

Exam 2 Information

The exam will be closed book and closed notes. Calculators will be allowed. Some formulas will be provided, and some you will need to know (as in the first exam). The emphasis will be on understanding thermodynamics and problem solving, not on your memory of formulas.

Bring with you:

- Pencils and Erasers
- Calculators

Material Covered:

- Lectures 11-17 (up to equilibrium, not included phase transitions)
- Problem sets 4 and 5

Equations you should know (in addition to those listed as needing to know on the first exam information sheet):

Fundamental equations:

$$dU=TdS-pdV, dH=TdS+Vdp, dG=-SdT+Vdp, dA=-SdT-pdV$$

Gibbs free energy and Helmholtz Free energy:

$$G=H-TS, \quad A=U-TS$$

Equilibrium:

Form of K_p (i.e. product pressures to the power of their stoichiometry divided by reactant pressures to the power of their stoichiometry), form of K_X , $K_X = p^{-\Delta\nu} K_p$, $\Delta G_{rxn}^o = -RT \ln K_p$

All other equations will be given to you either in the text of the problem or as part of a set of equations on the front cover of the exam.