Yakeen NEET 2.0 2026

Physical Chemistry

Electrochemistry

DPP: 1

Amit Mahajan Sir

Q1 The standard reduction potential values of three metallic cations X, Y and Z are $0.52, -3.03$ and $-1.18\ V$ respectively. The order of reducing power of the corresponding metal is

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

Q2 To a mixture containing pieces of Zn, Cu and silver, $1M H_2SO_4$ was added. H_2 gas was found to be evolved. Which of the metal/metals do you think has/have reacted?

$$E^{o}_{Zn^{+2}/Zn} = -0.76\ V \quad E^{o}_{Cu^{+2}/Cu} = 0.34\ V$$
$$E^{o}_{Ag^{+2}/Ag} = 0.80\ V$$

(A) All the metals
(B) Only Zn
(C) Both Zn and Cu
(D) Only Ag

Q3 The standard reduction potentials at $298\ K$ for the following half reactions are given

$$Zn^{+2} + 2e^- \rightleftharpoons Zn \quad -0.762\ V$$
$$Cr^{+3} + 3e^- \rightleftharpoons Cr \quad -0.740\ V$$
$$2H^+ + 2e^- \rightleftharpoons H_2 \quad 0.00\ V$$
$$Fe^{+3} + e^- \rightleftharpoons Fe^{+2} \quad 0.770\ V$$

Which is the strongest reducing agent?

(A) Zn
(B) Cr
(C) H_2
(D) Fe^{+2}

Q4 When Zn dust is added to a solution of $MgCl_2$

(A) No reaction will take place
(B) $ZnCl_2$ is formed
(C) Zinc dissolved in the solution
(D) Magnesium is precipitated

Q5 The standard reduction potential of A, B and C are $0.34\ V, 0.80\ V$ and $0.79\ V$ respectively. The decreasing order of deposition of metals on electrodes are

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

Q6 Using the data given, find strongest oxidizing agent.

$$E^0_{Cl_2\ /\ Cl^-} = 1.36\ V$$
$$E^0_{Cr^{+6}\ /\ Cr^{+3}} = 1.33\ V$$
$$E^0_{MnO_4^-\ /\ Mn^{+2}} = 1.51\ V$$
$$E^0_{Cr^{+3}\ /\ Cr} = -0.74\ V$$

(A) Cl^-
(B) Cr
(C) Cr^{+3}
(D) MnO_4^-

Q7

A metal having negative reduction potential when dipped in the solution its own ions, has a tendency

(A) to pass into the solution

(B) to be deposited from the solution

(C) to become electrically positive

(D) to remain neutral

Q8 Zn cannot displace the following ion from its aqueous solution:

(A) Ag^{+}

(B) Cu^{+2}

(C) Fe^{+2}

(D) Na^{+}

Q9 Which of the following displacement does not occur?

(A) $\mathrm{Zn} + 2\mathrm{H}^{+} \rightarrow \mathrm{Zn}^{+2} + \mathrm{H}_2$

(B) $\mathrm{Fe} + 2\mathrm{Ag}^{+} \rightarrow \mathrm{Fe}^{+2} + 2\mathrm{Ag}$

(C) $\mathrm{Cu} + \mathrm{Fe}^{+2} \rightarrow \mathrm{Fe} + \mathrm{Cu}^{+2}$

(D) $\mathrm{Zn} + \mathrm{Pb}^{+2} \rightarrow \mathrm{Zn}^{+2} + \mathrm{Pb}$

Q10 The Kohlrausch's law is related to

(A) Conductance of ions at infinite dilution.

(B) Independent migration of ions.

(C) Both (A) & (B)

(D) Neither (A) & (B)

Answer Key

Q1	(A)	Q6	(D)
Q2	(B)	Q7	(A)
Q3	(A)	Q8	(D)
Q4	(A)	Q9	(C)
Q5	(B)	Q10	(C)