Q1: 16 March (Shift 2) - Numerical

A 5.0 m moldm^{-3} aqueous solution of KCl has a conductance of 0.55mS when measured in a cell constant 1.3 cm^{-1}. The molar conductivity of this solution is ___ mSm^2 mol^{-1}.
(Round off to the Nearest Integer)

Q2: 17 March (Shift 2) - Numerical

A KC solution of conductivity 0.14 S m^{-1} shows a resistance of 4.19Ω in a conductivity cell. If the same cell is filled with an HCl solution, the resistance drops to 1.03Ω. The conductivity of the HC1 solution is ____ $\times 10^{-2}$ S m^{-1}. (Round off to the Nearest Integer).

Q3: 18 March (Shift 1) - Numerical

For the reaction

$2Fe^{3+}(aq) + 2I^{-}(aq) \rightarrow 2Fe^{2+}(aq) + I_2(s)$

the magnitude of the standard molar free energy change, $\Delta_r G^{\circ}_m = -$_____kJ (Round off to the Nearest Integer).

Q4: 18 March (Shift 2) - Numerical

The molar conductivities at infinite dilution of barium chloride, sulphuric arid and hydrochloric acid are 280,860 and 426Scm^2 mol^{-1} respectively. The molar conductivity at infinite dilution of barium sulphate is_____ Scm^2 mol^{-1}(Round off to the Nearest Integer).

Answer Key

Q1 (14.3) **Q2** (57) **Q3** (45) **Q4** (288)