminary key

Q80 AP EAPCET 2023 · 17 May · Shift 2 MCQ

Arrange the oxides CrO, $\mathrm{CrO_3}$ and $\mathrm{Cr_2O_3}$ in the decreasing order of acidic strength

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(A) $CrO_3 > Cr_2O_3 > CrO$
(B) $CrO_3 > CrO > Cr_2O_3$
(C) $CrO > Cr_2O_3 > CrO_3$
(D) $CrO > CrO_3 > Cr_2O_3$

Answer: (A) $CrO_3 > Cr_2O_3 > CrO$ · The council's preliminary key

Q81 AP EAPCET 2023 · 16 May · Shift 1 MCQ

Match the following

List-I (Elements)	List-II (Valence shell Configuration)
A. Alkali metals	I. ns^2np^6
B. Alkaline earth metals	II. ns^2np^5
C. Halogens	III. ns^2
D. Noble gases	IV. ns^1

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

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

Q82 AP EAPCET 2023 · 16 May · Shift 1 MCQ

Which of the following oxides is highly basic?

(A) Cr_2O_3
(B) Al_2O_3
(C) MgO
(D) Na_2O

Answer: (D) Na_2O · The council's preliminary key

Q83 AP EAPCET 2023 · 16 May · Shift 2 MCQ

Consider the elements Ne, Na, Mg. The element with highest first ionization enthalpy and element with lowest second ionization enthalpy respectively are

(A) Na, Ne
(B) Ne, Mg
(C) Na, Na
(D) Mg, Na

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

Q84 AP EAPCET 2023 · 16 May · Shift 2 MCQ

The IUPAC symbol for the element with atomic number 108 is

(A) Hs
(B) Bh
(C) Mt
(D) Sg

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

Q85 AP EAPCET 2023 · 15 May · Shift 1 MCQ

Consider the following two statements

Statement I: Among Mg, Al, Mg^{2+}, Al^{3+} the one having smallest size is Al^{3+}

Statement II: Eu is having exceptionally high atomic radii among lanthanide elements

The correct answer is

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

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

Q86 AP EAPCET 2023 · 15 May · Shift 1 MCQ

Identify the pair of elements with highest and lowest electronegativity respectively

(A) K and Rb
(B) I and F
(C) F and Fr
(D) Fr and Li

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

Q87 AP EAPCET 2023 · 15 May · Shift 1 MCQ

Choose the acidic oxide from the following

(A) CO
(B) GeO
(C) SnO
(D) PbO

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

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Q88 AP EAPCET 2023 · 15 May · Shift 2 MCQ

The correct order of covalent radii of Si, Ge, Sn is:

(A) $\mathrm{Ge} < \mathrm{Si} < \mathrm{Sn}$
(B) $\mathrm{Sn} < \mathrm{Si} < \mathrm{Ge}$
(C) $\mathrm{Si} < \mathrm{Ge} < \mathrm{Sn}$
(D) $\mathrm{Sn} < \mathrm{Ge} < \mathrm{Si}$

Answer: (C) $\mathrm{Si} < \mathrm{Ge} < \mathrm{Sn}$ · The council's preliminary key

Q89 AP EAPCET 2023 · 15 May · Shift 2 MCQ

The first ionization enthalpies of Na, Mg and Si are respectively 496, 737 and 786 $\mathrm{kJ\ mol^{-1}}$. What would be the first ionization enthalpy of Al in $\mathrm{kJ\ mol^{-1}}$?

(A) 450
(B) 750
(C) 575
(D) 800

Answer: (C) 575 · The council's preliminary key

Q90 TS EAMCET 2023 · 14 May · Shift 1 MCQ

Match the following

List – I (Atomic number)	List – II (Group number & Period number)
A) 56	I) 9, 4
B) 50	II) 3, 6
C) 27	III) 14, 5
D) 58	IV) 2, 6

The correct answer is

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

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

Q91 TS EAMCET 2023 · 14 May · Shift 1 MCQ

Aluminium reacts with dilute HCl and liberates a gas 'A' and with aqueous alkali liberates a gas 'B'. A and B respectively are

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(A) Cl_2, O_2
(B) O_2, O_2
(C) Cl_2, H_2
(D) H_2, H_2

Answer: (D) H_2, H_2 · The council's preliminary key

Q92 TS EAMCET 2023 · 14 May · Shift 2 MCQ

Assertion (A): First ionisation enthalpy of oxygen is less than that of nitrogen

Reason (R): Atoms with half-filled or completely filled orbitals are less stable

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 correct explanation of (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

Q93 TS EAMCET 2023 · 13 May · Shift 1 MCQ

Choose the correct order of second ionisation enthalpies of Carbon, Nitrogen, Oxygen and Fluorine

(A) Carbon > Nitrogen > Oxygen > Fluorine
(B) Oxygen > Carbon > Nitrogen > Fluorine
(C) Fluorine > Nitrogen > Carbon > Oxygen
(D) Oxygen > Fluorine > Nitrogen > Carbon

Answer: (D) Oxygen > Fluorine > Nitrogen > Carbon · The council's preliminary key

Q94 TS EAMCET 2023 · 13 May · Shift 2 MCQ

What is the correct order with respect to metallic property of Zr, Cd, Sn, Sr?

(A) $Sn < Cd < Zr < Sr$
(B) $Sn < Sr < Cd < Zr$
(C) $Cd < Zr < Sr < Sn$
(D) $Zr < Sr < Cd < Sn$

Answer: (A) $Sn < Cd < Zr < Sr$ · The council's preliminary key

Q95 TS EAMCET 2023 · 12 May · Shift 1 MCQ

Consider the following

I) The order of first ionisation enthalpy of first three elements of 3rd period is $Mg > Al > Na$

II) The element with electronegativity of 3.5 is chlorine

III) The order of sizes of ions Mg^{2+}, Na^{+}, F^{-} and O^{2-} is $Mg^{2+} < Na^{+} < F^{-} < O^{2-}$

IV) The IUPAC name of the element with atomic number 106 is Bohrium

The correct statements are

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

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

Q96 TS EAMCET 2023 · 12 May · Shift 2 MCQ

In which of the following options, the elements are correctly arranged with respect to their negative electron gain enthalpies?

(A) $P > S > Cl > F$
(B) $S > P > F > Cl$
(C) $Cl > F > S > P$
(D) $F > Cl > P > S$

Answer: (C) $Cl > F > S > P$ · The council's preliminary key

Q97 TS EAMCET 2022 · 20 Jul · Shift 1 MCQ

Arrange the following in increasing order of ionic radii O^{2-}, Na^{+}, F^{-}, Mg^{2+}

(A) $Mg^{2+} < Na^{+} < F^{-} < O^{2-}$
(B) $Mg^{2+} < F^{-} < Na^{+} < O^{2-}$
(C) $O^{2-} < F^{-} < Na^{+} < Mg^{2+}$
(D) $O^{2-} < Mg^{2+} < F^{-} < Na^{+}$

Answer: (A) $Mg^{2+} < Na^{+} < F^{-} < O^{2-}$ · The council's preliminary key

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Q98 TS EAMCET 2022 · 20 Jul · Shift 2 MCQ

Which of the following sequence is correct for decreasing order of ionic radius?

(A) $I^{-} > Se^{2-} > Br^{-} > O^{2-} > F^{-}$
(B) $Se^{2-} > I^{-} > Br^{-} > F^{-} > O^{2-}$
(C) $I^{-} > Se^{2-} > O^{2-} > Br^{-} > F^{-}$
(D) $Se^{2-} > I^{-} > Br^{-} > O^{2-} > F^{-}$

Answer: (A) $I^{-} > Se^{2-} > Br^{-} > O^{2-} > F^{-}$ · The council's preliminary key

Q99 TS EAMCET 2022 · 20 Jul · Shift 2 MCQ

The successive ionisation energies (starting from the 1st) of an element are 801, 2430, 3660, 25,000 and 32,800 $\mathrm{kJ\,mol^{-1}}$, respectively. The element is

(A) B
(B) C
(C) O
(D) N

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

Q100 TS EAMCET 2022 · 19 Jul · Shift 1 MCQ

The correct order of the electron gain enthalpy of the given elements is

(A) $\mathrm{O > Se > S}$
(B) $\mathrm{Se > S > O}$
(C) $\mathrm{O > S > Se}$
(D) $\mathrm{S > O > Se}$

Answer: (A) $\mathrm{O > Se > S}$ · The council's preliminary key

Q101 TS EAMCET 2022 · 19 Jul · Shift 2 MCQ

The correct order of ionic radii for the given species is

(A) $\mathrm{Na^+ > Al^{3+} > Mg^{2+} > K^+}$
(B) $\mathrm{K^+ > Na^+ > Mg^{2+} > Al^{3+}}$
(C) $\mathrm{K^+ > Na^+ > Al^{3+} > Mg^{2+}}$
(D) $\mathrm{Al^{3+} > Mg^{2+} > K^+ > Na^+}$

Answer: (B) $\mathrm{K^+ > Na^+ > Mg^{2+} > Al^{3+}}$ · The council's preliminary key

Q102 TS EAMCET 2022 · 19 Jul · Shift 2 MCQ

Which of the following set of properties generally decreases along a period?

(A) Ionization energy and atomic radii
(B) Metallic character and atomic radii
(C) Electron affinity and electronegativity
(D) Valency and oxidation potential

Answer: (B) Metallic character and atomic radii · Checked by our team

Q103 TS EAMCET 2022 · 19 Jul · Shift 2 MCQ

$\mathrm{Al + aq.NaOH}$ (excess) $\longrightarrow$ P + Q. P and Q are

(A) $Al(OH)_3$; H_2O
(B) $Al(OH)_3$; Na_2O_2
(C) $Na^+[Al(OH)_4]^-$; H_2
(D) $Al(OH)_3$; Na_2O

Answer: (C) $Na^+[Al(OH)_4]^-$; H_2 · The council's preliminary key

Q104 TS EAMCET 2022 · 18 Jul · Shift 1 MCQ

How many of the following statements are correct?
a) 'He' is the second most abundant element in the universe.
b) the symbol for the element with atomic number 110 is Ds.
c) Osmium has the highest density among all elements.
d) Francium is the most electropositive element in the periodic table.

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

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

Q105 TS EAMCET 2022 · 18 Jul · Shift 1 MCQ

The correct order of the first ionization enthalpies of the following elements is

(A) $Li < B < Be < N$
(B) $Li < Be < B < N$
(C) $N < Be < B < Li$
(D) $N < B < Be < Li$

Answer: (A) $Li < B < Be < N$ · The council's preliminary key

Q106 TS EAMCET 2022 · 18 Jul · Shift 1 MCQ

Aluminium when treated with aqueous NaOH, liberates a gaseous molecule majorly. The gas is

(A) H_2
(B) O_2
(C) D_2
(D) O_3

Answer: (A) H_2 · The council's preliminary key

Q107 TS EAMCET 2022 · 18 Jul · Shift 2 MCQ

The correct order of decreasing acidic nature of oxides

(A) $Li_2O > BeO > CO_2 > B_2O_3 > N_2O_3$
(B) $CO_2 > N_2O_3 > B_2O_3 > Li_2O > BeO$
(C) $CO_2 > BeO > Li_2O > B_2O_3 > N_2O_3$
(D) $N_2O_3 > CO_2 > B_2O_3 > BeO > Li_2O$

Answer: (D) $N_2O_3 > CO_2 > B_2O_3 > BeO > Li_2O$ · The council's preliminary key

Q108 AP EAPCET 2022 · 8 Jul · Shift 1 MCQ

The electronic configuration which is associated with highest first ionisation enthalpy is:

(A) $[Ne]\,3s^2 3p^2$
(B) $[Ne]\,3s^2 3p^3$
(C) $[Ne]\,3s^2 3p^4$
(D) $[Ne]\,3s^2 3p^1$

Answer: (B) $[Ne]\,3s^2 3p^3$ · The council's preliminary key

Q109 AP EAPCET 2022 · 8 Jul · Shift 2 MCQ

The correct order of atomic radii of the elements O, N, S and P is

(A) $N < P < S < O$
(B) $N < O < P < S$
(C) $O < N < P < S$
(D) $O < N < S < P$

Answer: (D) $O < N < S < P$ · The council's preliminary key

Q110 AP EAPCET 2022 · 7 Jul · Shift 1 MCQ

Among the ions O^{2-}, Na^+, F^-, N^{3-}, Mg^{2+} the ions with smallest and largest radii are respectively

(A) F^-, N^{3-}
(B) Mg^{2+}, N^{3-}
(C) Na^+, F^-
(D) F^-, Na^+

Answer: (B) Mg^{2+}, N^{3-} · The council's preliminary key

Q111 AP EAPCET 2022 · 7 Jul · Shift 1 MCQ

Observe the following statements
Statement A: - In general, the ionization potential value decreases on moving down in the group.
Statement B:- The 1st ionization potential of sodium is greater from that of potassium
Correct answer is

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(A) Both A and B are wrong
(B) Both A and B are correct
(C) A is correct but B is wrong
(D) A is wrong but B is correct

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

Q112 AP EAPCET 2022 · 7 Jul · Shift 1 MCQ

The percentage of abundance of three elements X, Y and Z in the earth's crust are about 27.7, 8.3 and 46.0 by mass respectively. X, Y and Z are

(A) O, Si, Al
(B) Al, Si, O
(C) Si, Al, O
(D) Al, O, Si

Answer: (C) Si, Al, O · The council's preliminary key

Q113 AP EAPCET 2022 · 7 Jul · Shift 2 MCQ

In which of the following, elements are correctly arranged in the decreasing order of their second ionization enthalpies.

(A) O > F > N > C
(B) N > O > F > C
(C) F > O > N > C
(D) C > N > O > F

Answer: (A) O > F > N > C · The council's preliminary key

Q114 AP EAPCET 2022 · 7 Jul · Shift 2 MCQ

Identify the element which has highest second ionization enthalpy

(A) Carbon
(B) Phosphorus
(C) Nitrogen
(D) Oxygen

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

Q115 AP EAPCET 2022 · 7 Jul · Shift 2 MCQ

The general formula of the compound formed when a metal (M) of group - 1 reacts with non metal (x) of group - 16 is

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(A) MX_6
(B) M_2X_3
(C) MX_2
(D) M_2X

Answer: (D) M_2X · The council's preliminary key

Q116 AP EAPCET 2022 · 7 Jul · Shift 2 MCQ

Arrange the following oxides in correct order of their acidic character.
N_2O_3 (I), P_2O_3 (II), N_2O_5 (III), As_2O_3 (IV)

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

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

Q117 AP EAPCET 2022 · 6 Jul · Shift 1 MCQ

The set of amphoteric oxides among ZnO, Tl_2O_3, In_2O_3, B_2O_3, PbO, SnO_2 is

(A) ZnO, Tl_2O_3, PbO
(B) ZnO, PbO, SnO_2
(C) ZnO, In_2O_3, SnO_2
(D) ZnO, In_2O_3, PbO

Answer: (B) ZnO, PbO, SnO_2 · The council's preliminary key

Q118 AP EAPCET 2022 · 6 Jul · Shift 1 MCQ

In which of the following the elements are in correct order of their chemical reactivity in terms of oxidizing property?

(A) $F > O > Cl > N$
(B) $O > F > Cl > N$
(C) $Cl > F > O > N$
(D) $F > Cl > N > O$

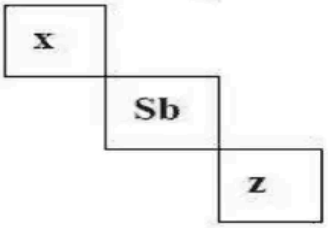
Answer: (A) $F > O > Cl > N$ · The council's preliminary key

Q119 AP EAPCET 2022 · 6 Jul · Shift 2 MCQ

Identify the elements x and z in the following representation. (Sb=antimony)
(see the figure above)

Identify the elements x and z in the following representation. (Sb=antimony)

క్రింద సూచించిన విధానంలో x, z మూలకాలను గుర్తించుము. (Sb= ఆంటిమోని)



Options :

1. Ge, Po
2. Sn, Ga
3. Ga, Bi
4. Si, Te

(A) Ge, Po
(B) Sn, Ga
(C) Ga, Bi
(D) Si, Te

Answer: (A) Ge, Po · The council's preliminary key

Q120 AP EAPCET 2022 · 6 Jul · Shift 2 MCQ

The successive ionization enthalpies of an element X in $(\mathrm{kJ\ mol^{-1}})$ are 1012, 1907, 2955, 4955, 6275 and 21, 260 respectively, the element X is

(A) C
(B) P
(C) S
(D) Cl

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

Q121 AP EAPCET 2022 · 5 Jul · Shift 1 MCQ

In which of the following, oxides of three elements X, Y and Z are correctly arranged in the increasing order of acidic nature. The electronic configurations of X, Y and Z are $[\mathrm{Ne}]3s^2 3p^1$, $[\mathrm{Ne}]3s^2 3p^5$, $[\mathrm{Ne}]3s^2$ respectively.

(A) X < Y < Z
(B) Y < Z < X
(C) Z < X < Y
(D) X < Z < Y

Answer: (C) Z < X < Y · The council's preliminary key

Q122 AP EAPCET 2022 · 5 Jul · Shift 1 MCQ

Assertion (A): 16th group elements have higher ionization enthalpy values than 15th group elements in the corresponding periods.
Reason (R): 15th group elements have half-filled stable electronic configurations.

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

Q123 AP EAPCET 2022 · 5 Jul · Shift 1 MCQ

Assertion (A): Fluorine has smaller negative electron gain enthalpy than chlorine
Reason (R): The electron - electron repulsion is higher in chlorine than in fluorine

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

Q124 AP EAPCET 2022 · 5 Jul · Shift 2 MCQ

In which of the following, the elements Al, B, Mg and K are correctly arranged in the increasing order of their metallic character?

(A) $\mathrm{B} < \mathrm{Al} < \mathrm{Mg} < \mathrm{K}$
(B) $\mathrm{B} < \mathrm{Mg} < \mathrm{Al} < \mathrm{K}$
(C) $\mathrm{Al} < \mathrm{Mg} < \mathrm{K} < \mathrm{B}$
(D) $\mathrm{B} < \mathrm{Mg} < \mathrm{K} < \mathrm{Al}$

Answer: (A) $\mathrm{B} < \mathrm{Al} < \mathrm{Mg} < \mathrm{K}$ · The council's preliminary key

Q125 AP EAPCET 2022 · 5 Jul · Shift 2 MCQ

The number of valence electrons present in an element with atomic number 117 is

(A) 7
(B) 8
(C) 6
(D) 5

Answer: (A) 7 · The council's preliminary key

Q126 AP EAPCET 2022 · 5 Jul · Shift 2 MCQ

The element with highest electronegativity value after fluorine is

(A) Nitrogen
(B) Oxygen
(C) Chlorine
(D) Bromine

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

Q127 AP EAPCET 2022 · 4 Jul · Shift 1 MCQ

Lithium shows diagonal relationship with element 'X' and aluminum with Y. X and Y respectively are

(A) Mg, Be
(B) Be, Mg
(C) Na, Si
(D) B, Be

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

Q128 AP EAPCET 2022 · 4 Jul · Shift 1 MCQ

The correct order of the metallic character of the elements Be, Al, Na, K is

(A) K > Na > Al > Be
(B) K > Al > Na > Be
(C) Al > K > Na > Be
(D) Na > K > Be > Al

Answer: (A) K > Na > Al > Be · The council's preliminary key

Q129 AP EAPCET 2022 · 4 Jul · Shift 2 MCQ

In which of the following, elements are arranged in the correct order of their electron gain enthalpies.

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(A) $F > S > O > N$
(B) $F > O > S > N$
(C) $F > O > N > S$
(D) $F > N > O > S$

Answer: (A) $F > S > O > N$ · The council's preliminary key

Q130 AP EAPCET 2022 · 4 Jul · Shift 2 MCQ

In second period of the long form of the periodic table an element X has second lowest first ionization enthalpy and element Y has second highest first ionization enthalpy values. What are X and Y?

(A) B, F
(B) Be, Ne
(C) Be, O
(D) C, O

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

Q131 AP EAPCET 2021 · 5 Oct · Shift 1 MCQ

The decreasing order of shielding effect of orbitals is _____

(A) $f > d > p > s$
(B) $d > f > s > p$
(C) $p > s > f > d$
(D) $s > p > d > f$

Answer: (D) $s > p > d > f$ · The council's preliminary key

Q132 AP EAPCET 2021 · 5 Oct · Shift 1 MCQ

An element with high electronegativity has _____ (IE-Ionization Energy, EA- Electron Affinity)

(A) Low IE & High EA
(B) Low IE & Low EA
(C) High IE & Low EA
(D) High IE & High EA

Answer: (D) High IE & High EA · The council's preliminary key

Q133 AP EAPCET 2021 · 5 Oct · Shift 1 MCQ

Identify the increasing order of ionization enthalpies of the group-14 elements.

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(A) $Si < C < Ge < Sn < Pb$
(B) $Si < C < Ge < Pb < Sn$
(C) $Sn < Pb < Ge < Si < C$
(D) $Pb < Sn < Ge < Si < C$

Answer: (C) $Sn < Pb < Ge < Si < C$ · The council's preliminary key

Q134 AP EAPCET 2021 · 25 Aug · Shift 1 MCQ

In the modern periodic table, the acidic nature of oxides _____

(A) Increases from left to right and decreases from top to bottom
(B) Decreases from right to left and increases from top to bottom
(C) Remains same across a period and increases from top to bottom
(D) Decreases from left to right and remains the same down the group

Answer: (A) Increases from left to right and decreases from top to bottom · The council's preliminary key

Q135 AP EAPCET 2021 · 25 Aug · Shift 2 MCQ

The formation of oxide ion O^{2-} from oxygen atom requires an exothermic reaction, followed by an endothermic step as shown below. The process of formation of O^{2-} in gas phase is unfavorable ($\Delta H^{\ominus} = +ve$), even though it has stable configuration of the nearest noble gas, Neon. This is because _____

$O_{(g)} + e^- \rightarrow O^-_{(g)}$; $\Delta H^{\ominus} = -141\ kJ.mol^{-1}$
$O^-_{(g)} + e^- \rightarrow O^{2-}_{(g)}$; $\Delta H^{\ominus} = +760\ kJ.mol^{-1}$

(A) O^{2-} has larger size than that of Neon
(B) Oxygen is more electronegative than Neon
(C) O^- has larger size than oxygen atom
(D) Electron repulsion in oxide ion is more which over comes the stability achieved by noble gas configuration

Answer: (D) Electron repulsion in oxide ion is more which over comes the stability achieved by noble gas configuration · The council's preliminary key

Q136 AP EAPCET 2021 · 25 Aug · Shift 2 MCQ

Identify the correct order of ionic radii of the given species:

(A) $Mn^{7+} > V^{5+} > Sc^{3+} > K^+ > S^{2-}$
(B) $S^{2-} > K^+ > Sc^{3+} > V^{5+} > Mn^{7+}$
(C) $S^{2-} > K^+ > V^{5+} > Sc^{3+} > Mn^{7+}$
(D) $K^+ > S^{2-} > Sc^{3+} > V^{5+} > Mn^{7+}$

Answer: (B) $S^{2-} > K^+ > Sc^{3+} > V^{5+} > Mn^{7+}$ · The council's preliminary key

Q137 AP EAPCET 2021 · 24 Aug · Shift 1 MCQ

Which of the following sequences is the correct order of the size of species?

(A) $I > I^+ > I^-$
(B) $I^- > I^+ > I^-$ (sic)
(C) $I^+ > I^- > I^-$ (sic)
(D) $I^- > I > I^+$

Answer: (D) $I^- > I > I^+$ · The council's preliminary key

Q138 AP EAPCET 2021 · 24 Aug · Shift 1 MCQ

If the successive ionization energies of an element A are 165, 190, 550 and 595 kcal, respectively, then the ground state electronic configuration of element A is _____

(A) $[\mathrm{Ne}]\ 3s^2\ 3p^2$
(B) $[\mathrm{He}]\ 2s^1$
(C) $[\mathrm{He}]\ 2s^2\ 2p^2$
(D) $[\mathrm{Ne}]\ 3s^2$

Answer: (D) $[\mathrm{Ne}]\ 3s^2$ · The council's preliminary key

Q139 AP EAPCET 2021 · 24 Aug · Shift 1 MCQ

How many oxides among the following are basic in nature?
$\mathrm{As_2O_3}$, $\mathrm{Na_2O}$, MgO, $\mathrm{Mn_2O_3}$, CaO, ZnO, $\mathrm{N_2O}$, $\mathrm{N_2O_5}$

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

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

Q140 AP EAPCET 2021 · 24 Aug · Shift 2 MCQ

Effective nuclear charge is maximum in case of _____

(A) Lithium
(B) Beryllium
(C) Oxygen
(D) Fluorine

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

Q141 AP EAPCET 2021 · 24 Aug · Shift 2 MCQ

Identify the incorrect order corresponding the mentioned property?

(A) $Al_2O_3 < MgO < Na_2O < K_2O$: Basicity
(B) $NH_3 < PH_3 < AsH_3$: Acidity
(C) $Li^+ < Na^+ < K^+ < Cs^+$: Ionic radius
(D) $Li < Be < B < C$: First Ionization enthalpy

Answer: (D) $Li < Be < B < C$: First Ionization enthalpy · The council's preliminary key

Q142 AP EAPCET 2021 · 23 Aug · Shift 1 MCQ

The ions $S^{2-}, Cl^-, K^+, Ca^{2+}$ are iso-electronic. Their ionic radii show _____

(A) a decrease from S^{2-} to Cl^- and then increase from K^+ to Ca^{2+}
(B) an increase from S^{2-} to Cl^- and then decrease from K^+ to Ca^{2+}
(C) a significant decrease from S^{2-} to Ca^{2+}
(D) a significant increase from S^{2-} to Ca^{2+}

Answer: (C) a significant decrease from S^{2-} to Ca^{2+} · The council's preliminary key

Q143 AP EAPCET 2021 · 23 Aug · Shift 1 MCQ

Which among the following iso-electronic species has the smallest size?
$O^{2-}, F^-, Ne, Na^+, Mg^{2+}, Al^{3+}, Si^{4+}$

(A) F^-
(B) Ne
(C) Si^{4+}
(D) Na^+

Answer: (C) Si^{4+} · The council's preliminary key

Q144 AP EAPCET 2021 · 23 Aug · Shift 1 MCQ

Assertion (A): The first ionization energy of Be is greater than that of B.
Reason (R): $2p$ orbital has lower energy than $2s$ orbital.

(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

Q145 AP EAPCET 2021 · 23 Aug · Shift 2 MCQ

Arrange N, S, O & F in order of decreasing electron gain enthalpy

(A) $F > S > O > N$
(B) $N > O > S > F$
(C) $O > S > F > N$
(D) $S > O > N > F$

Answer: (A) $F > S > O > N$ · The council's preliminary key

Q146 AP EAPCET 2021 · 23 Aug · Shift 2 MCQ

Which of the following statement is incorrect?

(A) A cation is smaller than an anion if they are isoelectronic
(B) Out of P^{3-}, S^{2-} & Cl^{-}, Cl^{-} ion is larger in size
(C) All transition elements are metals
(D) The ionic radii of lanthanoids in trivalent state decrease with increasing atomic numbers.

Answer: (B) Out of P^{3-}, S^{2-} & Cl^{-}, Cl^{-} ion is larger in size · The council's preliminary key

Q147 AP EAPCET 2021 · 23 Aug · Shift 2 MCQ

Which element among the following is most probable to have the following values?
$\Delta_i H_1 = 419\ kJ\ mol^{-1}$
$\Delta_i H_2 = 3051\ kJ\ mol^{-1}$
$\Delta_{eg} H = -48\ kJ\ mol^{-1}$

(A) Al
(B) K
(C) S
(D) Cl

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

Q148 AP EAPCET 2021 · 20 Aug · Shift 1 MCQ

The correct order of electronegativity of carbon in various hybridization states:

(A) $sp < sp^2 < sp^3$
(B) $sp > sp^2 > sp^3$
(C) $sp^2 > sp < sp^3$
(D) $sp = sp^2 < sp^3$

Answer: (B) $sp > sp^2 > sp^3$ · The council's preliminary key

Q149 AP EAPCET 2021 · 20 Aug · Shift 2 MCQ

The electronegativity of the given elements increases in the order _____

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(A) $C,\ N,\ Si,\ P$
(B) $N,\ Si,\ C,\ P$
(C) $Si,\ P,\ C,\ N$
(D) $P,\ Si,\ N,\ C$

Answer: (C) $Si,\ P,\ C,\ N$ · The council's preliminary key

Q150 AP EAPCET 2021 · 20 Aug · Shift 2 MCQ

The first ionization enthalpies of Mg and Al can be expected to be _____

(A) $\mathrm{IE}_1\ (Mg) = 577.5\ kJ.mol^{-1},\ \mathrm{IE}_1\ (Al) = 577.5\ kJ.mol^{-1}$
(B) $\mathrm{IE}_1\ (Mg) = 577.5\ kJ.mol^{-1},\ \mathrm{IE}_1\ (Al) = 737.7\ kJ.mol^{-1}$
(C) $\mathrm{IE}_1\ (Mg) = 737.7\ kJ.mol^{-1},\ \mathrm{IE}_1\ (Al) = 737.7\ kJ.mol^{-1}$
(D) $\mathrm{IE}_1\ (Mg) = 737.7\ kJ.mol^{-1},\ \mathrm{IE}_1\ (Al) = 577.5\ kJ.mol^{-1}$

Answer: (D) $\mathrm{IE}_1\ (Mg) = 737.7\ kJ.mol^{-1},\ \mathrm{IE}_1\ (Al) = 577.5\ kJ.mol^{-1}$ · The council's preliminary key

Q151 AP EAPCET 2021 · 20 Aug · Shift 2 MCQ

How many of the following statements is/are correct?
a) Mercury is the only metal that exists as liquid at room temperature.
b) Among non-metals, carbon has the highest melting point.
c) Hydrogen is the most abundant element in the universe.
d) Oxygen is the most abundant element in the earth's crust.

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

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

Q152 AP EAPCET 2021 · 19 Aug · Shift 1 MCQ

To which group of the periodic table does an element having electronic configuration $[\mathrm{Ar}]\ 3d^5 4s^2$ belong?

(A) Second
(B) Fourth
(C) Seventh
(D) Third

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

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Q153 AP EAPCET 2021 · 19 Aug · Shift 1 MCQ

Given that ionization potential and electron gain enthalpy of chlorine are $13\ eV$ and $4\ eV$ respectively. The electronegativity of chlorine on Mulliken scale, approximately equals to

(A) $8.5\ eV$
(B) $6.0\ eV$
(C) $3.0\ eV$
(D) $1.5\ eV$

Answer: (A) $8.5\ eV$ · Checked by our team

Q154 AP EAPCET 2021 · 19 Aug · Shift 1 MCQ

Which of the following represents the correct order of increasing electron gain enthalpy with negative sign for the elements?
a. Nitrogen
b. Phosphorous
c. Chlorine
d. Fluorine

(A) $\mathrm{P} < \mathrm{N} < \mathrm{F} < \mathrm{Cl}$
(B) $\mathrm{N} < \mathrm{P} < \mathrm{F} < \mathrm{Cl}$
(C) $\mathrm{Cl} < \mathrm{F} < \mathrm{P} < \mathrm{N}$
(D) $\mathrm{F} < \mathrm{Cl} < \mathrm{N} < \mathrm{P}$

Answer: (B) $\mathrm{N} < \mathrm{P} < \mathrm{F} < \mathrm{Cl}$ · The council's preliminary key

Q155 AP EAPCET 2021 · 19 Aug · Shift 2 MCQ

The element with outer electronic configuration $(n-1)d^2\,ns^2$, where $n = 4$, would belong to _____

(A) 2nd period, 2nd group
(B) 4th period, 4th group
(C) 4th period, 2nd group
(D) 2nd period, 4th group

Answer: (B) 4th **period,** 4th **group** · The council's preliminary key

Q156 AP EAPCET 2021 · 19 Aug · Shift 2 MCQ

Choose the correct option regarding the following statements:
Statement-1: Nitrogen has lesser electron gain enthalpy than oxygen.
Statement-2: Oxygen has lesser ionization enthalpy than nitrogen.

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(A) Statement-1 is correct, Statement-2 is wrong
(B) Both statements 1 and 2 are wrong
(C) Both statements 1 and 2 are correct
(D) Statement-1 is wrong, Statement-2 is correct

Answer: (C) Both statements 1 and 2 are correct · The council's preliminary key

Q157 AP EAPCET 2021 · 19 Aug · Shift 2 MCQ

Among the given configurations, identify the element which doesn't belong to the same family as the others?

(A) $[\mathrm{Ne}]\,3s^2\,2p^5$
(B) $[\mathrm{Ar}]\,3d^{10}\,4s^2$
(C) $[\mathrm{Kr}]\,4d^{10}\,5s^2$
(D) $[\mathrm{Xe}]\,4f^{14}\,5d^{10}\,4s^2$

Answer: (A) $[\mathrm{Ne}]\,3s^2\,2p^5$ · The council's preliminary key

Q158 TS EAMCET 2021 · 6 Aug · Shift 1 MCQ

Which of the following is not a periodic property?

(A) Atomic size
(B) Electron affinity
(C) Radioactivity
(D) Ionisation potential

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

Q159 TS EAMCET 2021 · 6 Aug · Shift 1 MCQ

Which of the following options represents the correct ionic radii in Å of N^{3-}, O^{2-} and F^{-}, respectively?

(A) 1.71, 1.36 and 1.40
(B) 1.36, 1.40 and 1.71
(C) 1.71, 1.40 and 1.36
(D) 1.40, 1.36 and 1.71

Answer: (C) 1.71, 1.40 and 1.36 · The council's preliminary key

Q160 TS EAMCET 2021 · 6 Aug · Shift 2 MCQ

How many of the following oxides are amphoteric? $\mathrm{BeO};\ \mathrm{ZnO};\ \mathrm{Sb_2O_3};\ \mathrm{CO};\ \mathrm{CaO};\ \mathrm{SO_2};\ \mathrm{SO_3}$

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

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

Q161 TS EAMCET 2021 · 6 Aug · Shift 2 MCQ

Among the options, the element with highest electron gain enthalpy is

(A) He
(B) Ne
(C) Kr
(D) Xe

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

Q162 TS EAMCET 2021 · 6 Aug · Shift 2 MCQ

The electronegativity order of the following elements is

(A) $\mathrm{N} > \mathrm{S} > \mathrm{Te} > \mathrm{I}$
(B) $\mathrm{I} > \mathrm{N} > \mathrm{S} > \mathrm{Te}$
(C) $\mathrm{N} > \mathrm{I} > \mathrm{S} > \mathrm{Te}$
(D) $\mathrm{N} > \mathrm{S} > \mathrm{I} > \mathrm{Te}$

Answer: (C) $\mathrm{N} > \mathrm{I} > \mathrm{S} > \mathrm{Te}$ · The council's preliminary key

Q163 TS EAMCET 2021 · 5 Aug · Shift 1 MCQ

Starting from the 1st, the successive ionization potentials of an element are respectively 5.98, 18.8, 28.4, 120.1, 154 eV. The element is

(A) B
(B) Al
(C) P
(D) Mg

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

Q164 TS EAMCET 2021 · 5 Aug · Shift 2 MCQ

The correct increasing order of the electronegativity is

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(A) B < C < S < Cl
(B) B < S < C < Cl
(C) B < C < Cl < S
(D) C < B < S < Cl

Answer: (A) B < C < S < Cl · The council's preliminary key

Q165 TS EAMCET 2021 · 5 Aug · Shift 2 MCQ

Which one of the following oxide dissolves in both hydrochloric acid and sodium hydroxide?

(A) MgO
(B) Na_2O
(C) Al_2O_3
(D) BaO

Answer: (C) Al_2O_3 · The council's preliminary key

Q166 TS EAMCET 2021 · 5 Aug · Shift 2 MCQ

Which of the given atoms has the greatest electron affinity?

(A) F
(B) Cl
(C) P
(D) Al

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

Q167 TS EAMCET 2021 · 5 Aug · Shift 2 MCQ

The neutral oxide among the following is

(A) SO_2
(B) CO
(C) CO_2
(D) CaO

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

Q168 TS EAMCET 2021 · 4 Aug · Shift 1 MCQ

The set of amphoteric oxides among the given oxides are
Ga_2O_3, As_4O_{10}, Sb_4O_{10}, B_2O_3, Tl_2O

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(A) Tl_2O, B_2O_3
(B) Sb_4O_{10}, B_2O_3, Ga_2O_3
(C) Ga_2O_3, Tl_2O, As_4O_{10}
(D) Ga_2O_3, As_4O_{10}, Sb_4O_{10}

Answer: (D) Ga_2O_3, As_4O_{10}, Sb_4O_{10} · The council's preliminary key

Q169 TS EAMCET 2021 · 4 Aug · Shift 1 MCQ

The first ionisation energies (in $kJ\ mol^{-1}$) of four consecutive elements of the second period are given in the options. The first ionisation energy of nitrogen is

(A) 1086
(B) 1402
(C) 1681
(D) 1314

Answer: (B) 1402 · The council's preliminary key

Q170 AP EAMCET 2020 · 7 Oct · Shift 1 MCQ

Which among the following is the possible electronic configuration of an element 'X' having first and second ionization enthalpy values as $520\ kJ.mol^{-1}$ and $7300\ kJ.mol^{-1}$ respectively

(A) $1s^2\ 2s^2\ 2p^1$
(B) $1s^2\ 2s^2\ 2p^3$
(C) $1s^2\ 2s^2\ 2p^6\ 3s^1$
(D) $1s^2\ 2s^2\ 2p^6\ 3s^2\ 3p^2$

Answer: (C) $1s^2\ 2s^2\ 2p^6\ 3s^1$ · The council's preliminary key

Q171 AP EAMCET 2020 · 23 Sep · Shift 1 MCQ

Which of the following arrangements is correct regarding the three types of radii of an atom?

(A) Metallic radius < Covalent radius < Vander wall's radius
(B) Covalent radius < Metallic radius < Vander wall's radius
(C) Vander wall's radius < Metallic radius < Covalent radius
(D) Metallic radius < Covalent radius > Vander wall's radius

Answer: (B) Covalent radius < Metallic radius < Vander wall's radius · The council's preliminary key

Q172 AP EAMCET 2020 · 23 Sep · Shift 1 MCQ

Match the following elements, given as hints to their first, second ionisation enthalpies and electron gain enthalpies.
Elements | ΔH_1 | ΔH_2 | $\Delta_{eg}H$
i. Most reactive non metal

ii. Most reactive metal
iii. Least reactive element
iv. Metal forming binary halide
A. 419, 3051, -48
B. 1681, 3374, -328
C. 738, 1451, -40
D. 2372, 5251, $+48$

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

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

Q173 AP EAMCET 2020 · 23 Sep · Shift 1 MCQ

Which among the following oxides is the most basic?

(A) CO
(B) Al_2O_3
(C) Cl_2O_7
(D) Na_2O

Answer: (D) Na_2O · The council's preliminary key

Q174 AP EAMCET 2020 · 22 Sep · Shift 1 MCQ

Arrange $\mathrm{Li}, \mathrm{Be}, \mathrm{B}$ and C in decreasing order of their first ionization enthalpies

(A) $\mathrm{Li} > \mathrm{B} > \mathrm{Be} > \mathrm{C}$
(B) $\mathrm{C} > \mathrm{Li} > \mathrm{Be} > \mathrm{B}$
(C) $\mathrm{C} > \mathrm{Be} > \mathrm{B} > \mathrm{Li}$
(D) $\mathrm{C} > \mathrm{B} > \mathrm{Be} > \mathrm{Li}$

Answer: (C) $\mathrm{C} > \mathrm{Be} > \mathrm{B} > \mathrm{Li}$ · The council's preliminary key

Q175 AP EAMCET 2020 · 22 Sep · Shift 1 MCQ

The order of screening effect among s, p, d and f orbitals of a given shell of an atom, in its outer shell electrons is:

(A) $s > p > d > f$
(B) $f > d > p > s$
(C) $p < d < s > f$
(D) $d > f > p > s$

Answer: (A) $s > p > d > f$ · The council's preliminary key

Q176 AP EAMCET 2020 · 22 Sep · Shift 1 MCQ

In which of the following options order of arrangement does not agree with the variation of property indicated against it?

(A) $\mathrm{Al^{3+} < Mg^{2+} < Na^{+} < F^{-}}$ (increasing ionic size)
(B) $\mathrm{B < C < O < N}$ (increasing first ionization enthalpy)
(C) $\mathrm{I < Br < Cl < F}$ (increasing electron gain enthalpy)
(D) $\mathrm{Li < Na < K < Rb}$ (increasing metallic radius)

Answer: (C) $\mathrm{I < Br < Cl < F}$ **(increasing electron gain enthalpy)** · The council's preliminary key

Q177 AP EAMCET 2020 · 22 Sep · Shift 2 MCQ

The largest element among O, Se, S, Te is

(A) S
(B) Se
(C) O
(D) Te

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

Q178 AP EAMCET 2020 · 21 Sep · Shift 1 MCQ

Calculate the energy required to convert all atoms in 4.8 g of Mg to $\mathrm{Mg^{2+}}$ in the vapor state. IE_1 and IE_2 of Mg are 740 kJ/mol and 1450 kJ/mol respectively.

(A) $+740$ kJ/mol
(B) -740 kJ/mol
(C) -1450 kJ/mol
(D) $+438$ kJ/mol

Answer: (D) $+438$ kJ/mol · The council's preliminary key

Q179 AP EAMCET 2020 · 21 Sep · Shift 1 MCQ

The number of elements among $\mathrm{O, Cl, F, N, P, Sn, Ti, K, Sc}$ which show more than one non-zero oxidation state is

(A) 2
(B) 3
(C) 6
(D) 8

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

Q180 AP EAMCET 2020 · 21 Sep · Shift 1 MCQ

The second ionization energies of Li, Be, B and C are in the order _____

(A) Li > C > B > Be
(B) Li > B > C > Be
(C) Be > C > B > Li
(D) B > C > Be > Li

Answer: (B) Li > B > C > Be · Checked by our team

Q181 AP EAMCET 2020 · 21 Sep · Shift 2 MCQ

Find the correct order of the given elements with respect to their size

(A) $Zn > Fe > Fe^{2+} > Fe^{3+}$
(B) $Fe^{3+} > Fe^{2+} > Zn > Fe$
(C) $Fe > Fe^{2+} > Fe^{3+} > Zn$
(D) $Zn > Fe^{3+} > Fe^{2+} > Fe$

Answer: (A) $Zn > Fe > Fe^{2+} > Fe^{3+}$ · The council's preliminary key

Q182 AP EAMCET 2020 · 18 Sep · Shift 1 MCQ

Which of the following statements is correct about "shielding effect"?
A) It is effective when the orbitals in the inner shells are completely filled
B) Inner shells do not show any effect
C) With increase of shielding down the group, ionization energy increases
D) With increasing nuclear charge, the shielding effect increases

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

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

Q183 AP EAMCET 2020 · 17 Sep · Shift 1 MCQ

Choose the smallest ion from the following

(A) Mg^{2+}
(B) S^{2-}
(C) Na^{+}
(D) Cl^{-}

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

Q184 AP EAMCET 2020 · 17 Sep · Shift 1 MCQ

Assertion (A): Boron has a smaller first ionization enthalpy than beryllium.
Reason (R): The penetration of a 2s electron to the nucleus is more than the 2p electron hence 2p electron is more shielded by the inner core of electrons than the 2s electrons.

(A) Assertion and reason both are correct statements but reason is not correct explanation for assertion.
(B) Assertion is correct statement but reason is wrong statement.
(C) Assertion and reason both are correct statements and reason is correct explanation for assertion.
(D) Assertion and reason both are wrong statements.

Answer: (C) Assertion and reason both are correct statements and reason is correct explanation for assertion. · The council's preliminary key

Q185 AP EAMCET 2020 · 17 Sep · Shift 1 MCQ

"The properties of elements are periodic functions of their atomic weights." This periodic law was given by

(A) Dobereiner
(B) Lothar Meyer
(C) Mendeleev
(D) Alexander

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

Q186 AP EAMCET 2020 · 17 Sep · Shift 2 MCQ

How many compounds given below are amphoteric oxides?
P_2O_5, P_4O_6, As_2O_5, As_4O_6, Sb_2O_5, Sb_4O_6, Bi_2O_3

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

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

Q187 TS EAMCET 2020 · 14 Sep · Shift 1 MCQ

What is the correct order of atomic radius of Al, Na, B and Be ?

(A) Be < Na < Al < B
(B) B < Be < Al < Na
(C) Al < Be < B < Na
(D) Na < Al < B < Be

Answer: (B) B < Be < Al < Na · Official TGCHE final key

Q188 TS EAMCET 2020 · 14 Sep · Shift 2 MCQ

Arrange the following ions in the correct order with respect to their ionic radii.

(A) $Br^- > Cl^- > Na^+ > Be^{2+}$
(B) $Be^{2+} > Na^+ > Cl^- > Br^-$
(C) $Cl^- > Br^- > Na^+ > Be^{2+}$
(D) $Na^+ > Be^{2+} > Br^- > Cl^-$

Answer: (A) $Br^- > Cl^- > Na^+ > Be^{2+}$ · Official TGCHE final key

Q189 TS EAMCET 2020 · 11 Sep · Shift 1 MCQ

Among the following, the pair of elements having same electronegativity values are
(i) H and P (ii) Be and Al (iii) N and Cl (iv) C and P

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

Answer: (A) (i), (ii) and (iii) only · Official TGCHE final key

Q190 TS EAMCET 2020 · 11 Sep · Shift 2 MCQ

The basic difference in approach between Mendeleev's periodic law and modern periodic law is the change on the basis of classification of elements from _____

(A) atomic number to atomic weight
(B) atomic weight to atomic number
(C) neutron number to atomic weight
(D) electron number to atomic number

Answer: (B) atomic weight to atomic number · Official TGCHE final key

Q191 TS EAMCET 2020 · 11 Sep · Shift 2 MCQ

Which of the following pairs shows diagonal relationship?

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

Answer: (A) Li and Mg · Official TGCHE final key

Q192 TS EAMCET 2020 · 10 Sep · Shift 1 MCQ

Assertion (A) : Mg^{2+} and Al^{3+} are isoelectronic but the magnitude of ionic radius of Al^{3+} is less than that in Mg^{2+}
Reason (R) : The effective nuclear charge on the outermost electrons in Al^{3+} is greater than that in Mg^{2+}
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 the not the correct explanation for A (sic)
(C) (A) is true but (R) is false
(D) (A) is false but (R) is true

Answer: (A) (A) is true, (R) is true and (R) is the correct explanation for (A) · Official TGCHE final key

Q193 TS EAMCET 2020 · 10 Sep · Shift 1 MCQ

The successive ionisation energy values for an element 'X' are given below
i) 1st ionisation energy = 410 $kJ\,mol^{-1}$
ii) 2nd ionisation energy = 820 $kJ\,mol^{-1}$
iii) 3rd ionisation energy = 1100 $kJ\,mol^{-1}$
iv) 4th ionisation energy = 1500 $kJ\,mol^{-1}$
v) 5th ionisation energy = 3200 $kJ\,mol^{-1}$
The number of valence electrons in the atom 'X' is

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

Answer: (B) 4 · Official TGCHE final key

Q194 TS EAMCET 2020 · 10 Sep · Shift 2 MCQ

Based on the quantum numbers, what will be the maximum number of elements for sixth period of the periodic table?

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(A) 22
(B) 30
(C) 32
(D) 34

Answer: (C) 32 · Official TGCHE final key

Q195 TS EAMCET 2020 · 9 Sep · Shift 1 MCQ

What will be the IUPAC symbol and name for the element with atomic number 123?

(A) Unt and Unniltrium
(B) Ubq and Unbiquadium
(C) Ubt and Unbitrium
(D) Unb and Unnilbium

Answer: (C) Ubt and Unbitrium · Official TGCHE final key

Q196 TS EAMCET 2020 · 9 Sep · Shift 2 MCQ

Which of the following atoms is the most electronegative?

(A) O
(B) F
(C) N
(D) Cl

Answer: (B) F · Official TGCHE final key

Q197 TS EAMCET 2019 · 6 May · Shift 1 MCQ

Which one among the following statements is/are not correct?
a) Ba compounds, generally are more covalent than Be compounds
b) The electron gain enthalpy of He is positive
c) The oxidation state of O in OF_2 and Na_2O are same
d) The radius of Na^+ ion is smaller than that of F^- ion

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

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

Q198 TS EAMCET 2019 · 4 May · Shift 1 MCQ

The reason for a cation to be smaller than its parent atom is

(A) Repulsion between the electrons of outer orbit.
(B) Increased electrostatic attraction between nucleus and electrons.
(C) Increase in the mass of the cation compared to neutral atom.
(D) Change in the number of protons of cation compared to neutral atom.

Answer: (B) Increased electrostatic attraction between nucleus and electrons. · Official TGCHE final key

Q199 TS EAMCET 2019 · 4 May · Shift 1 MCQ

Arrange the following in the decreasing order of radius:
$S^{2-}, P^{3-}, Cl^{-}, Ca^{2+}, Ar, K^{+}$

(A) $P^{3-} > S^{2-} > Cl^{-} > Ar > K^{+} > Ca^{2+}$
(B) $Cl^{-} > P^{3-} > S^{2-} > Ar > K^{+} > Ca^{2+}$
(C) $Ar > P^{3-} > S^{2-} > Cl^{-} > Ca^{2+} > K^{+}$
(D) $K^{+} > Ca^{2+} > Cl^{-} > S^{2-} > P^{3-} > Ar$

Answer: (A) $P^{3-} > S^{2-} > Cl^{-} > Ar > K^{+} > Ca^{2+}$ · Official TGCHE final key

Q200 TS EAMCET 2019 · 4 May · Shift 2 MCQ

Identify the correct order of ionic radii of the following ions

(A) $Al^{3+} > K^{+} > Mg^{2+} > Li^{+}$
(B) $K^{+} > Mg^{2+} > Al^{3+} > Li^{+}$
(C) $K^{+} > Li^{+} > Mg^{2+} > Al^{3+}$
(D) $K^{+} > Mg^{2+} > Li^{+} > Al^{3+}$

Answer: (C) $K^{+} > Li^{+} > Mg^{2+} > Al^{3+}$ · Official TGCHE final key

Q201 TS EAMCET 2019 · 4 May · Shift 2 MCQ

The elements with highest and lowest electron gain enthalpy in group 16 respectively are

(A) O ; Te
(B) O ; Po
(C) S ; O
(D) S ; Te

Answer: (C) S ; O · Official TGCHE final key

Q202 TS EAMCET 2019 · 3 May · Shift 1 MCQ

In which group of the periodic table the element with Z = 120 be placed?

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(A) 2
(B) 1
(C) 14
(D) 15

Answer: (A) 2 · Official TGCHE final key

Q203 TS EAMCET 2019 · 3 May · Shift 2 MCQ

Among the isoelectronic ions (O^{2-}, N^{3-}, Mg^{2+}, Na^{+}), the ions with least and highest ionic radius are respectively

(A) Mg^{2+}, N^{3-}
(B) Mg^{2+}, O^{2-}
(C) Na^{+}, N^{3-}
(D) Na^{+}, O^{2-}

Answer: (A) Mg^{2+}, N^{3-} · Official TGCHE final key

Q204 AP EAMCET 2019 · 22 Apr · Shift 2 MCQ

X and Y are two elements which form oxides of the type XO_3 and Y_2O_5 with highest oxygen content. Identify the group numbers to which X and Y belongs

(A) 13, 15
(B) 16, 15
(C) 13, 17
(D) 16, 17

Answer: (B) 16, 15 · Official APSCHE final key

Q205 AP EAMCET 2019 · 21 Apr · Shift 1 MCQ

If four elements with atomic numbers $Z-2$, $Z-1$, Z and $Z+1$ are forming isoelectronic ions, the atomic number of the ion having largest size is

(A) $Z-2$
(B) $Z-1$
(C) Z
(D) $Z+1$

Answer: (A) $Z-2$ · Official APSCHE final key

Q206 AP EAMCET 2019 · 21 Apr · Shift 2 MCQ

The electron gain enthalpy $\Delta_{eg}H$ of $Cl(g)$ is $-349\ kJ\ mol^{-1}$. If the ground state energy of $Cl(g)$ is $x\ kJ\ mol^{-1}$, the ground state energy (in $kJ\ mol^{-1}$) of $Cl^{-}(g)$ is

(A) $x + 349$

(B) x

(C) $x - 349$

(D) $\frac{x - 349}{17}$

Answer: (C) $x - 349$ · Official APSCHE final key

Q207 AP EAMCET 2019 · 20 Apr · Shift 1 MCQ

In which of the following the electron gain enthalpy of elements is correctly arranged?

(A) S > Se > Te > O

(B) F > Cl > Br > I

(C) Na > Li > K > Rb

(D) O > S > Se > Te

Answer: (A) S > Se > Te > O · Official APSCHE final key

Q208 AP EAMCET 2019 · 20 Apr · Shift 1 MCQ

Identify the set of acidic oxides.

(A) Na_2O, CaO, BaO

(B) ZnO, PbO, BeO

(C) CO, NO, N_2O

(D) Mn_2O_7, CrO_3, V_2O_5

Answer: (D) Mn_2O_7, CrO_3, V_2O_5 · Official APSCHE final key

Q209 AP EAMCET 2019 · 20 Apr · Shift 2 MCQ

Which of the following statements are correct for classification of elements?

I) The properties of elements are periodic functions of their atomic numbers

II) Non metallic elements are less in number than the metallic elements

III) The first ionisation energies of elements along a period do not vary in a regular manner

IV) The ground state electronic configuration of Pd (Z = 46) is $[Kr]4d^8 5s^2$

(A) I, II, III, IV

(B) I, II, III only

(C) II, III, IV only

(D) I, II, IV only

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

Q210 TS EAMCET 2018 · 7 May · Shift 1 MCQ

Which of the following are correct?
a) First ionization enthalpy of He < Second ionization enthalpy of Li
b) Li has the highest second ionization enthalpy
c) All d-block elements are transition elements
d) The only alphabet not found in the periodic table is the letter 'J'
e) Francium concentration is ~10^{-18} ppm on Earth

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

Options (2) or (3) were accepted. More than one answer was accepted. · The council's preliminary key

Q211 TS EAMCET 2018 · 7 May · Shift 1 MCQ

The correct increasing order of ionisation enthalpy of He, Li^+, Be^{2+} is

(A) $He < Li^+ < Be^{2+}$
(B) $Be^{2+} < Li^+ < He$
(C) $Li^+ < Be^{2+} < He$
(D) $Be^{2+} < He < Li^+$

Answer: (A) $He < Li^+ < Be^{2+}$ · The council's preliminary key

Q212 TS EAMCET 2018 · 5 May · Shift 1 MCQ

The correct option for the first ionization enthalpy (in $kJ\ mol^{-1}$) of Li, Na, K and Cs respectively is

(A) 496, 520, 419, 374
(B) 374, 419, 496, 520
(C) 520, 496, 419, 374
(D) 374, 419, 520, 496

Answer: (C) 520, 496, 419, 374 · The council's preliminary key

Q213 TS EAMCET 2018 · 5 May · Shift 2 MCQ

What is the correct order of atomic/ionic size for

(A) $Cu^+ < Cu < Zn^{2+} < Ag$
(B) $Zn^{2+} < Cu^+ < Cu < Ag$
(C) $Ag < Cu < Cu^+ < Zn^{2+}$
(D) $Cu^+ < Zn^{2+} < Cu < Ag$

Answer: (B) $Zn^{2+} < Cu^+ < Cu < Ag$ · The council's preliminary key

Q214 TS EAMCET 2018 · 4 May · Shift 1 MCQ

Covalent bond length of chlorine molecule is 1.98 Å. Covalent radius (in Å) of chlorine atom is

(A) 1.98
(B) 0.99
(C) 3.96
(D) 0.49

Answer: (B) 0.99 · The council's preliminary key

Q215 TS EAMCET 2018 · 4 May · Shift 2 MCQ

The symbol of an element is Une. Its atomic number is

(A) 110
(B) 109
(C) 101
(D) 108

Answer: (B) 109 · The council's preliminary key

Q216 TS EAMCET 2018 · 4 May · Shift 2 MCQ

Statement (a) : $\mathrm{Na_2O} < \mathrm{MgO} < \mathrm{ZnO} < \mathrm{P_4O_{16}}$ - Acidic property
Statement (b) : $\mathrm{F} > \mathrm{Cl} > \mathrm{Br}$ - Electron gain enthalpy
Statement (c) : $\mathrm{M^{2-}} > \mathrm{M^{-}} > \mathrm{M^{+}} > \mathrm{M^{2+}}$ - ionic size
Statement (d) : The second ionisation enthalpy of Cu is more than second ionisation enthalpy of K.
Which of the following is the correct representation of True (T) / False (F) for the given statements

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

Answer: (D) (a) T, (b) F, (c) T, (d) F · The council's preliminary key

Q217 AP EAMCET 2018 · 23 Apr · Shift 2 MCQ

Identify the correct statements from the following.
i. In the periodic table, about 78% of elements are metals.
ii. In a group, the metallic character decreases from top to bottom and in a period the non-metallic character decreases from left to right.
iii. The element Ho belongs to f-block.

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

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

Q218 AP EAMCET 2018 · 23 Apr · Shift 2 MCQ

Identify the statements which are **not** correct.
i. ZnO, PbO, Sb_2O_3 are neutral oxides.
ii. CO and NO are amphoteric oxides.
iii. CrO_3, Mn_2O_7, V_2O_5 are basic oxides.

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

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

Q219 AP EAMCET 2018 · 22 Apr · Shift 1 MCQ

To which group and period does the element belong if the electronic configuration of an element in its -2 oxidation state is $1s^2 2s^2 2p^6 3s^2 3p^6$?

(A) period 3 , group 16
(B) period 3 , group 17
(C) period 4 , group 16
(D) period 4 , group 17

Answer: (A) period 3 , group 16 · The council's preliminary key

Q220 AP EAMCET 2018 · 22 Apr · Shift 2 MCQ

Which of the following represents the correct order of ionic radii?

(A) $Al^{3+} > Mg^{2+} > Na^{+} > O^{2-} > F^{-}$
(B) $O^{2-} > F^{-} > Na^{+} > Mg^{2+} > Al^{3+}$
(C) $Mg^{2+} > Al^{3+} > O^{2-} > F^{-} > Na^{+}$
(D) $O^{2-} > F^{-} > Al^{3+} > Mg^{2+} > Na^{+}$

Answer: (B) $O^{2-} > F^{-} > Na^{+} > Mg^{2+} > Al^{3+}$ · The council's preliminary key

Q221 TS EAMCET 2017 · 12 May · Offline MCQ

Which of the following is the most basic oxide?

(A) SO_3
(B) SeO_3
(C) PoO
(D) TeO

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

Q222 TS EAMCET 2017 · 12 May · Offline MCQ

Atomic radius (pm) of Al, Si, N and F respectively is

(A) 117, 143, 64, 74
(B) 143, 117, 74, 64
(C) 143, 47, 64, 74
(D) 64, 74, 117, 143

Answer: (B) 143, 117, 74, 64 · The council's preliminary key

Q223 TS EAMCET 2017 · 12 May · Offline MCQ

The set representing the right order of ionic radius is

(A) $Li^+ > Na^+ > Mg^{2+} > Be^{2+}$
(B) $Mg^{2+} > Be^{2+} > Li^+ > Na^+$
(C) $Na^+ > Mg^{2+} > Li^+ > Be^{2+}$
(D) $Na^+ > Li^+ > Mg^{2+} > Be^{2+}$

Answer: (D) $Na^+ > Li^+ > Mg^{2+} > Be^{2+}$ · The council's preliminary key

Q224 AP EAMCET 2017 · 26 Apr · Shift 1 MCQ

Assertion (A) : Na^+ and Mg^{2+} ions are isoelectronic but the ionic radius of Na^+ is greater than that of Mg^{2+}
Reason (R) : The effective nuclear charge of Na^+ ion is less than that of Mg^{2+} ion

(A) Both (A) and (R) are correct and (R) is 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 not correct
(D) (A) is not correct but (R) is correct

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

Q225 AP EAMCET 2017 · 26 Apr · Shift 2 MCQ

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

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(A) First ionization enthalpy of nitrogen is greater than that of carbon
(B) Electron gain enthalpy of oxygen is greater than that of sulphur
(C) Ionic radius of Mg^{+2} is greater than that of Al^{3+}
(D) Electronegitivity of fluorine is greater than that of oxygen

Answer: (B) Electron gain enthalpy of oxygen is greater than that of sulphur · The council's preliminary key

Q226 AP EAMCET 2017 · 25 Apr · Shift 2 MCQ

Identify the set of elements in which they are arranged in the increasing order of electron gain enthalpies.

(A) F, O, S, Cl
(B) Cl, O, F, S
(C) O, S, F, Cl
(D) S, F, Cl, O

Answer: (C) O, S, F, Cl · The council's preliminary key

Q227 AP EAMCET 2017 · 24 Apr · Shift 1 MCQ

Arrange the following oxides in the increasing order of their basic nature
(a) Al_2O_3 (b) K_2O (c) P_2O_5 (d) MgO

(A) $d < b < c < a$
(B) $b < c < a < d$
(C) $c < a < d < b$
(D) $a < c < d < b$

Answer: (C) $c < a < d < b$ · The council's preliminary key

Q228 AP EAMCET 2017 · 24 Apr · Shift 1 MCQ

The correct order of first ionisation enthalpy of group-13 elements is

(A) $B > Ga > Tl$
(B) $B > Tl > Ga$
(C) $Ga > B > Tl$
(D) $Tl > Ga > B$

Answer: (B) $B > Tl > Ga$ · The council's preliminary key

Q229 TS EAMCET 2016 · 15 May · Offline MCQ

What is the atomic number of the element with symbol Uus ?

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(A) 117
(B) 116
(C) 115
(D) 114

Answer: (A) 117 · Official TGCHE final key

Q230 AP EAMCET 2016 · 29 Apr · Offline MCQ

An element has [Ar] $3d^1$ configuration in its +2 oxidation state. Its position in the periodic table is

(A) period-3, group-3
(B) period-3, group-7
(C) period-4, group-3
(D) period-3, group-9

Answer: (C) period-4, group-3 · The council's preliminary key

Q231 AP EAMCET 2014 · 22 May · Offline MCQ

The increasing order of the atomic radius of Si, S, Na, Mg, Al is

(A) S < Si < Al < Mg < Na
(B) Na < Al < Mg < S < Si
(C) Na < Mg < Si < Al < S
(D) Na < Mg < Al < Si < S

Answer: (A) S < Si < Al < Mg < Na · The council's preliminary key

Q232 AP EAMCET 2013 · 10 May · Offline MCQ

The number of elements present in fourth period is :

(A) 32
(B) 8
(C) 18
(D) 2

Answer: (C) 18 · The council's preliminary key

Q233 AP EAMCET 2012 · 12 May · Offline MCQ

Which one of the following cannot form an amphoteric oxide ?

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(A) Al
(B) Sn
(C) Sb
(D) P

Answer: (D) P · Official APSCHE final key

Q234 AP EAMCET 2011 · 8 May · Offline MCQ

Electronegativity of group 13 elements follow the order :

(A) B > Ga > Al > Tl > In
(B) B > Tl > Ga > Al > In
(C) B > Tl > In > Ga > Al
(D) B > Al > Tl > In > Ga

Answer: (C) B > Tl > In > Ga > Al · The council's preliminary key

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Q235 AP EAMCET 2010 · 30 May · Offline MCQ

The electron affinity values of elements A, B, C and D are respectively $-135, -60, -200$ and $-348\ \text{kJ mol}^{-1}$. The outer electronic configuration of element B is :

(A) $3s^2 3p^5$
(B) $3s^2 3p^4$
(C) $3s^2 3p^3$
(D) $3s^2 3p^2$

Answer: (C) $3s^2 3p^3$ · Official APSCHE final key

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