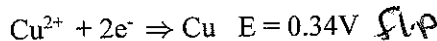
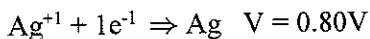


AS

Electrochemistry Preliminary Quiz 15 (Standards: #10-1, #10-2, #10-3)



A 1. (#10-2) Copper metal dropped into a solution of silver nitrate. Which of the following is true.

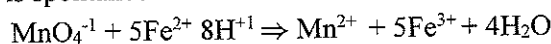


- a. A reaction is running with a voltage of 0.46V ←
- b. A reaction is running with a voltage of 1.26V
- c. The reaction is running with a voltage of -0.46V
- d. The reaction is not running with a voltage of 0.46

+0.8V
-0.34V

+0.46V

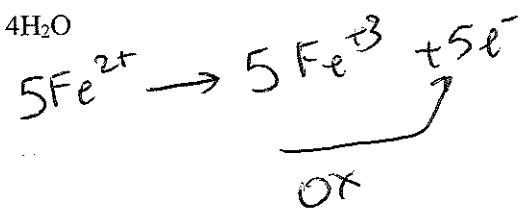
2. (#10-1) The following reaction is spontaneous at 298K.



Which of the following is true regarding the reaction above?

I. The iron is being oxidized. *ug?*

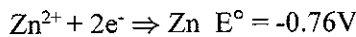
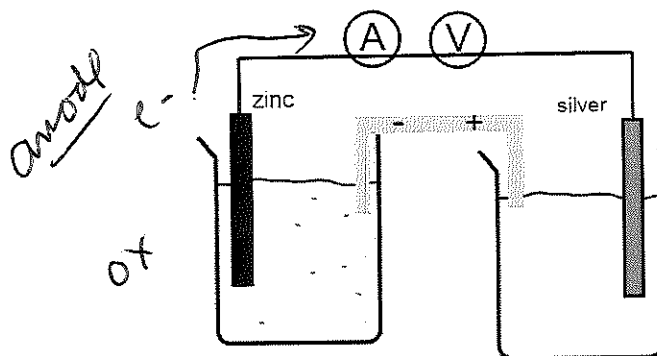
II. 5 electrons are involved in this exchange per reaction cycle. *ug*



- a. I only
- b. I and II

- c. II only
- d. Neither I or II

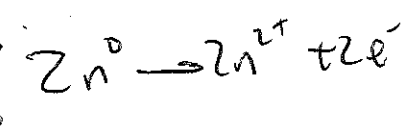
3.



← flip

(#10-3) Which of the following is correct?

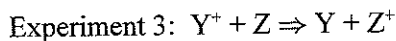
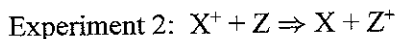
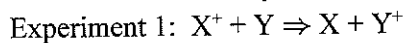
- I. The zinc electrode is getting more massive. *NO*
- II. electrons will flow through the wire toward the silver electrode. *ug*
- III. electrons will flow through the salt bridge to toward the silver electrode. *NS*



- a. I only
- b. II only

- c. II and III only
- d. I, II and III

4. (#10-1) A series of chemical reactions are below. *well spontaneous*



Which of the following is true regarding the experiments above?

I. In experiment 1, X^{+1} is being reduced. \checkmark

II. Due to experiment 1 and 2, a student can make the judgment that X^+ is the strongest reducer. \checkmark

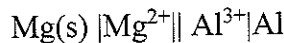
III. Zn metal is the strongest oxidizer. \checkmark

- a. I only
- b. I and II only

- c. I and III only
- d. I, II and III

Problem

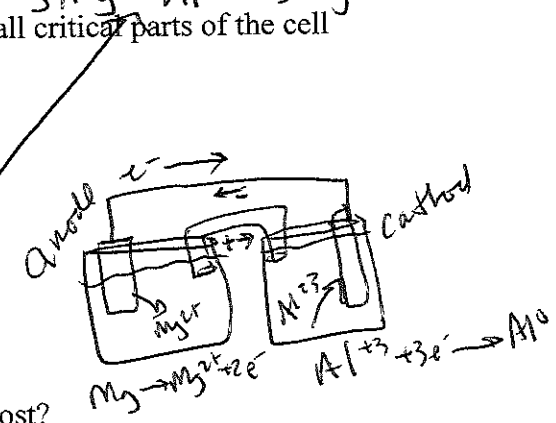
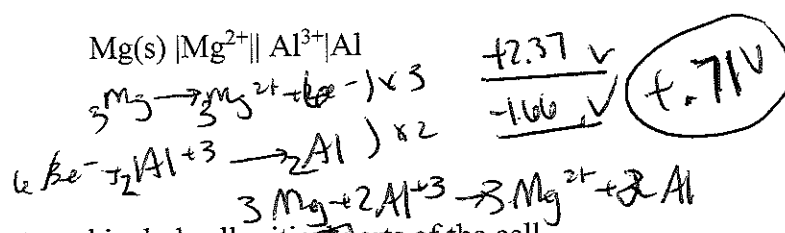
5. (4 points #10-3)



Draw a galvanic cell

List/label the following (2 points)

- Label beakers solutions and posts and include all critical parts of the cell
- Flow of electrons $\xrightarrow{\text{flow } e^-}$
- Direction current \leftarrow opposite of e^- flow
- Write the balanced reaction
- Determine voltage $0.71V$

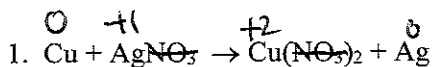


Answer the following questions. (2 points)

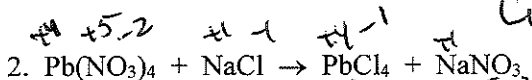
- 1) What happens to the mass of the Aluminum post?
more massive
- 2) Which direction (toward which post) will the cations in the salt bridge migrate?
 \rightarrow ~~Aluminum~~ post
Al

6. (#10-2; 2 points) For the following reactions

- Indicate the type of reaction. If the reaction is a Redox reaction, then
- balance
- indicate who is being oxidized and who is being reduced.



yes \leftarrow ox $\quad AgNO_3 \leftarrow$ reduced
 $Cu \quad 0 \rightarrow +2 + 2e^-$



Not Redox
 Solubility forms solid.