Exam 3– Skills List

1. Given an overall composition and thermal history on a binary phase diagram determine the most likely microconstituents present and their relative amounts.

2. Given an Isothermal Transformation (IT) diagram for a steel, either quantitatively describe the microstructure of the steel given a thermal history, or provide a plausible thermal history given the quantitative microstructure.

3. Given a semiconductor and dopant, and any four of: the semiconductor atomic weight, the semiconductor density, the carrier mobility, the dopant concentration in atom fraction, and the doped conductivity at saturation, determine the fifth.

4. Given a rectangular flat-plate capacitor and any four of: length, width, plate separation, capacitance, and dielectric constant, determine the fifth.