Name: _____

Exam 4 Equations (Chapters 16-17)

$$S = k_B \ln W$$

$$\Delta S_{universe} = \Delta S_{sys} + \Delta S_{surr}$$

$$\Delta G = \Delta H - T\Delta S$$

$$\Delta G = \Delta G^\circ + RT \ln Q$$

$$E^\circ_{cell} = E^\circ_{cathode} - E^\circ_{anode}$$

$$\Delta G^\circ = -nFE^\circ$$

$$E^\circ = \frac{RT}{nF} \ln K$$

$$\Delta S^\circ_{rxn} = \sum_{i,products} \nu_i S^\circ_i - \sum_{j,reactants} \nu_j S^\circ_j$$

$$\Delta S_{surr} = \frac{-q_{sys}}{T_{surr}} = \frac{-n_{rxn}\Delta H_{rxn}}{T_{surr}}$$

$$\Delta G^\circ = \Delta H^\circ - T\Delta S^\circ$$

$$\Delta G^\circ = -RT \ln K$$

$$\frac{C_1 V_1}{n_1} = \frac{C_2 V_2}{n_2}$$

$$\Delta G = -nFE$$

$$E = E^\circ - \frac{RT}{nF} \ln Q$$