

5 x 6 = 30

- State & explain the Ostwald's dilution law. Why the law is not applicable in cases of strong electrolytes? What is meant by the leveling effect of solvent? Calculate the amount of oxalic acid is required to prepare ~~250~~ 250 ml of 0.1 (N) oxalic acid? 1+2+2=5
- Plot conductometric titration curve for titration oxalic acid vs NaOH & explain it. What is saponification of an ester? 3+2=5
- Calculate equivalent weight of $K_2Cr_2O_7$ & $Na_2S_2O_3$. Why equivalent conductance decreases with an increasing concentration? 3+2=5
- Show that Ionisation constant $K_a = \frac{c\Lambda^2}{\Lambda^0(10-\Lambda)}$. What is the basic difference between solubility & solubility product? 3+2=5
- How will you determine of K_{sp} for AgCl by potentiometric titration of $AgNO_3$ against standard KCl solution. 5
- Explain, giving the following
 - Enthalpy of neutralization of a strong monobasic acid by a strong base is always equal to -57.32 kJ
 - Differential enthalpy of a solution is identical with the integral enthalpy of solution for every dilute solution & decreases with increasing concentration & finally becomes zero for saturated solution. 2.5+2.5=5