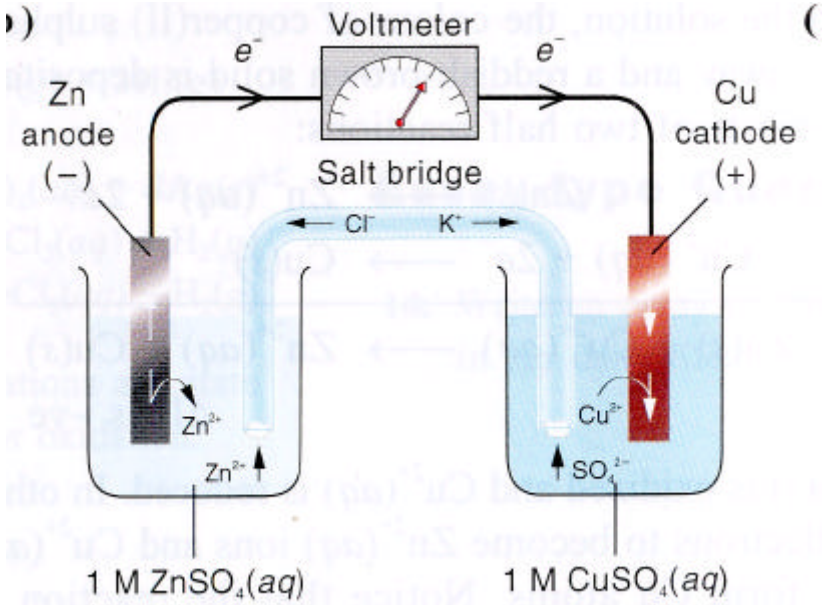
AL Chemistry
Redox Equilibrium (Part 2)
Exercise 1

Name : _____ ( ) Class : _____
Date : _____

Predicting Cell e.m.f



Calculate the standard e.m.f. of the cell

$$E^{o}_{cell} = E^{o}_{cathode} - E^{o}_{anode}$$

$Cu^{2+}(aq) + 2e^{-} == Cu(s)$ $E^{o} = +0.34V$ *(cathode)*

--) $Zn^{2+}(aq) + 2e^{-} == Zn(s)$ $E^{o} = -0.76V$ *(anode)*

$E^{o}_{cell} =$

Think about it

$Ag^+(aq) + e^- == Ag(s)$ ……..(1) $E^o_{red} = +0.8V$

2x(1) $2Ag^+(aq) + 2e^- == 2Ag(s)$ …(2) E^o_{red}=

Calculate the e.m.f. of the cell

$Ag^+(aq) + e^- == Ag(s)$ $E^o = +0.8V$ *(cathode)*

--) $Cu^{2+}(aq) + 2e^- == Cu(s)$ $E^o = +0.34V$ *(anode)*

E^o_{cell} =

Draw the cell diagram of the above cell.

Predict the feasibility of redox Rx

Consider the following Rx

$$A + B == C + D$$

If $E^o > 0$

$E^o = 0$

$E^o < 0$

Question

Will a reaction take place if a bar of Ag(s) is placed into 1M of $Fe_2SO_4(aq)$