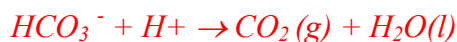


## Quiz 1

Name

Lab Section  
25 points available

1. Identify a test to identify the presence of a) bicarbonates ion in water b) chloride ions. Write the equations. (4 points)



*CO<sub>2</sub>, turns blue litmus red.*

*Cl<sup>-</sup> can be detected by Ag<sup>+</sup>, ppt of AgCl:  $\text{Cl}^- + \text{Ag}^+ \rightarrow \text{AgCl}(\text{s})$*

2. Cite two observations that indicate the occurrence of a chemical reaction. (4 points)

*Color change, gas produced, precipitate formation, pH change*

3. From the list of following elements, determine which is an oxidizing agent and which would be a reducing agent. (4 points)

- a. Al **reducing agent**
- b. O<sub>2</sub> **oxidizing agent**
- c. I<sub>2</sub> **oxidizing agent**
- d. K **reducing agent**

4. Put the following elements in order of their reactivity, (more reactive first)

Au, Na, Cs, Fe (4 points)

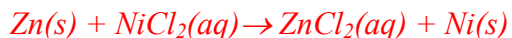
*Cs, Na, Fe, Au*

5. "If an experiment does not appear to pose any hazards, eye protection does not need to be worn" TRUE OR FALSE (1 point) *False*

6. What is an oxidizing agent? (2 points)

*A substance that gains electrons in a chemical reaction and so is reduced itself.*

7. If zinc metal is placed in a solution of nickel(II) chloride, what will happen.  
(Write the equation, even if you think no reaction). (3 points)



8. When gasoline tanks, (made of iron or steel) are buried underground, a block of magnesium or aluminum are often buried alongside and in contact with them.  
Why do you think this might be? (3 points)

*Mg and Al are more reactive than iron or steel and so are more easily oxidized, therefore will preferentially be oxidized, preventing the iron (steel) from rusting.*