

8. The values of Λ_m^0 for KCl and KNO_3 are 149.86 and 154.96 $\Omega^{-1}\text{cm}^2\text{mol}^{-1}$. Also $\Lambda_{\text{Cl}^-}^0$ is 71.44 $\Omega^{-1}\text{cm}^2\text{mol}^{-1}$. The value of $\Lambda_{\text{NO}_3}^0$ is
- 76.54 $\Omega^{-1}\text{cm}^2\text{mol}^{-1}$
 - 133.08 $\Omega^{-1}\text{cm}^2\text{mol}^{-1}$
 - 37.7 $\Omega^{-1}\text{cm}^2\text{mol}^{-1}$
 - Unpredictable
9. The change required for the reduction of 0.4 mol of $\text{K}_2\text{Cr}_2\text{O}_7$ to Cr^{+3} ions
- 0.6 x 96500 C
 - 2.4 x 96500 C
 - 6 x 96500 C
 - 12.4 x 96500 C
10. A cell is constituted as follows
 $\text{Pt, H}_2(1 \text{ atm}) | \text{HA}_1 || \text{HA}_2 | \text{H}_2(1 \text{ atm}), \text{Pt}$
 The pH of two acids solutions HA_1 and HA_2 are 3 and 5 respectively. The emf of the cell is
- 0.059 V
 - 0.118 V
 - 0.0295 V
 - 0.118 V
11. Which of the following is a cathodic reaction?
- $\text{Fe}^{+2} \rightarrow \text{Fe}^{+3}$
 - $4\text{OH}^- \rightarrow 2\text{H}_2\text{O} + \text{O}_2$
 - $2\text{H}_2\text{O} \rightarrow 2\text{OH}^- + \text{H}_2$
 - $2\text{SO}_4^{2-} \rightarrow \text{S}_2\text{O}_8^{2-}$
12. If salt – bridge is removed, from two half – cells, the voltage
- Drops to zero
 - Does not change
 - Increases gradually
 - Increases rapidly
13. E_{red}^0 of 4 elements A, B, C, D are -1.36, -0.32, 0, -1.26 V respectively. The decreasing reactivity order of these elements :
- A, D, B & C
 - C, B, D & A
 - B, D, C & A
 - C, A, D & B
14. The unit of specific conductivity is
- Ohm cm^{-1}
 - ohm cm^{-1}
 - $\text{ohm}^{-1} \text{cm}$
 - $\text{ohm}^{-1} \text{cm}^{-1}$
15. A smuggler could not carry gold by depositing iron on the gold surface since:
- Gold is denser
 - Iron rusts
 - gold has higher red. Potential
 - gold has lower reduction potential than iron.
16. The compound that can work both as oxidizing as well as reducing agent is
- KMO_4
 - H_2SO_4
 - BaO_2
 - H_2O_2
17. When during electrolysis of a solution of AgNO_3 , 9650 C of charge passes through the electroplate, the mass of silver deposited is
- 1.08 g
 - 10.8 g
 - 21.6 g
 - 108 g
18. The highest electrical conductivity of the following aqueous solutions is of:
- 0.1 M acetic acid
 - 0.1 M chloroacetic acid
 - 0.1 M fluoroacetic acid
 - 0.1 M difluoroacetic acid.
19. The cell $\text{Zn} | \text{Zn}^{+2} (1\text{M}) || \text{Cu}^{+2} (1\text{M}) | \text{Cu}$, $E_{\text{cell}}^0 = 1.10\text{V}$ was allowed to completely discharge at 298 K, the $\frac{[\text{Zn}^{+2}]}{[\text{Cu}^{+2}]}$ is
- 9.65×10^4
 - antilog(37.3)
 - 10.73
 - $10^{37.3}$
20. Electrolyte KCl KNO_3 HCl NaOAc NaCl
 Λ_m^0 149.9 145.0 426.2 91.0 126.5
 calculate Λ_m^0 of acetic acid from the above data:
- 517.2
 - 290.7
 - 390.7
 - 217.5