ECON 702, Final Exam Material

I. (30%) Questions from the midterm.
II. (70%) Material after the 2nd midterm.

Detailed topics list for part II

1. NGM with taxes.
   a. Distorting vs. non-distorting taxes
   b. Steady state
   c. Modified golden rule with taxes
   d. Providing economic intuition for all the theoretical results.

2. Risk aversion and elasticity of substitution
   a. Arrow-Pratt measure of relative risk aversion.
   b. Elasticity of substitution (intra-temporal, inter-temporal).
   c. CES utility.
   d. Risk aversion and consumption smoothing.
   e. Choice under uncertainty, and expected utility theory (demand insurance, investment in risky asset, tax evasion, etc).
   f. Providing economic intuition for all the theoretical results.

3. Stochastic NGM
   a. Analytical solution of the stochastic NGM, with inelastic labor supply, log utility and full depreciation.
   b. Understand the methodology of computational experiment (Kydland and Prescott 1996).
   c. Detrending data (separating the trend from the cyclical part). In particular, data with constant growth trend.
   d. Properties of AR(1) process.
   e. Calibration.
   f. Comparing model simulated data with real world data (volatility and comovement).
   g. Using the Euler Equation for asset pricing and illustrating the Equity Premium Puzzle.
   h. Providing economic intuition for all the theoretical results.

4. Monetary Economics
   a. Basic concepts of monetary theory: (1) inflation, (2) inflation tax, (3) seigniorage, (4) nominal interest rate, (5) real interest rate.
   b. Finding the money growth rate that maximizes the seigniorage, and analyzing the limits of seigniorage as the growth rate of money becomes infinitely large.
   c. Cash In Advance model
      i. Explaining the purpose of the CIA constraint.
      ii. Explaining the inefficiency associated with the CIA constraint.
      iii. Deriving the Friedman Rule.
iv. Analyzing the steady state under constant growth rate of money, in particular, the relationship between steady state inflation and money growth, real effects of monetary policy, and seigniorage.

d. Providing economic intuition for all the theoretical results.

5. Matlab: I will give a code or a part of a code, and ask specific questions as before.