EdLoop

EdLoop EAPCET

CHEMISTRY · EAPCET (EAMCET)

Redox Reactions

Previous Year Questions with answers

99 questions · **85** papers · **2011–2026** · newest paper first

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

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

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

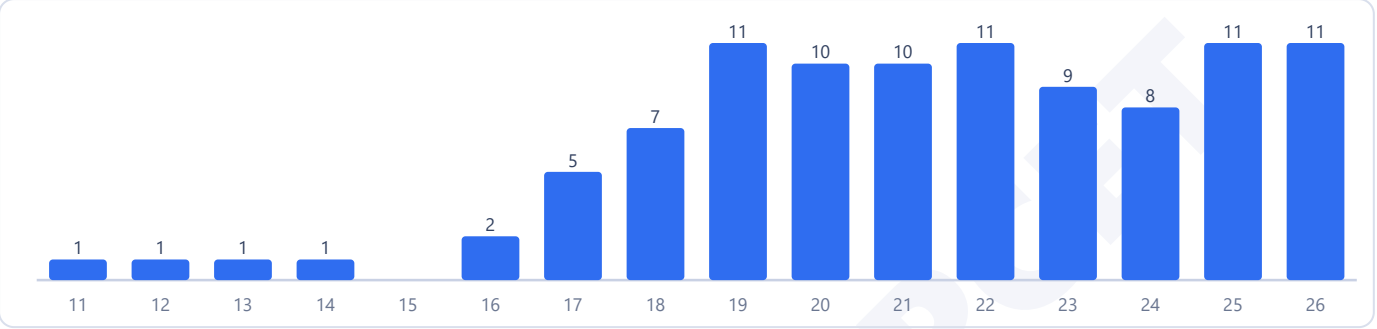
EdLoop EAPCET

Chapter at a glance

1.6%	99	43 of 77	99 / 0
of Chemistry questions, 2022–2026	questions, 2011–2026	papers asked it, 2022–2026	MCQ / numerical, 2011–2026

Trend. Steady: 0.7 questions per paper in 2024–2026 against 0.6 in 2022–2023.

Questions per year



Counts are the questions we hold: 99 in 85 papers. 4 questions in this chapter came back in more than one paper.

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

Oxidation Number & Balancing	64
Redox Titrations	35

How often it comes up

Redox Reactions stands at rank 28 among the 31 chemistry chapters during the 2022 to 2026 testing cycle. Across our full question compilation spanning 2010 through 2026, the chapter contributed 99 questions across 149 papers, appearing in 85 of those tests to account for 1.7 percent of the subject with an average of 0.7 questions per paper. In the modern window from 2022 to 2026, it provided 50 questions across 77 sittings, appearing in 43 papers to sustain 0.6 questions per paper and a 1.6 percent subject share.

The chapter has appeared in every exam year since 2022, though it was absent from thirty-four papers during this five-year period. Across individual state streams between 2022 and 2026, AP tests accounted for 33 questions across 48 papers (appearing in 28 papers, 0.7 questions per paper, 1.7 percent share), while TS papers recorded 17 questions across 29 papers (appearing in 15 papers, 0.6 questions per paper, 1.5 percent share).

Looking back at earlier tests between 2010 and 2021, papers included 49 questions across 72 sittings (appearing in 42 tests), representing 0.7 questions per paper and a 1.7 percent subject share. Across the most recent three exam cycles from 2024 to 2026, examiners included 30 questions across 46 sittings (with 27 papers containing questions), yielding 0.7 questions per test and a 1.6 percent share. Comparing early testing with the last three years shows the share is about the same, and comparing the recent five-year window with the last three years shows the share is about the same.

Most-asked topics

Questions in Redox Reactions divide into two practical application areas:

- **Oxidation Number & Balancing** forms the core topic with 64 questions across the archive and 33 during the recent timeframe through 2026. Frequent tasks include assigning fractional or integer oxidation numbers in complex anions and oxyacids, balancing skeletal redox equations by the ion-electron method in acidic or alkaline environments, and identifying disproportionation reactions.

- **Redox Titrations** accounts for 35 questions overall, with 17 appearing between 2022 and 2026. Problems emphasize equivalency calculations involving standard oxidizing agents such as potassium permanganate and potassium dichromate acting on iron salts, oxalates, halides, or hydrogen peroxide.

What the questions look like

Balancing problems are the signature style of this chapter. A common question presents an unbalanced skeletal redox reaction, such as elemental octasulphur reacting with hydroxide ions to yield sulphide, thiosulphate, and water, and asks you to determine the stoichiometric coefficients or evaluate mathematical relations between them.

Titration questions test stoichiometric equivalents directly. A representative question requires calculating the volume strength of hydrogen peroxide or finding the volume of potassium permanganate needed to oxidize a given mass of iron sulphate in acidic solution. Another recurrent format lists several chemical species and asks you to count how many can undergo disproportionation based on whether the central element occupies an intermediate oxidation state.

How to practise it

Practice balancing by splitting reactions into separate oxidation and reduction half-reactions. In basic medium, balance oxygen atoms by adding water molecules to the oxygen-deficient side and balance hydrogen atoms by adding water to the hydrogen-deficient side while placing an equal number of hydroxide ions on the opposite side. This technique eliminates confusion when canceling charges.

For titration calculations, work with normality and equivalents to bypass full equation balancing during quick calculations. Remember the equivalent factors for potassium permanganate: in acidic medium the oxidation state drops from plus seven to plus two (n-factor of five), in neutral or faintly alkaline medium it drops to plus four (n-factor of three), and in strongly alkaline medium it drops to plus six (n-factor of one). Potassium dichromate in acidic medium always transitions to chromium plus three, conferring an n-factor of six per dichromate molecule.

EdLoop EAPCET

Q1 AP EAPCET 2026 · 18 May · Shift 1 MCQ

x mL of 0.05 M $KMnO_4$ solution is required to oxidise completely 1.52 g of $FeSO_4$ in acidic medium. The value of x is

(At. wt: Fe = 56 u, S = 32 u, O = 16 u)

(A) 40

(B) 20

(C) 30

(D) 50

Answer: (A) 40 · The council's preliminary key

Q2 AP EAPCET 2026 · 18 May · Shift 2 MCQ

Chlorine gas reacts with cold, dilute $NaOH$ solution to produce $NaCl$, H_2O and a sodium salt (X). When it reacts with hot, concentrated $NaOH$ solution, it produces $NaCl$, H_2O and a sodium salt (Y).

Identify the correct statements regarding the oxidation states of chlorine in X and Y.

I. The oxidation state of chlorine in Y is same as that of nitrogen in nitric acid

II. The oxidation state of chlorine in X is same as that of phosphorus in phosphinic acid

III. The sum of the oxidation states of chlorine in X and Y is same as that of iodine in iodic acid

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

Q3 AP EAPCET 2026 · 14 May · Shift 2 MCQ

In which of the following reactions, chlorine undergoes disproportionation?

I. Reaction with cold, dilute $NaOH$

II. Reaction with hot, concentrated $NaOH$

III. Reaction with H_2S

The correct answer is

(A) I, II only

(B) I, II, III

(C) II, III only

(D) I, III only

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

Q4 AP EAPCET 2026 · 13 May · Shift 1 MCQ

Consider the following

$$H_3PO_2\ , Se_2Cl_2\ , HNO_2\ , HNO_3\ , H_2SO_4\ , H_2O_2$$

How many of the above compounds undergo disproportionation reaction?

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

Answer: (C) 4 · Checked by our team

Q5 AP EAPCET 2026 · 13 May · Shift 2 MCQ

Consider the unbalanced equation given below

$a\ Cr(OH)_3 + b\ IO_3^- + c\ OH^- \rightarrow d\ CrO_4^{2-} + eI^- + f\ H_2O$

Identify the correct statements/equations given below

I. $Cr(OH)_3$ is reduced to CrO_4^{2-}

II. $a + b + c = 7$

III. $a + c = d + f$

IV. IO_3^- acts as an oxidizing agent in this reaction

The correct answer is

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

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

Q6 AP EAPCET 2026 · 12 May · Shift 1 MCQ

Observe the following unbalanced equation

$a\ S_8(s) + b\ OH^-(aq) \rightarrow c\ S^{2-}(aq) + d\ S_2O_3^{-2}(aq) + e\ H_2O\ (l)$

From the balanced equation, identify the correct relations from the following sets

I. $a + b = c + d + e + 1$

II. $b = 2e + d$

III. $b - a = c + e + 1$

IV. $b + d = 2c + e - 1$

The correct answer is

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

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

Q7 AP EAPCET 2026 · 12 May · Shift 2 MCQ

In acidic medium, potassium permanganate oxidizes H_2O_2 to O_2 as per the equation given below

$$2\,MnO_4^- + 6H^+ + 5H_2O_2 \rightarrow 2Mn^{2+} + 8H_2O + 5O_2$$

100 mL of 0.02 M $KMnO_4$ oxidises 10 mL of X vol H_2O_2 completely. The value of X approximately is

(A) 2.8
(B) 5.6
(C) 7.2
(D) 10.0

Answer: (B) 5.6 · The council's preliminary key

Q8 TS EAPCET 2026 · 11 May · Shift 2 MCQ

A solution is prepared by reacting 500 mL of 0.2 M $\mathrm{KMnO_4}$ with 500 mL of 0.2 M KBr solution in basic medium. What are the concentrations of KBr and $\mathrm{KBrO_3}$ respectively in the resultant solution?

(A) 0.025 M, 0.025 M
(B) 0.05 M, 0.025 M
(C) 0.05 M, 0.05 M
(D) 0.025 M, 0.05 M

Answer: (C) 0.05 M, 0.05 M · The council's preliminary key

Q9 TS EAPCET 2026 · 10 May · Shift 2 MCQ

$$\mathrm{S_2O_3^{2-}(aq) + OH^-(aq) \rightarrow SO_4^{2-}(aq) + H_2O(l) + e^-}$$

After the above half reaction is balanced, which of the following are the coefficients of $\mathrm{OH^-}$ and $\mathrm{SO_4^{2-}}$ respectively?

(A) 8, 3
(B) 6, 2
(C) 10, 2
(D) 5, 2

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

Q10 TS EAPCET 2026 · 9 May · Shift 1 MCQ

Which of the following statement is correct about the balanced equation given below?

$\mathrm{Cr_2O_7^{2-}(aq) + 14H^+(aq) + 3S^{2-}(aq) \rightarrow 2Cr^{3+}(aq) + 3S(s) + 7H_2O(l)}$

(aq = aqueous, s = solid, l = liquid)

(A) $\mathrm{Cr_2O_7^{2-}}$ reduces the $\mathrm{S^{2-}}$

(B) oxidation number of Cr changes from +7 to +3

(C) oxidation number of S remains −2

(D) $\mathrm{Cr_2O_7^{2-}}$ oxidises the $\mathrm{S^{2-}}$

Answer: (D) $\mathrm{Cr_2O_7^{2-}}$ **oxidises the** $\mathrm{S^{2-}}$ · The council's preliminary key

Q11 TS EAPCET 2026 · 9 May · Shift 2 MCQ

$\mathrm{KMnO_4}$ oxidizes $\mathrm{M^{2+}}$ to $\mathrm{M^{4+}}$ in acid medium. 500 mL of 0.02M $\mathrm{M^{2+}}$ solution requires 500 mL of x M $\mathrm{MnO_4^-}$ solution for complete oxidation. The value of x is

(A) 16×10^{-3}

(B) 8×10^{-3}

(C) 4×10^{-3}

(D) 2×10^{-3}

Answer: (B) 8×10^{-3} · The council's preliminary key

Q12 AP EAPCET 2025 · 27 May · Shift 1 MCQ

$\mathrm{KMnO_4}$ oxidises hydrogen sulphide in acidic medium. The number of moles of $\mathrm{KMnO_4}$ which react with one mole of hydrogen sulphide is

(A) 2

(B) 4

(C) 0.4

(D) 2.5

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

Q13 AP EAPCET 2025 · 26 May · Shift 1 MCQ

100 mL of aqueous solution of 0.05 M $\mathrm{Cu^{2+}}$ is added to 1 L of 0.1 M KI solution. The resultant solution was titrated with 0.01 M $\mathrm{Na_2S_2O_3}$ solution using starch indicator till blue color disappeared. What is the volume (in mL) of $\mathrm{Na_2S_2O_3}$ used ?

(A) 2000
(B) 1000
(C) 500
(D) 250

Answer: (C) 500 · The council's preliminary key

Q14 AP EAPCET 2025 · 23 May · Shift 2 MCQ

H_2O_2 reduces $KMnO_4$ in acidic medium to 'x' and in basic medium to 'y'. What are x and y ?

(A) $x = MnO_2, \quad y = Mn^{2+}$
(B) $x = Mn^{2+}, \quad y = MnO_2$
(C) $x = MnO_4^{2-}, \ y = Mn^{2+}$
(D) $x = MnO_2, \quad y = MnO_4^{2-}$

Answer: (B) $x = Mn^{2+}, \quad y = MnO_2$ · The council's preliminary key

Q15 AP EAPCET 2025 · 21 May · Shift 1 MCQ

The volume (in mL) of 10 volume H_2O_2 solution required to completely react with 200 mL of 0.4 M $KMnO_4$ solution in acidic medium is

(A) 112
(B) 336
(C) 224
(D) 448

Answer: (C) 224 · The council's preliminary key

Q16 AP EAPCET 2025 · 21 May · Shift 2 MCQ

H_2O_2 with $KMnO_4$ in acidic medium gives a manganese compound 'X' and in basic medium gives another manganese compound 'Y'. The oxidation state of manganese in X and Y, respectively are

(A) +2, +4
(B) +4, +2
(C) +3, +4
(D) +4, +3

Answer: (A) +2, +4 · The council's preliminary key

Q17 TS EAPCET 2025 · 4 May · Shift 1 MCQ

Consider the following redox reaction in basic medium.

$x Cr(OH)_3 + y(IO_3)^- + z(OH)^- \rightarrow a(CrO_4)^{2-} + b(I)^- + c(H_2O)$

The incorrect option about it is

(A) $x + y = 3$
(B) $a + b = 7$
(C) $z = 4$
(D) $b = 1$

Answer: (B) $a + b = 7$ · The council's preliminary key

Q18 TS EAPCET 2025 · 3 May · Shift 2 MCQ

In which of the following, oxidation state of nitrogen is lowest?

(A) NH_2OH
(B) NH_4Cl
(C) N_2H_4
(D) HNO_2

Answer: (B) NH_4Cl · The council's preliminary key

Q19 TS EAPCET 2025 · 3 May · Shift 2 MCQ

The number of moles of oxalate ions oxidized by one mole of permanganate ions in acidic medium is

(A) 2.5
(B) 5.0
(C) 1.5
(D) 2.0

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

Q20 TS EAPCET 2025 · 2 May · Shift 1 MCQ

Oxidation state of hydrogen in compound X is -1 and in compound Y is $+1$.

X and Y are respectively

(A) $LiAlH_4, H_2O$
(B) NH_3, NaH
(C) CH_4, H_2O
(D) $H_2S, NaBH_4$

Answer: (A) $LiAlH_4, H_2O$ · The council's preliminary key

Q21 TS EAPCET 2025 · 2 May · Shift 1 MCQ

In acidic medium one mole each of MnO_4^- and $Cr_2O_7^{2-}$ is reduced by x and y moles of ferrous ions. The sum of x and y is

EdLoop EAPCET

(A) 14
(B) 12
(C) 10
(D) 11

Answer: (D) 11 · The council's preliminary key

Q22 TS EAPCET 2025 · 2 May · Shift 2 MCQ

If the number of moles of Fe^{2+} ions oxidized by one mole of acidified MnO_4^- is x, the number of moles of Fe^{2+} ions oxidised by one mole of acidified $Cr_2O_7^{2-}$ is

(A) $\frac{5x}{8}$
(B) $\frac{6x}{5}$
(C) $\frac{8x}{5}$
(D) $\frac{5x}{6}$

Answer: (B) $\frac{6x}{5}$ · The council's preliminary key

Q23 AP EAPCET 2024 · 23 May · Shift 1 MCQ

Observe the following reactions

(i) $2KClO_3(s) \xrightarrow{\Delta} 2KCl(s) + 3O_2(g)$

(ii) $2H_2O_2(aq) \xrightarrow{\Delta} 2H_2O(l) + O_2(g)$

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

(iv) $2Na(s) + \frac{1}{2}O_2(g) \longrightarrow Na_2O(s)$

The number of redox reactions in this list is

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

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

Q24 AP EAPCET 2024 · 22 May · Shift 2 MCQ

100 mL of 0.1 M Fe^{2+} solution was titrated with $\frac{1}{60}$ M $Cr_2O_7^{2-}$ solution in acid medium. What is the volume (in L) of $Cr_2O_7^{2-}$ solution consumed?

(A) 100
(B) 10
(C) 1
(D) 0.1

Answer: (D) 0.1 · The council's preliminary key

Q25 AP EAPCET 2024 · 22 May · Shift 2 MCQ

Which of the following reactions of $KMnO_4$ occurs in acidic medium?

(A) Oxidation of thiosulphate to sulphate
(B) Precipitation of sulphur from H_2S
(C) Oxidation of iodide to iodate
(D) Oxidation of manganous salt to MnO_2

Answer: (B) Precipitation of sulphur from H_2S · The council's preliminary key

Q26 AP EAPCET 2024 · 21 May · Shift 2 MCQ

Which of the following occurs with $KMnO_4$ in neutral medium?

(A) Oxidation of oxalate ion
(B) Precipitation of sulphur from hydrogen sulphide
(C) Oxidation of Fe^{2+} to Fe^{3+}
(D) Oxidation of iodide to iodate

Answer: (D) Oxidation of iodide to iodate · The council's preliminary key

Q27 AP EAPCET 2024 · 20 May · Shift 1 MCQ

Given below are two statements

Statement I: In the decomposition of potassium chlorate, Cl is reduced

Statement II: Reaction of Na with O_2 to form Na_2O is a redox reaction

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 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

Q28 AP EAPCET 2024 · 19 May · Shift 2 MCQ

Observe the following stoichiometric equation

$P_4 + 3\,OH^- + 3H_2O \rightarrow PH_3 + 3x^-$

What is the conjugate acid of x^- ?

(A) Phosphorous acid
(B) Hypophosphorous acid
(C) Phosphoric acid
(D) Pyrophosphoric acid

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

Q29 TS EAPCET 2024 · 10 May · Shift 2 MCQ

Observe the following reaction

$$2\mathrm{KClO_3(s)} \xrightarrow{\Delta} 2\mathrm{KCl(s)} + 3\mathrm{O_2(g)}$$

In this reaction

(A) Cl is oxidized and O is reduced
(B) Cl is reduced and O is oxidized
(C) K is oxidized and O is reduced
(D) K is reduced and Cl is also reduced

Answer: (B) Cl is reduced and O is oxidized · The council's preliminary key

Q30 TS EAPCET 2024 · 9 May · Shift 1 MCQ

Observe the following reactions

I. $\mathrm{H_2O}(l) + 2\mathrm{Na}\ (s) \rightarrow 2\mathrm{NaOH}\ (aq) + \mathrm{H_2}\ (g)$

II. $2\mathrm{H_2O}(l) + 2\mathrm{F_2}(g) \rightarrow 4\mathrm{H^+}(aq) + 4\mathrm{F^-}(aq) + \mathrm{O_2}(g)$

Identify the correct statement from the following

(A) In both reaction I and reaction II, water is oxidized
(B) In both reaction I and reaction II, water is reduced
(C) In reaction I water is reduced and in reaction II water is oxidized
(D) In reaction I water is oxidized and in reaction II water is reduced

Answer: (C) In reaction I water is reduced and in reaction II water is oxidized · The council's preliminary key

Q31 AP EAPCET 2023 · 19 May · Shift 1 MCQ

In neutral or faintly alkaline medium, $\mathrm{MnO_4^-}$ oxidizes $\mathrm{I^-}$ to iodate. What is the volume (in L) of 0.02M $\mathrm{KMnO_4}$ required to completely convert 1 L of 0.5 M KI solution to iodate in neutral or faintly alkaline medium?

EdLoop EAPCET

(A) 5
(B) 50
(C) 20
(D) 30

Answer: (B) 50 · The council's preliminary key

Q32 AP EAPCET 2023 · 19 May · Shift 1 MCQ

The auto catalyst in the redox reaction involving acidified potassium permanganate and oxalic acid is

(A) Mn^{2+}
(B) SO_4^{2-}
(C) CO_2
(D) H_2O

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

Q33 AP EAPCET 2023 · 18 May · Shift 1 MCQ

In neutral or faintly alkaline medium, MnO_4^- oxidizes I^- to iodate. What is the number of moles of $KMnO_4$ required to completely convert 1 L of 0.5 M KI to iodate?

(A) 0.5
(B) 4.0
(C) 2.0
(D) 1.0

Answer: (D) 1.0 · The council's preliminary key

Q34 AP EAPCET 2023 · 18 May · Shift 1 MCQ

Identify the reactions in which H_2O is oxidised

I. Photosynthesis

II. Reaction of H_2O with fluorine

III. Reaction of H_2O with hydrogen

IV. Reaction of H_2O with P_4O_{10}

The correct answer is

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

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

EdLoop EAPCET

Q35 AP EAPCET 2023 · 17 May · Shift 1 MCQ

What are x, y and z respectively in the following reaction?

$$x\mathrm{Fe}^{2+}(\mathrm{aq}) + y\mathrm{H}^{+}(\mathrm{aq}) + z\mathrm{Cr}_2\mathrm{O}_7^{2-}(\mathrm{aq}) \rightarrow \frac{y}{2}\mathrm{H}_2\mathrm{O}(\mathrm{l}) + x\mathrm{Fe}^{3+}(\mathrm{aq}) + 2z\mathrm{Cr}^{3+}(\mathrm{aq})$$

(A) 14, 1, 6
(B) 14, 6, 1
(C) 6, 1, 14
(D) 6, 14, 1

Answer: (D) 6, 14, 1 · The council's preliminary key

Q36 AP EAPCET 2023 · 16 May · Shift 2 MCQ

Observe the following reaction

$$x\,\mathrm{S}_8(\mathrm{s}) + y\,\mathrm{OH}^{-}(\mathrm{aq}) \rightarrow z\,\mathrm{S}^{2-}(\mathrm{aq}) + 2\,\mathrm{S}_2\mathrm{O}_3^{2-}(\mathrm{aq}) + 6\,\mathrm{H}_2\mathrm{O}(\mathrm{l})$$

x, y and z are respectively.

(A) 1, 12, 4
(B) 1, 12, 2
(C) 1, 4, 12
(D) 2, 12, 2

Answer: (A) 1, 12, 4 · The council's preliminary key

Q37 AP EAPCET 2023 · 15 May · Shift 1 MCQ

Observe the following reaction

$$\mathrm{Cl}_2(\mathrm{g}) + 2\mathrm{OH}^{-}(\mathrm{aq}) \rightarrow \mathrm{ClO}^{-}(\mathrm{aq}) + \mathrm{Cl}^{-}(\mathrm{aq}) + \mathrm{H}_2\mathrm{O}(\mathrm{l})$$

Identify the correct statements about this reaction

I. $\mathrm{Cl}_2(\mathrm{g})$ **is oxidized to** $\mathrm{ClO}^{-}(\mathrm{aq})$
II. $\mathrm{Cl}_2(\mathrm{g})$ is oxidized to $\mathrm{Cl}^{-}(\mathrm{aq})$
III. $\mathrm{Cl}_2(\mathrm{g})$ is reduced to $\mathrm{ClO}^{-}(\mathrm{aq})$
IV. $\mathrm{Cl}_2(\mathrm{g})$ is reduced to $\mathrm{Cl}^{-}(\mathrm{aq})$

The correct answer is

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

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

EdLoop EAPCET

Q38 TS EAMCET 2023 · 14 May · Shift 2 MCQ

The oxidation states of three carbon atoms in carbon suboxide (C_3O_2) respectively are

(A) +2, 0, +2
(B) +2, 0, +4
(C) +4, +2, +2
(D) -2, +2, 0

Answer: (A) +2, 0, +2 · The council's preliminary key

Q39 TS EAMCET 2023 · 12 May · Shift 2 MCQ

Which of the following is only a redox reaction but not a disproportionation reaction?

(A) $4H_3PO_3 \rightarrow 3H_3PO_4 + PH_3$
(B) $2H_2O_2 \rightarrow 2H_2O + O_2$
(C) $P_4 + 3NaOH + 3H_2O \rightarrow 3NaH_2PO_2 + PH_3$
(D) $P_4 + 8SOCl_2 \rightarrow 4PCl_3 + 2S_2Cl_2 + 4SO_2$

Answer: (D) $P_4 + 8SOCl_2 \rightarrow 4PCl_3 + 2S_2Cl_2 + 4SO_2$ · The council's preliminary key

Q40 TS EAMCET 2022 · 20 Jul · Shift 2 MCQ

Which of the following are disproportionation reactions?
A) $Cl_2 + 2\,NaOH \rightarrow NaCl + NaOCl + H_2O$
B) $H_2O_2 \rightarrow 2H_2O + O_2$
C) $2\,KMnO_4 \rightarrow K_2MnO_4 + MnO_2 + O_2$
D) $3\,MnO_4^{2-} + 4H^+ \rightarrow 2MnO_4^- + MnO_2 + 2H_2O$

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

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

Q41 TS EAMCET 2022 · 19 Jul · Shift 2 MCQ

The number of moles of ferrous oxalate oxidised by one mole of $KMnO_4$ in acidic medium is

(A) $\frac{5}{2}$
(B) $\frac{2}{5}$
(C) $\frac{3}{5}$
(D) $\frac{5}{3}$

Answer: (D) $\frac{5}{3}$ · Checked by our team

EdLoop EAPCET

Q42 TS EAMCET 2022 · 18 Jul · Shift 1 MCQ

Identify the pair of reactions undergoing disproportionation from the following.

(A) $2H_2O_2 \rightarrow 2H_2O + O_2$ and $Cl_2 + 2NaOH \rightarrow NaCl + NaOCl + H_2O$

(B) $P_4 + 3NaOH + 3H_2O \rightarrow PH_3 + 3NaH_2PO_4$ and $Cl_2 + 2NO \rightarrow 2NaCl$

(C) $Cl_2 + 2KBr \rightarrow 2KCl + Br_2$ and $5Cl_2 + I_2 + 6H_2O \rightarrow 2IO_3^- + 10Cl^- + 2H^+$

(D) $Pb_3O_4 + 8HCl \rightarrow 3PbCl_2 + Cl_2 + H_2O$ and $P_4 + 3NaOH \rightarrow 3H_2O + PH_3 + 3NaH_2PO_4$

Answer: (A) $2H_2O_2 \rightarrow 2H_2O + O_2$ and $Cl_2 + 2NaOH \rightarrow NaCl + NaOCl + H_2O$ · The council's preliminary key

Q43 AP EAPCET 2022 · 7 Jul · Shift 1 MCQ

Which of the following does not show disproportionation reaction?

(A) ClO_2^-

(B) ClO_3^-

(C) ClO_4^-

(D) ClO^-

Answer: (C) ClO_4^- · The council's preliminary key

Q44 AP EAPCET 2022 · 7 Jul · Shift 2 MCQ

Match the following

List -I (Type of reaction): A Combination reaction; B Decomposition reaction; C Disproportionation reaction; D Displacement reaction

List - II (unbalanced equation):

i) $AgNO_3 + CaCl_2 \longrightarrow AgCl + Ca(NO_3)_2$

ii) $Cl_2 \longrightarrow Cl^- + ClO_3^-$

iii) $Mg + N_2 \longrightarrow Mg_3N_2$

iv) $KClO_3 \xrightarrow{\Delta} KCl + O_2$

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

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

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

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

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

Q45 AP EAPCET 2022 · 5 Jul · Shift 1 MCQ

What are the oxidation numbers on S atoms in $S_4O_6^{2-}$

EdLoop EAPCET

(A) 6, -1, -1,6
(B) 5, 0, 0, 5
(C) 2.5, 2.5, 2.5, 2.5
(D) 7, -2, -2, 7

Answer: (B) 5, 0, 0, 5 · The council's preliminary key

Q46 AP EAPCET 2022 · 5 Jul · Shift 2 MCQ

Which of the following reactions is not a disproportionation reaction?

(A) $CaCO_3 \longrightarrow CaO + CO_2$
(B) $P_4 + 3\,NaOH + 3H_2O \longrightarrow 3NaH_2PO_2 + PH_3$
(C) $2H_2O_2 \longrightarrow 2H_2O + O_2$
(D) $2Cu^{+} \longrightarrow Cu^{2+} + Cu$

Answer: (A) $CaCO_3 \longrightarrow CaO + CO_2$ · The council's preliminary key

---

Q47 AP EAPCET 2022 · 5 Jul · Shift 2 MCQ

Which of the following is not a disproportionation reaction?

(A) $Hg_2Cl_2 \longrightarrow Hg + HgCl_2$
(B) $4H_3PO_3 \longrightarrow 3H_3PO_4 + PH_3$
(C) $Cl_2 + 2NaOH \longrightarrow NaCl + NaOCl + H_2O$
(D) $BaO_2 + H_2SO_4 \longrightarrow BaSO_4 + H_2O_2$

Answer: (D) $BaO_2 + H_2SO_4 \longrightarrow BaSO_4 + H_2O_2$ · The council's preliminary key

---

Q48 AP EAPCET 2022 · 4 Jul · Shift 1 MCQ

What are the oxidation states of three Br atoms in Br_3O_8 molecule

(A) +5, +6, +5
(B) +6, +4, +6
(C) +7, +2, +7
(D) +6, +3, +7

Answer: (B) +6, +4, +6 · The council's preliminary key

Q49 AP EAPCET 2022 · 4 Jul · Shift 2 MCQ

What is the oxidation state of S in the sulphur containing product of the following reaction?
$SO_3^{2-}(aq) + Br_2(l) + H_2O \rightarrow$

EdLoop EAPCET

(A) $+6$
(B) $+4$
(C) $+2.5$
(D) $+2$

Answer: (A) $+6$ · The council's preliminary key

Q50 AP EAPCET 2022 · 4 Jul · Shift 2 MCQ

Among P_4, S_8 and N_2, the elements which undergo disproportionation when heated with NaOH solution

(A) P_4, S_8 only
(B) N_2, S_8 only
(C) N_2, P_4 only
(D) P_4, N_2, S_8

Answer: (A) P_4, S_8 only · The council's preliminary key

Q51 AP EAPCET 2021 · 25 Aug · Shift 1 MCQ

The transition metal in which of the following compound has zero oxidation state?

(A) $K_2Cr_2O_7$
(B) $KMnO_4$
(C) CrO_5
(D) $Fe(CO)_5$

Answer: (D) $Fe(CO)_5$ · The council's preliminary key

Q52 AP EAPCET 2021 · 20 Aug · Shift 1 MCQ

Which among the following species doesn't show disproportionation reaction?

(A) ClO^-
(B) ClO_2^-
(C) ClO_3^-
(D) ClO_4^-

Answer: (D) ClO_4^- · The council's preliminary key

Q53 AP EAPCET 2021 · 19 Aug · Shift 1 MCQ

Which among the following species acts as a self-indicator?

(A) H_2O_2
(B) I^-
(C) $Cr_2O_7^{2-}$
(D) MnO_4^-

Answer: (D) MnO_4^- · The council's preliminary key

Q54 AP EAPCET 2021 · 19 Aug · Shift 2 MCQ

For the redox reaction $MnO_4^- + C_2O_4^{2-} + H^+ \rightarrow Mn^{2+} + CO_2 + H_2O$, the correct coefficients of the reactants for the balanced reaction are respectively MnO_4^-, $C_2O_4^{2-}$ and H^+ _____

(A) $2, 5, 16$
(B) $16, 3, 12$
(C) $15, 16, 12$
(D) $2, 16, 5$

Answer: (A) $2, 5, 16$ · The council's preliminary key

Q55 TS EAMCET 2021 · 6 Aug · Shift 1 MCQ

Which of the following is not a disproportionation reaction?

(A) $Cl_2(g) + 2OH^-(aq) \rightarrow ClO^-(aq) + Cl^-(aq) + H_2O$
(B) $F_2(g) + 2OH^-(aq) \rightarrow OF_2(g) + 2F^-(aq) + H_2O(l)$
(C) $4ClO_3^-(aq) \rightarrow Cl^-(aq) + 3ClO_4^-(aq)$
(D) $3ClO^-(aq) \rightarrow 2Cl^-(aq) + ClO_3^-(aq)$

Answer: (B) $F_2(g) + 2OH^-(aq) \rightarrow OF_2(g) + 2F^-(aq) + H_2O(l)$ · The council's preliminary key

Q56 TS EAMCET 2021 · 6 Aug · Shift 2 MCQ

In Pb_3O_4, the different oxidation states of Pb is/are

(A) 2.66 only
(B) 2 only
(C) 2 and 4 only
(D) 2, 4 and 1

Answer: (C) 2 and 4 only · The council's preliminary key

Q57 TS EAMCET 2021 · 5 Aug · Shift 1 MCQ

From the given reactions identify the disproportionation reaction
i) $Cl_2(g) + 2KI(aq) \longrightarrow 2KCl(aq) + I_2(s)$
ii) $Cl_2(g) + 2OH^-(aq) \longrightarrow ClO^-(aq) + Cl^-(aq) + H_2O(l)$
iii) $Mg(s) + 2HCl(aq) \longrightarrow MgCl_2(aq) + H_2(g)$
iv) $2H_2O_2(aq) \longrightarrow 2H_2O(l) + O_2(g)$

EdLoop EAPCET

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

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

Q58 TS EAMCET 2021 · 5 Aug · Shift 1 MCQ

$KMnO_4$ oxidises oxalic acid in acidic medium. The number of CO_2 molecules produced per mole of $KMnO_4$ is

(A) 5
(B) 4
(C) 3
(D) 1.5

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

Q59 TS EAMCET 2021 · 4 Aug · Shift 2 MCQ

The products P and Q of the following reaction, respectively, are
$a\ S_8(s) + b\ NaOH(aq) \longrightarrow P(aq) + q\ Q(aq) + r\ H_2O$

(A) Na_2S ; $Na_2S_2O_3$
(B) Na ; $Na_2S_2O_3$
(C) Na ; Na_2S
(D) SO_2 ; Na_2SO_4

Answer: (A) Na_2S ; $Na_2S_2O_3$ · The council's preliminary key

Q60 TS EAMCET 2021 · 4 Aug · Shift 2 MCQ

The oxidation state of Cr in CrO_5 is

(A) 3
(B) 5
(C) 10
(D) 6

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

Q61 AP EAMCET 2020 · 7 Oct · Shift 1 MCQ

In acidic medium, iodide (I^-) liberates iodine (I_2) in the presence of $KMnO_4$. The change in oxidation number of manganese in this procedure is _____ units

(A) 7
(B) 5
(C) 4
(D) 2

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

Q62 AP EAMCET 2020 · 21 Sep · Shift 1 MCQ

Which of the following represents disproportionation of potassium chlorate?

(A) $2\ KClO_3 \rightarrow 2\ KCl + 3\ O_2$
(B) $3\ KClO_3 \rightarrow 2\ KClO_2 + KClO_3$
(C) $4\ KClO_3 \rightarrow 3\ KClO_4 + KCl$
(D) None of the options are correct

Answer: (C) $4\ KClO_3 \rightarrow 3\ KClO_4 + KCl$ · The council's preliminary key

Q63 AP EAMCET 2020 · 21 Sep · Shift 1 MCQ

Which species among the following doesn't show disproportionation reactions?

(A) ClO_2^-
(B) ClO_3^-
(C) ClO^-
(D) ClO_4^-

Answer: (D) ClO_4^- · The council's preliminary key

Q64 AP EAMCET 2020 · 18 Sep · Shift 1 MCQ

The oxidation number of an element in a compound is evaluated on the basis of certain rules. Which of the following rules is not correct?
A) The oxidation number of hydrogen is always +1
B) The algebraic sum of all the oxidation numbers of all elements in a compound is zero
C) An element in the free or the uncombined state bears oxidation number zero
D) In all its compounds, the oxidation number of fluorine is -1

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

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

Q65 AP EAMCET 2020 · 18 Sep · Shift 2 MCQ

Which oxide among the following cannot act as a reducing agent?

(A) SO_2
(B) NO_2
(C) CO_2
(D) ClO_2

Answer: (C) CO_2 · The council's preliminary key

Q66 AP EAMCET 2020 · 17 Sep · Shift 2 MCQ

After balancing equation $C_2O_4^{2-} + H^+ + MnO_4^- \rightarrow CO_2 + Mn^{2+} + H_2O$, the coefficient of CO_2 is _____

(A) 4
(B) 5
(C) 10
(D) 2

Answer: (C) 10 · The council's preliminary key

Q67 TS EAMCET 2020 · 14 Sep · Shift 1 MCQ

In the following reaction mixtures,
1) $Cu/CuSO_4 + Ag/Ag_2SO_4$
2) $Zn/ZnSO_4 + Cu/CuSO_4$
copper respectively undergoes

(A) reduction and reduction
(B) oxidation and reduction
(C) reduction and oxidation
(D) oxidation and oxidation

Answer: (B) oxidation and reduction · Official TGCHE final key

Q68 TS EAMCET 2020 · 10 Sep · Shift 1 MCQ

$KMnO_4$ oxidises $C_2H_2O_4$ to form CO_2. In which of the following, the reaction will be faster?

(A) aq. HCl solution
(B) aq. NaOH solution
(C) aq. NaCl solution
(D) aq. $NaHCO_3$ solution

Answer: (A) aq. HCl solution · Official TGCHE final key

Q69 TS EAMCET 2020 · 9 Sep · Shift 1 MCQ

$LiCoO_2$ crystallizes in a rhombohedral structure. Consider a situation where 50 % lithium (Li) is extracted from the lattice. To keep the crystal electrically neutral, change in average oxidation state of

Co is

(A) 16.66 % decrease
(B) 16.66 % increase
(C) 50 % increase
(D) 50 % decrease

Answer: (B) 16.66 % increase · Official TGCHE final key

Q70 TS EAMCET 2020 · 9 Sep · Shift 1 MCQ

Oxidation state of S in $H_2S_2O_8$ is

(A) 8
(B) 6
(C) 4
(D) 7

Answer: (B) 6 · Official TGCHE final key

Q71 TS EAMCET 2019 · 6 May · Shift 1 MCQ

Match the following.
List - I
A) $TiCl_4(l) + 2Mg(s) \xrightarrow{\Delta} Ti(s) + 2MgCl_2(s)$
B) $2H_2O_2(aq) \longrightarrow 2H_2O(l) + O_2(g)$
C) $C(s) + O_2(g) \xrightarrow{\Delta} CO_2(g)$
D) $2NaH(s) \xrightarrow{\Delta} 2Na(s) + H_2(g)$
List - II
I) Disproportionation reaction
II) Metal displacement reaction
III) Decomposition reaction
IV) Combination reaction
The correct answer is

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

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

Q72 TS EAMCET 2019 · 6 May · Shift 1 MCQ

How many protons will be consumed when dichromate ion oxidises Fe^{2+} ions in aqueous acidic medium?

EdLoop EAPCET

(A) 4
(B) 6
(C) 10
(D) 14

Answer: (D) 14 · Official TGCHE final key

Q73 TS EAMCET 2019 · 4 May · Shift 1 MCQ

One third liter of x M $\mathrm{K_2Cr_2O_7}$ is required to completely oxidize 2 L of 0.1 M ferrous ammonium sulphate in acid medium. What is x?

(A) 0.03
(B) 0.1
(C) 0.2
(D) 0.5

Answer: (B) 0.1 · Official TGCHE final key

Q74 TS EAMCET 2019 · 4 May · Shift 2 MCQ

The coefficients x, y, p, q and r in the following balanced equations respectively are:
$x\,\mathrm{MnO_4^{2-}}_{(aq)} + y\,\mathrm{H_2O}_{(l)} \longrightarrow p\,\mathrm{MnO_2}_{(s)} + q\,\mathrm{MnO_4^-}_{(aq)} + r\,\mathrm{OH^-}_{(aq)}$

(A) 3, 2, 2, 4, 1
(B) 2, 3, 1, 1, 5
(C) 2, 3, 2, 1, 5
(D) 3, 2, 1, 2, 4

Answer: (D) 3, 2, 1, 2, 4 · Official TGCHE final key

Q75 TS EAMCET 2019 · 3 May · Shift 1 MCQ

Identify the oxidation states of Mn when $\mathrm{MnO_4^{2-}}$ ion undergoes disproportionation reaction under acidic medium

(A) $+2, +7$
(B) $+2, +5$
(C) $+4, +4$
(D) $+7, +4$

Answer: (D) $+7, +4$ · Official TGCHE final key

Q76 TS EAMCET 2019 · 3 May · Shift 1 MCQ

What is the approximate volume (in mL) of 10 vol $\mathrm{H_2O_2}$ solution that will react completely with 1 L of 0.02 M $\mathrm{KMnO_4}$ solution in acid medium?

EdLoop EAPCET

(A) 56.05
(B) 113.5
(C) 90.8
(D) 75.75

Answer: (A) 56.05 · Official TGCHE final key

Q77 AP EAMCET 2019 · 23 Apr · Shift 1 MCQ

Which of the following are non-metal displacement reactions?
A) $Ca_{(s)} + 2H_2O_{(l)} \rightarrow Ca(OH)_{2(aq)} + H_{2(g)}$
B) $V_2O_{5(s)} + 5Ca_{(s)} \xrightarrow{\Delta} 2V_{(s)} + 5CaO_{(s)}$
C) $2Fe_{(s)} + 3H_2O_{(l)} \xrightarrow{\Delta} Fe_2O_{3(s)} + 3H_{2(g)}$
D) $Cr_2O_{3(s)} + 2Al_{(s)} \xrightarrow{\Delta} Al_2O_{3(s)} + 2Cr_{(s)}$

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

Answer: (D) A, C only · Official APSCHE final key

Q78 AP EAMCET 2019 · 22 Apr · Shift 1 MCQ

$20\ mL$ of Fe^{2+} solution of certain concentration has completely reacted with $20\ mL$ of $0.01\ M\ K_2Cr_2O_7$ in acid medium. If $20\ mL$ of same Fe^{2+} solution has reacted completely with $20\ mL$ of $KMnO_4$ solution in acid medium, the molarity of $KMnO_4$ solution is

(A) 0.01M
(B) 0.12M
(C) 0.10M
(D) 0.012M

Answer: (D) 0.012M · Official APSCHE final key

Q79 AP EAMCET 2019 · 21 Apr · Shift 1 MCQ

What is the volume (in mL) of 20 vol H_2O_2 required to completely react with 500 mL of 0.02 M acidified $KMnO_4$ solution?

(A) 14.0
(B) 7.0
(C) 28.0
(D) 42.0

Answer: (A) 14.0 · Official APSCHE final key

Q80 AP EAMCET 2019 · 21 Apr · Shift 2 MCQ

In how many of the following compounds of sulphur, the oxidation state of sulphur atom is +6?
$H_2S_2O_8, H_2SO_5, H_2SO_3, H_2SO_4, H_2S_2O_7, SO_2Cl_2, SOCl_2$

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

Answer: (B) 5 · Official APSCHE final key

Q81 AP EAMCET 2019 · 20 Apr · Shift 1 MCQ

The volume of 0.02 M acidified permanganate solution required for complete reaction of 60 mL of 0.01 M I^- ion solution to form I_2 in mL is

(A) 60
(B) 20
(C) 40
(D) 6

Answer: (D) 6 · Official APSCHE final key

Q82 TS EAMCET 2018 · 5 May · Shift 1 MCQ

Which one of following is a disproportionation reaction?

(A) $2AgNO_{3(aq)} + Cu_{(s)} \rightarrow Cu(NO_3)_{2(aq)} + 2Ag_{(s)}$
(B) $3AgNO_{3(aq)} + K_3PO_{4(aq)} \rightarrow Ag_3PO_{4(s)} + 3KNO_{3(aq)}$
(C) $4KClO_{3(s)} \xrightarrow{\Delta} KCl_{(s)} + 3KClO_{4(s)}$
(D) $4Fe_{(s)} + 3O_{2(g)} \rightarrow 2Fe_2O_3$

Answer: (C) $4KClO_{3(s)} \xrightarrow{\Delta} KCl_{(s)} + 3KClO_{4(s)}$ · The council's preliminary key

Q83 TS EAMCET 2018 · 5 May · Shift 2 MCQ

If stoichiometric quantities of $KMnO_4$ and $K_2Cr_2O_7$ mixture is added for the oxidation of Fe^{2+} to Fe^{3+} in acidic medium, then Fe^{2+} will be oxidised

(A) Equally by $KMnO_4$ and $K_2Cr_2O_7$
(B) More by $KMnO_4$
(C) More by $K_2Cr_2O_7$
(D) No reaction

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

Q84 TS EAMCET 2018 · 4 May · Shift 1 MCQ

In the titration of I_2 (aq) by $S_2O_3^{2-}$ (aq) using the starch indicator, the end point is indicated by

(A) Colourless to blue
(B) Blue to colourless
(C) Pink to colourless
(D) Blue to pink

Answer: (B) Blue to colourless · The council's preliminary key

Q85 AP EAMCET 2018 · 24 Apr · Shift 1 MCQ

$2Cu_2O_{(s)} + Cu_2S_{(s)} \rightarrow 6Cu_{(s)} + SO_{2(g)}$
the oxidant and reductant respectively in the above reaction are

(A) Oxide of Cu_2O and sulphide of Cu_2S
(B) Sulphide of Cu_2S and Oxide of Cu_2O
(C) Cu (I) of Cu_2O, Cu_2S and sulphide of Cu_2S
(D) Cu (I) of Cu_2S, Cu (I) of Cu_2O

Answer: (C) Cu (I) of Cu_2O, Cu_2S and sulphide of Cu_2S · The council's preliminary key

Q86 AP EAMCET 2018 · 24 Apr · Shift 2 MCQ

Which of the following are disproportionation reactions?
(A) $2NO_{2(g)} + 2NaOH_{(aq)} \rightarrow NaNO_{2(aq)} + NaNO_{3(aq)} + H_2O_{(l)}$
(B) $Cl_{2(g)} + 2NaOH_{(aq)} \rightarrow NaClO_{(aq)} + NaCl_{(aq)} + H_2O_{(l)}$
(C) $3ClO^- \rightarrow 2Cl^- + ClO_3^-$
(D) $3Mg_{(s)} + N_{2(g)} \rightarrow Mg_3N_{2(s)}$

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

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

Q87 AP EAMCET 2018 · 23 Apr · Shift 1 MCQ

From the given reaction
$2KMnO_4 + 3H_2SO_4 + 5H_2O_2 \rightarrow K_2SO_4 + 2MnSO_4 + 8H_2O + 5O_2$
Find the normality of H_2O_2 solution, if 20 mL of it is required to react completely with 16 mL of 0.02 M $KMnO_4$ solution. (Molar mass of $KMnO_4$ = 158 g mol^{-1})

(A) 4×10^{-2} N
(B) 2×10^{-2} N
(C) 6×10^{-2} N
(D) 8×10^{-2} N

Answer: (D) 8×10^{-2} N · The council's preliminary key

Q88 AP EAMCET 2018 · 22 Apr · Shift 1 MCQ

One litre of 0.15M Na_2SO_3 aqueous solution is mixed with $500\ \text{mL}$ of 0.2M $\text{K}_2\text{Cr}_2\text{O}_7$ aqueous solution in acid medium. What is the number of moles of $\text{K}_2\text{Cr}_2\text{O}_7$ remaining in the solution after the reaction?

(A) 0.1
(B) 0.0125
(C) 0.025
(D) 0.05

Answer: (D) 0.05 · The council's preliminary key

Q89 AP EAMCET 2017 · 26 Apr · Shift 1 MCQ

How many millilitres of 20 volume H_2O_2 solution is needed to react completely with 500 mL of acidified 1N KMnO_4 solution?

(A) 56
(B) 140
(C) 224
(D) 280

Answer: (B) 140 · The council's preliminary key

Q90 AP EAMCET 2017 · 26 Apr · Shift 2 MCQ

One litre of 0.15 M Na_2SO_3 aqueous solution is mixed with 500 mL of 0.2M $\text{K}_2\text{Cr}_2\text{O}_7$ aqueous solution in acid medium. What is the concentration (in mol L^{-1}) of unreacted $\text{K}_2\text{Cr}_2\text{O}_7$ in the resultant solution ?

(A) $\frac{1}{3}$
(B) $\frac{1}{20}$
(C) $\frac{1}{300}$
(D) $\frac{1}{30}$

Answer: (D) $\frac{1}{30}$ · The council's preliminary key

Q91 AP EAMCET 2017 · 26 Apr · Shift 2 MCQ

The reaction in which dihydrogen is acting as an oxidising agent is

(A) $Pd^{2+}_{(aq)} + H_{2(g)} \longrightarrow Pd_{(s)} + 2H^{+}_{(aq)}$

(B) $CuO_{(s)} + H_{2(g)} \longrightarrow Cu_{(s)} + H_2O_{(g)}$

(C) $2Na_{(s)} + H_{2(g)} \longrightarrow 2NaH_{(s)}$

(D) $O_{2(g)} + 2H_{2(g)} \longrightarrow 2H_2O_{(l)}$

Answer: (C) $2Na_{(s)} + H_{2(g)} \longrightarrow 2NaH_{(s)}$ · The council's preliminary key

Q92 AP EAMCET 2017 · 25 Apr · Shift 1 MCQ

MnO_4^- reacts with A^{x+} to form AO_3^-, Mn^{2+} and O_2. One mole of MnO_4^- oxidizes 1.25 moles of A^{x+} to AO_3^-. What is the value of x?

(A) 1

(B) 3

(C) 4

(D) 2

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

Q93 AP EAMCET 2017 · 25 Apr · Shift 2 MCQ

Which one of the following does **not** undergo disproportionation reaction?

(A) ClO^-

(B) ClO_3^-

(C) ClO_2^-

(D) ClO_4^-

Answer: (D) ClO_4^- · The council's preliminary key

Q94 TS EAMCET 2016 · 15 May · Offline MCQ

What is the change in the oxidation state of Mn, in the reaction of MnO_4^- with H_2O_2 in acidic medium ?

(A) $7 \rightarrow 4$

(B) $6 \rightarrow 4$

(C) $7 \rightarrow 2$

(D) $6 \rightarrow 2$

Answer: (C) $7 \rightarrow 2$ · Official TGCHE final key

EdLoop EAPCET

Q95 AP EAMCET 2016 · 29 Apr · Offline MCQ

40 ml of x M $\mathrm{KMnO_4}$ solution is required to react completely with 200 ml of 0.02 M oxalic acid solution in acidic medium. The value of x is

(A) 0.04
(B) 0.01
(C) 0.03
(D) 0.02

Answer: (A) 0.04 · The council's preliminary key

Q96 AP EAMCET 2014 · 22 May · Offline MCQ

$\mathrm{KMnO_4}$ reacts with KI in basic medium to form $\mathrm{I_2}$ and $\mathrm{MnO_2}$. When 250 mL of 0.1 M KI solution is mixed with 250 mL of 0.02 M $\mathrm{KMnO_4}$ in basic medium, what is the number of moles of $\mathrm{I_2}$ formed ?

(A) 0.015
(B) 0.0075
(C) 0.005
(D) 0.01

Answer: (B) 0.0075 · The council's preliminary key

Q97 AP EAMCET 2013 · 10 May · Offline MCQ

Which one of the following is an example of disproportionation reaction ?

(A) $3\mathrm{Cl_2}\,(g) + 6\mathrm{OH^-}\,(aq) \rightarrow \mathrm{ClO_3^-}\,(aq) + 5\mathrm{Cl^-}\,(aq) + 3\mathrm{H_2O}\,(l)$
(B) $\mathrm{Ag^{2+}}\,(aq) + \mathrm{Ag}\,(s) \rightarrow 2\mathrm{Ag^+}\,(aq)$
(C) $\mathrm{Zn}\,(s) + \mathrm{CuSO_4}\,(aq) \rightarrow \mathrm{Cu}\,(s) + \mathrm{ZnSO_4}\,(aq)$
(D) $2\mathrm{KClO_3}\,(s) \rightarrow 2\mathrm{KCl}\,(s) + 3\mathrm{O_2}\,(g)$

Answer: (A) $3\mathrm{Cl_2}\,(g) + 6\mathrm{OH^-}\,(aq) \rightarrow \mathrm{ClO_3^-}\,(aq) + 5\mathrm{Cl^-}\,(aq) + 3\mathrm{H_2O}\,(l)$ · The council's preliminary key

Q98 AP EAMCET 2012 · 12 May · Offline MCQ

One mole of $\mathrm{N_2H_4}$ loses 10 moles of electrons to form a new compound Z. Assuming that all the nitrogens appear in the new compound, what is the oxidation state of nitrogen in Z ? (There is no change in the oxidation state of hydrogen)

(A) -1
(B) -3
(C) +3
(D) +5

Answer: (C) +3 · Official APSCHE final key

Q99 AP EAMCET 2011 · 8 May · Offline MCQ

In acidic medium, 100 ml of 0.01 M $KMnO_4$ solution oxidizes 100 ml of H_2O_2 solution. The volume of 0.01 M $KMnO_4$ required to oxidize the same volume of H_2O_2 in alkaline medium in ml. is :

(A) $\frac{300}{2}$
(B) $\frac{300}{5}$
(C) $\frac{500}{3}$
(D) $\frac{500}{2}$

Answer: (C) $\frac{500}{3}$ · The council's preliminary key

EdLoop EAPCET