Sample Questions for Section on Numerical Value-Chemistry

Q.1: The hardness of a water sample (in terms of equivalents of $CaCO_3$) containing 10^{-3}M $CaSO_4$ is : (molar mass of $CaSO_4$ = 136g/mol).

Answer : **100 ppm**

Q.2: 50mL of 0.5M Oxalic Acid is needed to neutralize 25mL of sodium hydroxide solution. The amount of NaOH in 50mL of the given sodium hydroxide solution is _____.
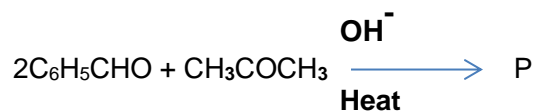
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Answer : **2g**

Q.3: The standard electrode potential E^0 and its temperature coefficient $(dE^0/dT)_p$ for a cell are 2V and -5×10^{-4} VK^{-1} at 300K respectively. The cell reaction is $Zn(s) + Cu^{2+}(aq) \rightarrow Zn^{2+}(aq) + Cu(s)$. The standard reaction enthalpy (Δ_rH^0) at 300K is _____ kJ/mol (F= 96485 C mol^{-1})

Answer : **-414.9**

Q.4: In the following reaction sequence, the mass percentage of carbon in the major product P is_____.

$$2C_6H_5CHO + CH_3COCH_3 \xrightarrow[\text{Heat}]{OH^-} P$$

Answer : **87.18%**

Q.5: The number of monochlorinated product obtained on chlorination of 2 methylbutane is_____.

Answer : **4**