

Yakeen NEET 2.0 2026

Practice Sheet

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Redox Reaction

Q1 Select the compound in which chlorine shows oxidation state + 7:

- (A) HClO_4 (B) HClO_3
(C) HClO_2 (D) HClO

Q2 The most common oxidation state of oxygen is -2. This is best explained as due to:

- (A) 2 electrons in the outermost shell
(B) 4 electrons in the outermost shell
(C) 6 electrons in the outermost shell
(D) 8 electrons in the outermost shell

Q3 $\text{Cl}_2 + \text{H}_2\text{S} \rightarrow 2\text{HCl} + \text{S}$,

In the above reaction, oxidation state of chlorine changes from:

- (A) zero to -1
(B) 1 to zero
(C) zero to 1
(D) remains unchanged

Q4 Which of the following is a mild oxidising agent?

- (A) Ag_2O (B) KMnO_4
(C) $\text{K}_2\text{Cr}_2\text{O}_7$ (D) Cl_2

Q5 The reaction,



- manifests:
(A) oxidising action of H_2O_2
(B) reducing nature H_2O_2
(C) acidic nature of H_2O_2
(D) alkaline nature of H_2O_2

Q6 Oxidation number of xenon in XeOF_2 is:

- (A) 0 (B) 2
(C) 4 (D) 3

Q7 Match the following:

Column – I (Chemical species)	Column – II (Oxidation number of sulphur)

(A)	S	(P)	+6
(B)	H_2S	(Q)	+1
(C)	S_2Cl_2	(R)	0
(D)	$\text{H}_2\text{S}_2\text{O}_8$	(S)	-2

(A) A-S, B-R, C-P, D-Q

(B) A-R, B-S, C-P, D-Q

(C) A-R, B-S, C-Q, D-P

(D) A-Q, B-P, C-R, D-S

Q8 Match List - I (compound) with list - II (Oxidation state of N) and select the correct answer using the codes given below the list:-

List – I (Compound)		List – II (Oxidation state of N)	
(A)	KNO_3	(P)	-1/3
(B)	HNO_2	(Q)	-3
(C)	NH_4Cl	(R)	+5
(D)	NaN_3	(S)	+3

(A) A-R, B-S, C-Q, D-P

(B) A-Q, B-S, C-P, D-R

(C) A-S, B-R, C-P, D-Q

(D) A-Q, B-R, C-S, D-P

Q9 Which one of the following is a reducing agent?

- (A) Ozone (B) Chlorine



(C) FeCl_3 (D) Na_2SO_3

Q10 The oxidation number of arsenic atom in H_3AsO_4 is:

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

Q11 Oxidation number of C in HNC is:

- (A) +2 (B) -3
(C) +3 (D) Zero

Q12 Oxidation states of carbon atoms in diamond and graphite are:

- (A) +2, +4 (B) +4, +2
(C) -4, 4 (D) Zero, zero

Q13 Phosphorus has the oxidation state of +1 in:

- (A) Orthophosphoric acid
(B) Phosphorous acid
(C) Hypophosphorous acid
(D) Metaphosphoric acid

Q14 Match the Column I with Column II:

Column - I	Column - II
(A) $(\text{NH}_4)_2\text{Cr}_2\text{O}_7 \rightarrow \text{N}_2 + \text{Cr}_2\text{O}_3 + 4\text{H}_2\text{O}$	(P) Intermolecular redox reaction
(B) $\text{PbO}_2 + \text{H}_2\text{O} \rightarrow \text{PbO} + \text{H}_2\text{O}_2$	(Q) Disproportionation
(C) $\text{Cl}_2 + 2\text{OH}^- \rightarrow \text{ClO}^- + \text{Cl}^- + \text{H}_2\text{O}$	(R) Intramolecular redox reaction

- (A) A-R, B-Q, C-P
(B) A-Q, B-R, C-P
(C) A-P, B-R, C-Q
(D) A-R, B-P, C-Q

Q15 Oxidation number of P in PO_4^{3-} , of S in SO_4^{2-} and that of Cr in $\text{Cr}_2\text{O}_7^{2-}$ in respectively:

- (A) -3, +6 and +6 (B) +5, +6 and +6
(C) +3, +6 and +5 (D) +5, +3 and +6

Q16 Match the Column I with Column II:

Column - I (Compound)	Column - II (Oxidation state of)

(A) SO_2	(P) Sulphur is +4
(B) $\text{Na}_2\text{S}_2\text{O}_4$	(Q) Sulphur is +5
(C) $\text{H}_2\text{S}_2\text{O}_6$	(R) Sulphur is +6
(D) $\text{H}_2\text{S}_2\text{O}_7$	(S) Sulphur is +3

(A) A-R, B-S, C-Q, D-P

(B) A-S, B-R, C-P, D-Q

(C) A-P, B-S, C-Q, D-R

(D) A-R, B-S, C-P, D-Q

Q17 Match the column I with column II:

Column - I (Redox Process)	Column - II (Equivalent weight for underlined species)
(A) $\text{As}_2\text{S}_3 \rightarrow \text{AsO}_3^- + \text{SO}_4^{2-}$	(P) $\frac{M}{28}$
(B) $\text{I}_2 \rightarrow \text{I}^- + \text{IO}_3^-$	(Q) $\frac{3M}{4}$
(C) $\text{H}_3\text{PO}_2 \rightarrow \text{PH}_3 + 2\text{H}_3\text{PO}_3$	(R) M
(D) $\text{H}_3\text{PO}_2 + \text{NaOH} \rightarrow \text{NaH}_2\text{PO}_2 + \text{H}_2\text{O}$	(S) $\frac{3M}{5}$

(A) A-P, B-S, C-Q, D-R

(B) A-R, B-S, C-P, D-Q

(C) A-S, B-R, C-Q, D-P

(D) A-S, B-R, C-P, D-Q

Q18 Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R:

Assertion (A) : PbCl_2 is more stable than PbCl_4 .

Reason (R): PbCl_4 is a powerful oxidising agent.

In the light of the above statements, choose the **correct** answer from the options given below:

- (A) A is true but R is false.
(B) A is false but R is true.



- (C) Both A and R are true and R is the correct explanation of A.
 (D) Both A and R are true but R is NOT the correct explanation of A.

Q19 In which of the following reactions no change in valency occurs?

- (A) $SO_2 + 2H_2S \rightarrow 3S + 2H_2O$
 (B) $2Na + O_2 \rightarrow Na_2O_2$
 (C) $Cl_2 + 2NaOH \rightarrow NaClO + NaCl + H_2O$
 (D) $AgNO_3 + KCl \rightarrow AgCl + KNO_3$

Q20 The brown ring complex compound is formulated as $[Fe(H_2O)_5(NO)]SO_4$. The oxidation state of iron is:

- (A) +1 (B) +2
 (C) +3 (D) Zero

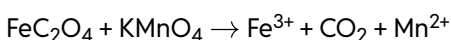
Q21 10 ml of 1 N-HCl, 20 mL of N/2 H_2SO_4 and 30 mL of N/3 HNO_3 are mixed together and volume made to one litre. The normality of H^+ in the resulting solution is:

- (A) 3N/100 (B) N/10
 (C) N/20 (D) N/40

Q22 In which of the following compounds, iron has an oxidation state of +3?

- (A) $Fe(NO_3)_2$
 (B) FeC_2O_4
 (C) $[Fe(H_2O)_6]Cl_3$
 (D) $(NH_4)_2SO_4 \cdot FeSO_4 \cdot 6H_2O$

Q23 Which species are oxidized and reduced in the reaction?



- (A) Oxidised : Fe, C; Reduced : Mn
 (B) Oxidised : Fe; Redued : Mn
 (C) Reduced : Fe, Mn; Oxidised : C
 (D) Reduced : C; Oxidised : Mn, Fe

Q24 Match the Column I with Column II:

Column – I (Compound)		Column – II (Oxidation state of nitrogen)	
(A)	Mg_3N_2	(P)	-1

(B)	NO	(Q)	+2
(C)	N_2	(R)	0
(D)	NH_2OH	(S)	-3

(A) A-R, B-S, C-P, D-Q

(B) A-S, B-Q, C-R, D-P

(C) A-S, B-R, C-P, D-Q

(D) A-R, B-S, C-Q, D-P

Q25 Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R:

Assertion: H_2SO_4 can not act as reducing agent.

Reason: Sulphur can not increase its oxidation number beyond +6.

In the light of the above statements, choose the **correct** answer from the options given below:

- (A) A is true but R is false.
 (B) A is false but R is true.
 (C) Both A and R are true and R is the correct explanation of A.
 (D) Both A and R are true but R is NOT the correct explanation of A.

Q26 In which of the following reactions the underlined substance is oxidised?

- (A) $3Mg + \underline{N}_2 \rightarrow Mg_3N_2$
 (B) $2KI + \underline{Br}_2 \rightarrow 2KBr + I_2$
 (C) $\underline{CuO} + H_2 \rightarrow Cu + H_2O$
 (D) $\underline{CO} + Cl_2 \rightarrow COCl_2$

Q27 What will be the normality of a solution obtained by mixing 0.45 N and 0.60 N NaOH in the ratio 2 : 1 by volume?

- (A) 0.4 N (B) 0.5 N
 (C) 1.05 N (D) 0.15 N

Q28 When P reacts with caustic soda, the products are PH_3 and NaH_2PO_2 . The reaction is an example of:

- (A) oxidation
 (B) reduction
 (C) both oxidation and reduction
 (D) neutralisation



Q29 0.1 mole of H_3PO_x is completely neutralised by 5.6 g KOH then the true statement is:
 (A) $x = 3$ and given acid is dibasic
 (B) $x = 4$ and given acid has no P-H linkage
 (C) $x = 2$ and given acid does not form acid salt
 (D) All of the above

Q30 Magnesium reacts with acids producing hydrogen and corresponding magnesium salts. In such reactions Mg undergoes:
 (A) reduction
 (B) oxidation
 (C) neither oxidation nor reduction
 (D) simple dissolution

Q31 Following reaction describes the rusting of iron
 $4\text{Fe} + 3\text{O}_2 \rightarrow 4\text{Fe}^{3+} + 6\text{O}^{2-}$
 Which one of the following statement is incorrect?
 (A) This is an example of a redox reaction
 (B) Metallic iron is reduced to Fe^{3+}
 (C) Fe^{3+} is an oxidizing agent
 (D) Metallic iron is a reducing agent

Q32 The oxidation number of Fe in $\text{K}_4[\text{Fe}(\text{CN})_6]$ is :
 (A) +6 (B) +4
 (C) +3 (D) +2

Q33 When SO_2 is passed into an acidified potassium dichromate solution, the oxidation numbers of sulphur and chromium in the final products respectively are:
 (A) +6, +6 (B) +6, +3
 (C) 0, +3 (D) +2, +3

Q34 Phosphorus has the oxidation state of +3 in:
 (A) ortho phosphoric acid
 (B) phosphorus acid
 (C) meta phosphoric acid
 (D) pyrophosphoric acid

Q35 Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R:
Assertion (A) : Fluorine acts as a stronger reducing agent than oxygen.
Reason (R) : Fluorine is more electronegative than oxygen.

In the light of the above statements, choose the **correct** answer from the options given below:
 (A) A is true but R is false.
 (B) A is false but R is true.
 (C) Both A and R are true and R is the correct explanation of A.
 (D) Both A and R are true but R is NOT the correct explanation of A.

Q36 In which one of the following changes, there is transfer of five electrons?
 (A) $\text{MnO}_4^- \rightarrow \text{Mn}^{2+}$
 (B) $\text{CrO}_4^{2-} \rightarrow \text{Cr}^{3+}$
 (C) $\text{MnO}_4^- \rightarrow \text{MnO}_2$
 (D) $\text{Cr}_2\text{O}_7^{2-} \rightarrow 2\text{Cr}^{3+}$

Q37 Match the Column I with Column II:

Column – I (Compound)		Column – II (Oxidation state of central atom)	
(A)	CrO_5	(P)	+6
(B)	H_2SO_3	(Q)	+4
(C)	CaCl_2	(R)	+2
(D)	$(\text{CH}_3)_2\text{SO}$	(S)	0

(A) A-P, B-Q, C-R, D-S
 (B) A-S, B-R, C-P, D-Q
 (C) A-S, B-R, C-Q, D-P
 (D) A-P, B-Q, C-S, D-R

Q38 The oxidation state(s) of Cl in CaOCl_2 (bleaching powder) is/are:
 (A) +1 only
 (B) -1 only
 (C) +1 and -1 only
 (D) None of these

Q39 Which of the following is **not** a redox change?
 (A) $2\text{H}_2\text{S} + \text{SO}_2 \rightarrow 2\text{H}_2\text{O} + 3\text{S}$
 (B) $2\text{BaO} + \text{O}_2 \rightarrow 2\text{BaO}_2$
 (C) $\text{BaO}_2 + \text{H}_2\text{SO}_4 \rightarrow \text{BaSO}_4 + \text{H}_2\text{O}_2$
 (D) $2\text{KClO}_3 \rightarrow 2\text{KCl} + 3\text{O}_2$



Q40 Which of the following is not a redox reaction?

- (A) Burning of candle
- (B) Rusting of iron
- (C) Dissolving a salt in water
- (D) Dissolving Zn in dil. H_2SO_4

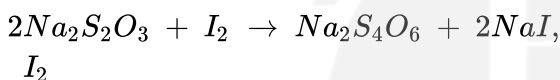
Q41 In which of the following the oxidation number of oxygen has been arranged in increasing order:

- (A) $OF_2 < BaO_2 < KO_2 < O_3$
- (B) $BaO_2 < KO_2 < O_3 < OF_2$
- (C) $BaO_2 < O_3 < OF_2 < KO_2$
- (D) $KO_2 < OF_2 < O_3 < BaO_2$

Q42 The oxidation number of oxygen in KO_3 , Na_2O_2 is:

- (A) 3, 2
- (B) 1, 0
- (C) 0, 1
- (D) -0.33, -1

Q43 In the reaction,



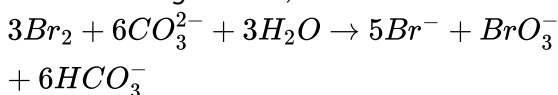
I_2 acts as:

- (A) reducing agent
- (B) oxidising agent
- (C) oxidising agent as well as reducing agent
- (D) none of the above

Q44 When tin(IV) chloride is treated with excess of conc. hydrochloric acid, the complex ion $[SnCl_6]^{2-}$ is formed. The oxidation state of tin in this complex ion is:

- (A) +4
- (B) zero
- (C) -2
- (D) -4

Q45 In the following reaction,



- (A) bromine is oxidised, carbonate is reduced
- (B) bromine is reduced, carbonate is oxidised
- (C) bromine is neither reduced nor oxidised
- (D) bromine is reduced as well as oxidised



Answer Key

Q1 (A)
Q2 (C)
Q3 (A)
Q4 (A)
Q5 (A)
Q6 (C)
Q7 (C)
Q8 (A)
Q9 (D)
Q10 (D)
Q11 (A)
Q12 (D)
Q13 (C)
Q14 (D)
Q15 (B)
Q16 (C)
Q17 (A)
Q18 (D)
Q19 (D)
Q20 (A)
Q21 (A)
Q22 (C)
Q23 (A)

Q24 (B)
Q25 (C)
Q26 (D)
Q27 (B)
Q28 (C)
Q29 (C)
Q30 (B)
Q31 (B)
Q32 (D)
Q33 (B)
Q34 (B)
Q35 (B)
Q36 (A)
Q37 (A)
Q38 (C)
Q39 (C)
Q40 (C)
Q41 (B)
Q42 (D)
Q43 (B)
Q44 (A)
Q45 (D)



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