Econ 3542: Experimental and Behavioral Economics
Exam #2 Review Questions

- **CHAPTER 12: Bargaining in the Lab**
  - What is the typical result on proposals in the simple ultimatum game? What is the (selfish) theoretical prediction? What could be causing the difference between the two?
  - What is a "double-blind" method in experiments, and how has this type of method been used in evaluating results from the dictator game experiments?
  - Name at least two experimental variables that have been shown to affect outcomes in the dictator or ultimatum games
  - Neuroeconomics has found that when proposers make unfair ultimatum offers, this activates two brain regions in responders. The first is the "deliberative" thinking area (i.e., prefrontal cortex), and the second is which general area? (I'm not looking for a specific technical brain region name).

- **CHAPTER 13: Behavioral Labor Economics (trust, reciprocity)**
  - Describe the "Trust" game, and highlight the two key behavioral outcomes that can be analyzed from this game
  - Describe field experiment applications of the trust game (describe at least two).

- **CHAPTER 14: Voluntary Contributions**
  - Describe a detailed setup (i.e., parameterization) for a voluntary contributions public goods game, where the Nash equilibrium is to free-ride, but it is efficient to contribute 100% towards provision of the public good.
  - Describe two alternative hypotheses about contributions in a public goods game with respect to increasing the group size. That is, discuss one hypothesis regarding why larger groups might contribute less, and another hypothesis that indicates why contributions should rise. (Note: these will necessarily be non-Nash hypotheses, because we are assuming that we preserve the Nash prediction of complete free-riding while we manipulate the group size).
  - How might one evaluate efficiency in a public goods experiment?

- **CHAPTER 29: Optimal Search Behavior**
  - Suppose that the marginal revenue of a job search is given by:
    $MR=75-w$
    Suppose also that the marginal cost of a job search is given by:
    $MC=15+w$
    where w is the current wage offer the employee faces.
    a) What is this worker's reservation wage?
    b) Assume that the worker has skill level $k^*=50$, and that whatever a worker's skill level is, the wages employers offer as a function of the skills they require are $w(k)=k$. So, with skill level k^* the worker is considered qualified for jobs requiring $k \leq k^*$. Assume also that the worker has imperfect information jobs in the labor market, but the worker knows that the distribution of potential jobs is such that there is an equal chance of

finding a job offering wage $21-$120 (e.g., a 1% chance of finding a job offering $21, a 1% chance of finding a job offering $22, all the way up to a 1% change of finding a job offering $120).
What is the chance that this worker will find an acceptable job offer for which he/she is qualified? *(note: your answer will require information from part (a).*
c) What is the expected wage from this worker's job search?
d) Suppose that unemployment insurance benefits just got worse, such that the worker's marginal cost of search is now MC=25+w (i.e., the "out-of-pocket" search costs increase from 15 to 25). What does this do to the worker's reservation wage, the expected duration of job search (i.e., the probability of finding an acceptable job offer), and the expected wage from the job search?

- The previous question helps you understand the context behind setting up an optimal search experiment. How might the assumption of risk aversion affect predictions in an optimal search experiment, and what have been the general results of optimal search experiments?

- **CHAPTER 30: Information updating and Bayes Rule (sleep dep discussion also)**
  - Suppose there are two cups, a red and a blue cup. Both cups contain 5 balls, but the red cup has 4 red and 1 blue ball, while the blue cup has 4 blue and 1 red ball. Use Bayes rule to calculate the posterior probability that the red cup is used if the prior (base rate) odds of using the red cup was 1/4, and we draw one red ball as the evidence (i.e., not knowing exactly which cup was used, only knowing the prior odds). How does your answer differ if 2 red balls are drawn (with replacement)? What about if 2 blue balls are drawn?
  - Describe two alternative Bayes rule experiments, where the outcome measures differ. Talk about the benefits and drawback of each approach.
  - What does emerging research show about the effects of total sleep deprivation on Bayes rule outcomes and risky choice?

- **CHAPTER 32: Statistical Discrimination**
  - Describe the key difference between statistical discrimination and other models of discrimination? Give examples of each
  - Give examples of two different types of experiments that have been used to study statistical discrimination, and highlight their key results