**PO 6 Unit Exam Study Guide Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Chapters 17-18**

This exam will be made up of actual AP Chemistry exam questions.

* Conceptual and mathematical differences between the following:
  + Delta H
  + Delta S
  + Delta G
* How does the equilibrium constant relate to delta G and cell potential?
* When is entropy mathematically increasing? Decreasing?
* When is spontaneity mathematically increasing? Decreasing?
* What is the difference between thermodynamically favorable and thermodynamically unfavorable?
* Assigning oxidation numbers.
* Determining half reactions.
* Using standard reductions to determine E cell for a given reaction.
* Understanding each case for determining whether or not a reaction will be spontaneous or nonspontaneous (four cases).
* Review specific heat capacity calculations and what it is..
* Understanding all parts to a voltaic cell, including where counter-ions would flow.
* Calculating cell potential in nonstandard state.
* Review net ionic equations.