The exam covers sections 12.1-12.9. You will NOT need a calculator for this exam. You can bring one 8.5x11 inch sheet of paper of notes (on both sides, if you want) to use as a reference. No electronics of any sort allowed on the exam.

**Topics**

- Functions of 2 (or more) variables
  - Level curves
  - Evaluating
  - Domain
  - Continuity
  - Limits
  - Partial Derivatives
  - Gradient
  - Directional Derivatives
  - Tangent Planes
  - Chain Rule
  - Differentials
  - Maxima and minima
  - Lagrange Multipliers

**Review Questions to do for practice**:

- Chapter 12 Review (pg 672-673)
  - Concepts Test Problems #1, 2, 4, 5, 6, 7, 8, 9, 13, 14, 15
  - Sample Test Problems #1-21 all, 23, 25, 26, 27, 28, 29