

Worksheet: Electrochemistry

ISC · Class 12 · Chemistry · 5 questions · 13 marks

Name: _____

Date: _____

Score: _____ / 13

Q1. Calculate E_{cell} for $\text{Zn}|\text{Zn}^{2+}||\text{Ag}^{+}|\text{Ag}$ ($E(\text{Zn}^{2+}/\text{Zn}) = -0.76 \text{ V}$, $E(\text{Ag}^{+}/\text{Ag}) = +0.80 \text{ V}$). [2 marks]

Q2. Find Λ° for CH_3COOH given $\lambda^{\circ}(\text{H}^{+}) = 349.8$ and $\lambda^{\circ}(\text{CH}_3\text{COO}^{-}) = 40.9 \text{ S cm}^2/\text{mol}$. [2 marks]

Q3. For $2\text{Al} + 3\text{Cu}^{2+} \rightarrow 2\text{Al}^{3+} + 3\text{Cu}$, $E^{\circ} = 2.0 \text{ V}$. Calculate ΔG° . [3 marks]

Q4. Find the reduction potential of a Cu electrode in 0.001 M CuSO_4 at 25 C ($E^{\circ} = +0.34 \text{ V}$). [3 marks]

Q5. A 0.05 M KCl solution has conductivity 0.007 S/m at 25 C. Find the molar conductivity. [3 marks]
