

ST. ANDREWS SCOTS SR. SEC. SCHOOL
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(Session - 2026-2027)

Class XII – Chemistry
Chapter: Electrochemistry – Assignment (25
Questions)

1. Define electrochemistry and electrochemical cell.
2. Differentiate between galvanic cell and electrolytic cell.
3. Define electrode potential and standard electrode potential.
4. What is salt bridge? Write its functions.
5. Define emf of a cell and write its unit.
6. Write the Nernst equation for electrode potential.
7. Define standard hydrogen electrode and its significance.
8. Differentiate between oxidation and reduction with examples.
9. What is electrolysis? State Faraday's first law of electrolysis.
10. State Faraday's second law of electrolysis.
11. Define molar conductivity and specific conductivity.
12. Differentiate between strong and weak electrolytes.
13. Explain variation of conductivity with dilution.
14. Define Kohlrausch's law and write its applications.
15. Explain electrochemical series and its importance.
16. Predict feasibility of reaction using electrode potentials.
17. What is corrosion? Explain rusting of iron.
18. Explain prevention of corrosion.
19. Calculate emf of Daniell cell given $E^\circ_{\text{Zn}^{2+}/\text{Zn}} = -0.76 \text{ V}$ and $E^\circ_{\text{Cu}^{2+}/\text{Cu}} = +0.34 \text{ V}$.
20. Calculate emf of cell at 298 K if concentration of Zn^{2+} is 0.01 M and Cu^{2+} is 1 M.
21. Calculate molar conductivity if resistance is 100 Ω , cell constant 1 cm^{-1} and concentration 0.1 M.
22. Calculate quantity of electricity required to deposit 1 mole of Ag.
23. How much copper is deposited by passing 2 F of electricity?
24. Calculate time required to deposit 0.5 g silver by 2 A current.

25. Calculate emf of cell using Nernst equation at 298 K when reaction quotient $Q = 10$.