REXOX HW #1 name: _____

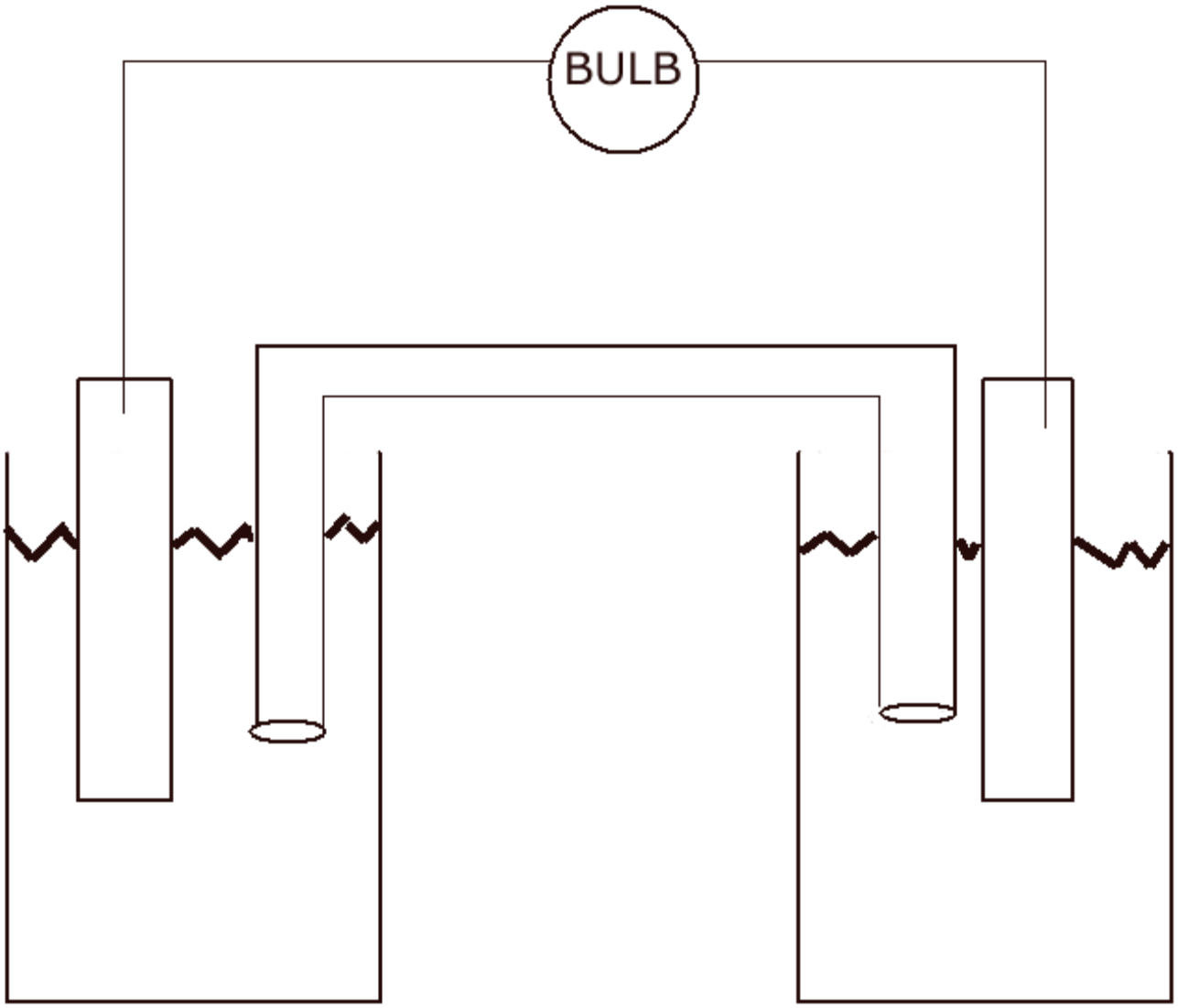
Below is the standard Redox Voltaic Cell set up. On the left put magnesium into magnesium chloride solution. On the right put nickel metal into nickel II sulfate solution. Into the salt bridge use $NaCl_{(AQ)}$
Show the direction of electron flow (electricity). Label the anode and cathode. Show the charge formed in each solution, offset by the salt ions. Show the movement of ions between the metals and the solutions.

Write the ½ Oxidation reaction: _____

Write the ½ Reduction reaction: _____

Write the NET IONIC EQUATION: _____

Give three CHEMICAL reasons that this voltaic cell would stop:



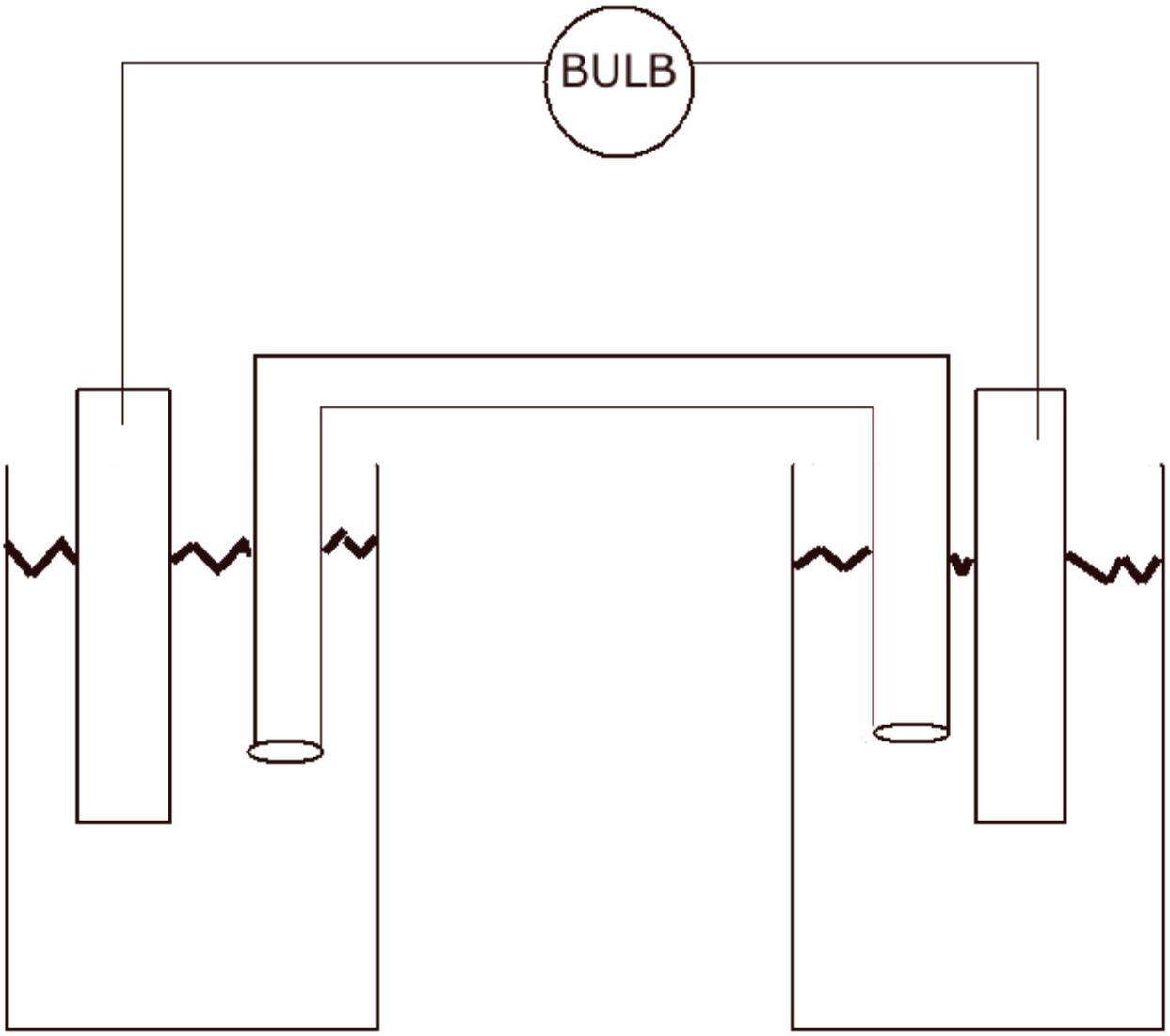
In this voltaic cell set up put lead into lead II nitrate solution. On the right put copper metal into copper II sulfate solution. Into the salt bridge use $KCl_{(AQ)}$
Show the direction of electron flow (electricity). Label the anode and cathode. Show the charge formed in each solution, offset by the salt ions. Show the movement of ions between the metals and the solutions.

Write the ½ Oxidation reaction: _____

Write the ½ Reduction reaction: _____

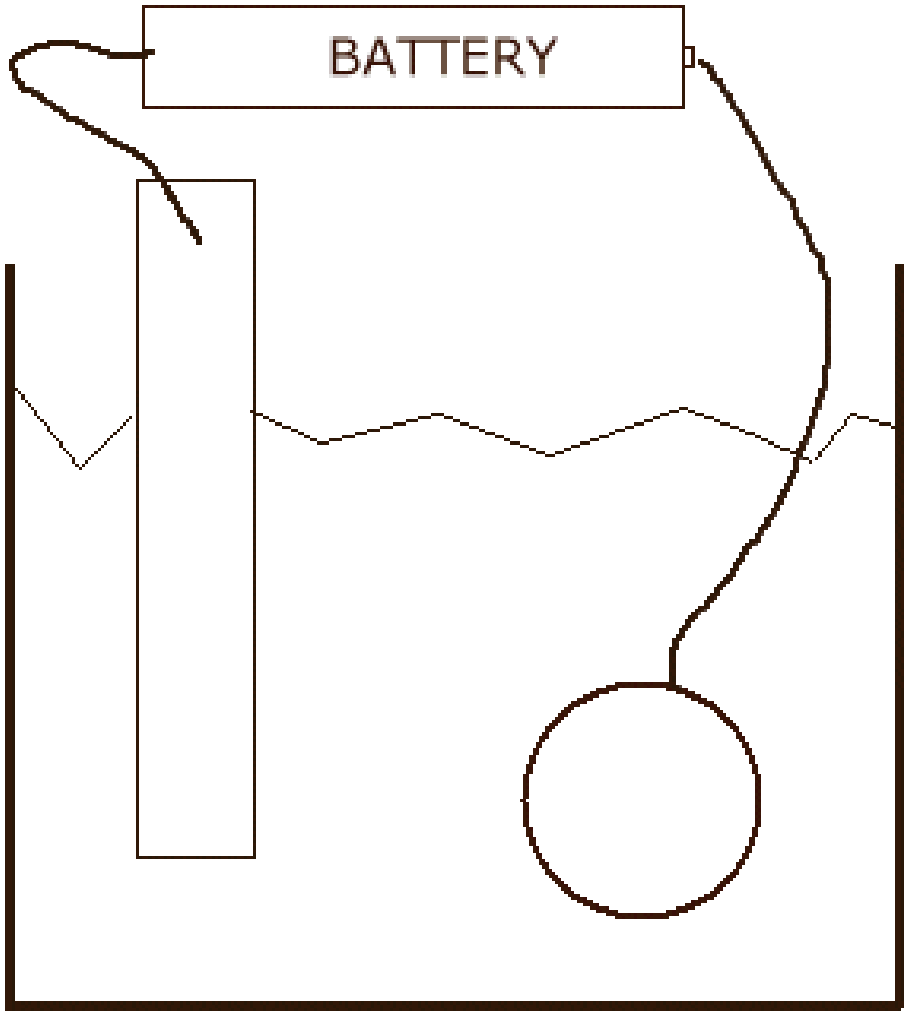
Write the NET IONIC EQUATION: _____

DEFINE REDCAT: _____



REXOX HW #2 name: _____

Directions: draw an electrolytic cell that will plate gold onto a copper ring. Label… the electron flow, oxidation and the reduction arrows in the beaker, label the anode and cathode. At the bottom, write the half reactions and net ionic equation, answer the one important question fully.



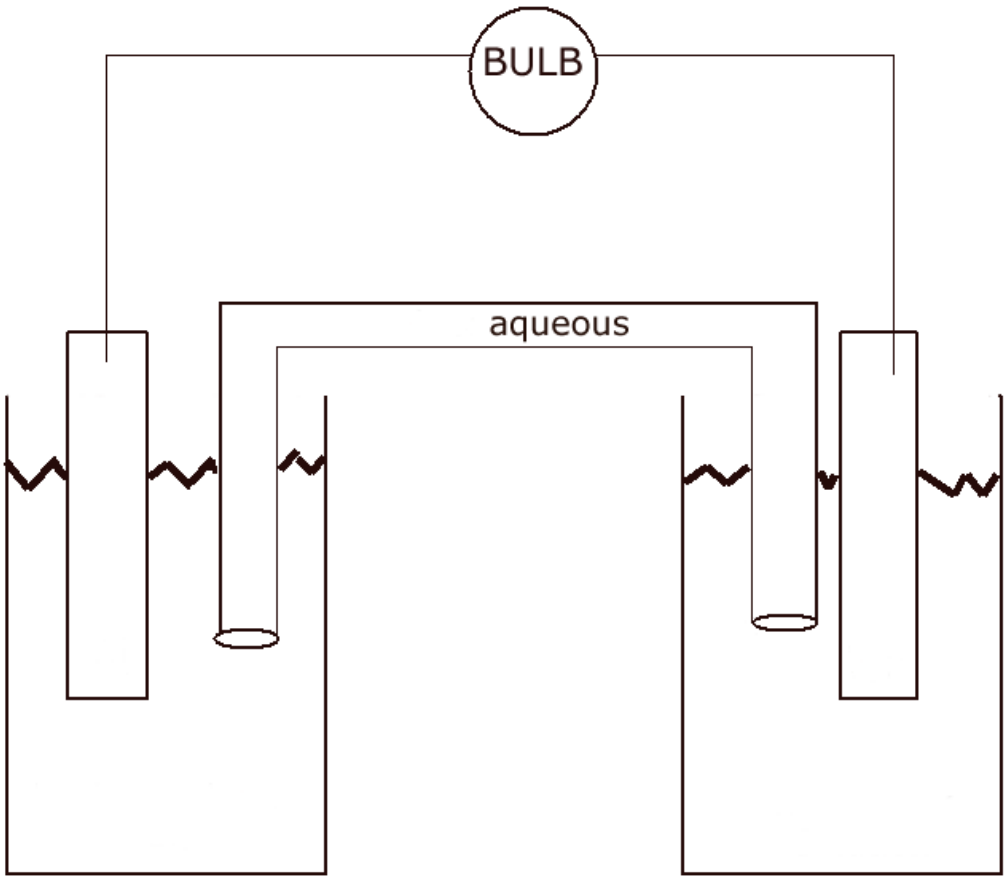
½ OX: _____

½ RED: _____

Net Ionic Equation _____

Tell the difference between this electrolytic and a voltaic cell:

Directions: draw a voltaic cell with cobalt in cobalt (III) chloride solution on the left half cell. In the right hand half cell put tin into tin (IV) acetate solution. The salt bridge has KCl solution. SHOW: OX and RED below the beakers, Cations in each solution, arrows that show oxidation and reduction in the beakers, electron flow, the charges of the solutions caused by oxidation and reduction, the ion flow in bridge, label the cathode, then the anode. Below, write the oxidation and reduction half reactions, then balance them properly (because the ions are not in a 1:1 ratio here), finally write out the NET IONIC equation for this redox.



½ OX _____

½ RED_____

Net Ionic Equation: _____

REXOX HW #3 name: _____

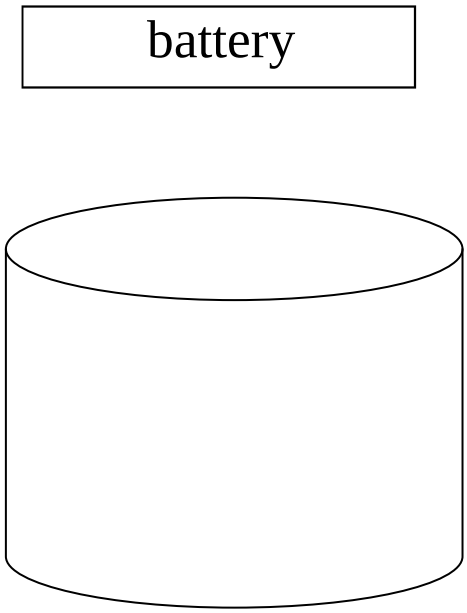
For these 8 reactions, tell what type of reaction it is, then tell if it is ALSO REDOX (yes or no).

6 of these reactions ARE redox. For those: write the ½ reactions and the net ionic equations below.

#	Reactions	Type	Is it also Redox?
1	$HCl + NaOH \rightarrow NaCl_{(AQ)} + HOH_{(L)}$		
2	$2Mg_{(S)} + O_{2(G)} \rightarrow 2MgO_{(S)}$		
3	$2C_{(S)} + O_{2(G)} \rightarrow 2CO_{(G)}$		
4	$2Li_{(S)} + NiCl_{2(AQ)} \rightarrow 2LiCl_{(AQ)} + 2Ni_{(S)}$		
5	$2K_{(S)} + S_{(S)} \rightarrow K_2S_{(S)}$		
6	$ZnCl_{2(S)} \rightarrow Zn_{(S)} + Cl_{2(G)}$		
7	$Pb(NO_3)_{2(AQ)} + 2KCl_{(AQ)} \rightarrow 2KNO_{3(AQ)} + PbCl_{2(S)}$		
8	$2H_{2(G)} + O_{2(G)} \rightarrow 2H_2O_{(G)}$		

½ OX: ½ RED: NET:	½ OX: ½ RED: NET:
½ OX: ½ RED: NET:	½ OX: ½ RED: NET:
½ OX: ½ RED: NET:	½ OX: ½ RED: NET:

Plate SILVER onto an iron ring. Connect the battery properly, draw in a ring and anything else you need to make this happen. Write the two half reactions, the net ionic equation, and label the anode and cathode.



½OX: _____

½RED: _____

NET: _____

When Aluminum and chlorine form into aluminum chloride, what type of reaction is this (besides redox)? Write a balanced chemical reaction for it, then the half reactions and the net ionic equation for this reaction as well. Is there a spectator ion?

BALANCED: _____

½OX: _____

½RED: _____

NET: _____

SPECTATOR ION: _____