Yakeen NEET 2.0 2026

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Electrochemistry

DPP: 2

Q1 When equilibrium is reached, the potential difference between the two electrodes is

(A) < 1 (B) > 1

(C) 0 (D) None

Q2 In the construction of a salt bridge, saturated solution of $\mathrm{KNO_3}$ is used because:

(A) Velocity of K^+ & NO_3^- are same.

(B) Velocity of $\mathrm{NO_3^-}$ is greater than that of $\mathrm{K^+}$.

(C) Velocity of $\mathrm{K^+}$ is greater than that of $\mathrm{NO_3^-}$.

(D) $\mathrm{KNO_3}$ is highly soluble in water.

Q3 In an electrochemical cell, the electrode having a higher reduction potential will act as:

(A) Salt (B) Electrolyte

(C) Anode (D) Cathode

Q4 A cell is prepared by dipping a copper rod in $1\mathrm{M}$ $\mathrm{CuSO_4}$ solution and an iron rod in $2\mathrm{M}\mathrm{FeSO_4}$ solution. What are the cathode & anode respectively?

(A) Cathode $\rightarrow$ Iron ; Anode $\rightarrow$ Copper

(B) Cathode $\rightarrow$ Copper ; Anode $\rightarrow$ Iron

(C) Cathode $\rightarrow$ Iron; Anode $\rightarrow$ Iron

(D) Cathode $\rightarrow$ Copper; Anode $\rightarrow$ Copper

Q5 Daniell cell is represented as

(A) $\mathrm{Zn} \mid \mathrm{Zn^{+2}}$ (aq) $\|\mathrm{Cu^{+2}(aq)} \mid \mathrm{Cu}$

(B) $\mathrm{Cu}\left|\mathrm{Cu^{+2}(aq)}\right\|\mathrm{Zn^{+2}(aq)}\left|\mathrm{Zn}\right.$

(C) $\mathrm{Zn} \mid \mathrm{Zn^{+2}}$ (aq) $\|\mathrm{Zn^{+2}}$ (aq) $|\mathrm{Zn}$

(D) $\mathrm{Cu} \mid \mathrm{Cu^{+2}(aq)}\|\mathrm{Cu^{+2}}$ (aq) $|\mathrm{Cu}$

Q6 The equilibrium constant for a cell reaction: $\mathrm{Cu(g) + 2Ag^+(aq) \rightarrow Cu^{+2}(aq) + 2Ag(s)}$ is 4×10^{16}. Find $\mathrm{E^o_{cell}}$ for the cell reaction.

(A) $0.63\ \mathrm{V}$

(B) $0.49\ \mathrm{V}$

(C) $1.23\ \mathrm{V}$

(D) $3.24\ \mathrm{V}$

Q7 The standard electrode potential of zinc ions is $0.76\ \mathrm{V}$. What will be the potential of a $2\mathrm{M}$ solution at $300\ \mathrm{K}$?

(A) $0.83\ \mathrm{V}$

(B) $0.76\ \mathrm{V}$

(C) $0.23\ \mathrm{V}$

(D) $0.98\ \mathrm{V}$

Q8 $\Delta \mathrm{G^\circ}$ for the reaction $\mathrm{Cu^{+2} + Fe \rightarrow Fe^{+2} + Cu}$ is $\left[\mathrm{E^o_{Cu^{+2}/Cu}} = 0.34\ \mathrm{V}, \mathrm{E^o_{Fe^{+2}/Fe}} = 0.44\ \mathrm{V}\right]$

(A) $19.3\ \mathrm{kJ}$

(B) $180.8\ \mathrm{kJ}$

(C) $150.5\ \mathrm{kJ}$

(D) $28.5\ \mathrm{kJ}$

Q9 Equilibrium constant for the reaction at equilibrium will be:

$\mathrm{Cu^{+2} + Fe \rightleftharpoons Fe^{+2} + Cu}$

$\mathrm{E^o_{Cu^{+2}\ /\ Cu}} = 0.54\ \mathrm{V} \quad \mathrm{E^o_{Fe^{+2}\ /\ Fe}} = 0.44\ \mathrm{V}$

(A) 3442 (B) 1450

(C) 3926 (D) 2422

Q10 The potential of single electrode depends upon

(A) The nature of the electrode

(B) Temperature

(C) Concentration of the ion with respect to which it is reversible

(D) All of the above

Q11 The relationship between standard reduction potential of a cell and equilibrium constant is

shown by

(A) $\mathrm{E^o_{cell}} = \frac{\mathrm{n}}{0.059}\log \mathrm{K_C}$

(B) $\mathrm{E^o_{cell}} = \frac{0.059}{\mathrm{n}}\log \mathrm{K_C}$

(C) $\mathrm{E^o_{cell}} = 0.059\mathrm{n}\log \mathrm{K_C}$

(D) $\mathrm{E^o_{cell}} = \frac{\log \mathrm{K_C}}{\mathrm{n}}$

Q12 If $\mathrm{E^0_{cell}}$ for a given reaction has a positive value, then which of the following is correct?

(A) $\Delta \mathrm{G}^0 > 0,\ \mathrm{K_C} < 1$

(B) $\Delta \mathrm{G}^0 > 0,\ \mathrm{K_C} > 1$

(C) $\Delta \mathrm{G}^0 < 0,\ \mathrm{K_C} > 1$

(D) $\Delta \mathrm{G}^0 < 0,\ \mathrm{K_C} < 1$

Q13 The equilibrium constant of the reaction if

$$\mathrm{E^o_{cell}} = 0.4\ \mathrm{V}$$
$$\mathrm{Fe(s) + 2Ag^+(aq) \rightarrow Fe^{+2}(aq) + 2Ag(s)}$$

at $298\ \mathrm{K}$ is

(A) 2.5×10^{12}

(B) 3.5×10^{13}

(C) 1.5×10^{12}

(D) 4.5×10^{15}

Q14 Find equilibrium constant when the reaction reaches equilibrium

$$\mathrm{I_2 + 2e^- \rightarrow 2I^-}\ \left(\mathrm{E^0} = 0.59\ \mathrm{V}\right)$$

(A) 10^{20} (B) 10^{25}

(C) 10^{30} (D) 10^{15}

Answer Key

Q1	(C)
Q2	(A)
Q3	(D)
Q4	(B)
Q5	(A)
Q6	(B)
Q7	(B)
Q8	(A)
Q9	(D)
Q10	(D)
Q11	(B)
Q12	(C)
Q13	(B)
Q14	(A)