Topics for Final Exam

1.) Derivative Securities

2.) Option Pricing
   - The Black-Scholes Formula

3.) The Consumption-Based CAPM
   - Euler Equations
   - Stochastic Discount Factors
   - The Equity Premium Puzzle
   - Hansen-Jagannathan Bounds

4.) Heterogeneous Beliefs
   - Speculative Trading + Bubbles

5.) Asset Pricing + Information Aggregation

6.) Asymmetric Info + the Grossman-Stiglitz Paradox

7.) Common Knowledge + No Trade

Econ 815

Financial Economics, I

Prof. Kasa

Fall 2015

PRACTICE FINAL EXAM QUESTIONS

Answer the following True, False, or Uncertain. Explain Why.

1. Stock returns will be predictable if dividends are predictable.

2. The consumption-based CAPM is not valid if markets are incomplete.

3. Idiosyncratic risk increases the equity premium.

4. Favorable news about future dividends increases stock prices.

5. If markets are efficient, then stock prices follow random walks.

6. An increase in a stock's variance reduces the value of options written on that stock.

7. The value of an option does not depend on the growth rate of the stock.

8. According to the consumption-CAPM, stocks that are more highly correlated with consumption have higher expected returns.

9. Asymmetric information cannot explain asset trade.

10. If markets are efficient, then stock prices reveal all publicly available information.

Short answer questions:

11. In the press, stock markets are often described as 'casinos', where people are trying to place winning bets and avoid losing bets. Do you think this is a good metaphor? Why or why not? What might be a better metaphor? (Hint: Read Cochrane's "Portfolio Advice for a Multifactor World").

12. People often find that the traditional CAPM "fits the data" better than the consumption-based CAPM. Why study the consumption-based CAPM then? Why not just use the regular CAPM? Was Lucas just wasting our time? What's the value-added of the consumption-based CAPM?

13. Use an arbitrage argument to derive the Black-Scholes PDE. Outline a simple Monte Carlo simulation strategy for solving this PDE.

14. Assume a representative agent maximizes a logarithmic utility function:

$$E_t \sum_{j=0}^{\infty} \beta^j \ln c_{t+j}$$

Also assume that there is a single asset in the economy, which produces an exogenous stream of nonstorable dividends, d_{t+j}. Assume this is the only good in the economy, so that in equilibrium, $c_t = d_t$, for all t.

Show that the equilibrium price/dividend ratio is constant, no matter what the dividend process is. What is the economic explanation for this result?