Econ 493u Law and Economics Spring 2017

1. Identify and/or Define:

a. Positive Statement
b. Marginal Cost
c. Consumer Surplus
d. Ownership
e. Tort law
f. Strict Negligence
g. Nash Equilibrium
h. Prisoner's Dilemma
i. Hobbesian Dilemma
j. Commons Problem
k. Team Production Problem
l. Regulatory Law
m. Median Voter
n. Rational Ignorance
o. Antitrust law
p. Sherman Act
q. per-se rule
r. Standard Oil case
s. FTC
t Breadth of a Patent
u. Takings Clause
v. Commerce Clause

I. A Review of Some Key Concepts and Tools from the First Half of the Semester

1. Use a Hobbesian dilemma diagram to demonstrate how creating property rights over produced outputs can greatly increase a society's prosperity.

a. (Label all important details.)
b. What fines is sufficient to enforce property rights in your diagram?

2. Use a 5x5 game matrix to characterize the "tragedy of the commons" for a two person commons.

a. What in your game matrix, if anything, distinguishes this tragedy from the standard prisoner's dilemma problem?
b. The game matrix can be used to show how various solutions to the commons problem may operate.
   - Show how user fees can solve the dilemma. (That is, modify the payoffs by subtracting the appropriate user fees to produce a Pareto optimal outcome.)
   - Analyze how quotas (use entitlements) can solve the problem.
c. Illustrate and discuss how privatization (assignment of rights to use and exclude) can solve the problem.
d. Develop an example in which the payoffs (outputs) are based on a production schedule and so there are more than three possible strategies. Characterize the payoffs and outcomes with a game matrix.
   - Use this approach to show that not every commons, has a problem.
   - (Hint, try a production schedule that has constant returns rather than diminishing returns.)
e. Explain why solutions to the commons problem tend to become more difficult as the number of commons users increases.
f. Does every commons have a commons problem? Why or why not?

3. Show how contracts can solve a team production problem.

a. Develop an team production matrix, and note the existence of unrealized potential gains to trade at the independent adjustment equilibrium (e.g. unrealized social net benefits at the Nash equilibrium).
b. How does contract enforcement help a firm to solve its internal free rider problems?
c. Why are so many contract put in writing?

4. Analyze the following game matrix.

Game Matrix Puzzle			
A \ B	High	Medium	Low
High	4, 4	3, 5	1, 6
Medium	5, 3	5, 5	2, 7
Low	6, 1	7, 2	4, 4

a. Find the Nash Equilibrium (or Equilibria) of this game. Explain
b. Is the equilibrium (or equilibria) Pareto optimal? Explain.
c. What type of problem from law and economics could this game be used to analyze? Explain.

5. **Depict a potential law breakers choice of personal "crime rate."**
   a. Note all relevant details.
   b. What is the law-breaker's net benefit from this crime?
   c. Show the effect on an increase in expected penalties on the crime rate selected by this person.
   d. How would one create a supply (or demand) curve for criminal activities? [Hint: the expected fine can be thought of as the price of illegal activities.]

6. **Create a diagram or series of diagrams that demonstrate that the optimal crime rate is NOT zero.**
   a. Explain the logic of these diagrams.
   b. What factors tend to increase the optimal level of crime?
   c. What factors tend to decrease the optimal level of crime?
   d. How would an increase in average age increase the crime rate?
   e. Crime rates have been falling in the US for the past 20 years, are their any factors that suggest that such reductions have been "optimal."

7. **Use a diagram to illustrate a moral hazard problem (under-investment in care problem) and show how tort law can induce people to take greater care than they would have without tort law?**
   a. Label all important details.
   b. What assumption about causality have you made?
   c. What incentive does the victim have to take steps to reduce the probability of an accident without tort law?
   d. Contrast the incentive effects of strict liability and the reasonable man standard for negligence on a victim's incentive to take precautions.
   e. How does a regulatory solution to the under prevision of care problem differ from that associated with tort law?

8. **Use a game matrix to illustrate how strict liability, negligence, and contributory negligence rules affect levels of care in a setting where both the accident causer (tort feasor) and victim can affect the extent of the damages by exercising "care."**
   a. Explain the problem associated with strict liability rules in this setting.
   b. Are there any differences between negligence and contributory negligence rules?
   c. In what sense can negligence and contributory negligence rules be said to be superior to a strict liability rule in this context?

II. Tools and Extensions of Old Tools Covered in the Second Half of the Semester [The questions in part II are the most important to review!]

1. **Public law also referred to as regulatory law or administrative laws are chosen by legislatures rather than created by court proceedings and precedents.**
   a. Discuss why such laws should be regarded as products of politics.
   b. Discuss why such laws may differ according to the political system in place. (For example, would a dictatorship and an elected legislature tend to adopt the same laws or not?)

2. **A median voter model can be used to characterize the outcomes of a democratic state's regulations.**
   a. Use a distribution of voter ideal points curve to conduct a series of elections that show why candidate policy positions tend to converge toward the median voter's ideal point.
   b. Discuss briefly the difference between the strong and weak forms of the median voter theorem.

3. **Draw a diagram in which three persons have different MB curves for expenditures on law enforcement. Assume that each person faces the same marginal cost schedule.**
   a. Characterize each person's ideal point.
   b. Characterize a democratic government's budget for law enforcement using the median voter theorem. Briefly explain your reasoning.

c. In another diagram, illustrate how those resources affect the typical criminal's crime rate. (Assume that expenditures increase the probability that a crimes are detected and punished.)

d. Show what happens to law enforcement budgets if each person believes that the risk of crime (i) has increased, or (ii) each person believes that the risk of crime has decreased?

e. What happens to the crime rates in the cases analyzed in part d, given the new law enforcement budget(s)?

4. Regulatory solutions.

a. Draw a diagram to illustrate an externality problem such as water polution. Label all details and briefly discuss the nature of the problem.

b. Show how a conditional fine can be used to solve an externality problem, such as air or water pollution. Label all important details and briefly discuss your analysis..

c. How does the probability of detection and conviction affect the outcome of a regulatory target or other law?

d. Suppose that the same problem is address through tort law. How does the tort law (with strict liability) outcome differ from the outcome that you modeled above? Is more or less pollution likely to be produced.

e. Can external marginal cost curves always be thought of as spillover marginal damages? Explain

5. Use a conventional diagram to characterize the advantage of competitive markets over monopolistic ones.

a. Label all details including the ordinary deadweight loss of monopoly (H).

b. Discuss why monopoly profits may be dissipated through non-price forms of competition or through contests to obtain government favors.

c. If "b" occurs, characterize the full deadweight loss from monopoly.

d. What, if anything, does "c" imply about the optimal level of antitrust law enforcement relative to that implied by "a."

e. Use a diagram of optimal law enforcement to support your answer to "d." [Hint, this will look a lot like the optimal law enforcement diagram for ordinary crimes developed in the first part of the course.]

6. Briefly summarize the facts and outcomes of the following antitrust cases:

a. The Standard Oil case

b. The US Steel case

c. The ALCOA case

d. The AT&T case

e. The Microsoft case

7. Patents may be said to be the opposite of antitrust law, because they establish, rather than break up or punish monopolies.

a. Use a profit diagram (with MR and MC curves) to show why research and development tend to be greater when an invention will be protected by a patent than without one.

b. Use a game matrix to show that patents can both speed up innovation and attract excessive resources to patent-seeking contests.

c. How can patent characteristics be adjusted (length and breadth) to produce better (higher SNB) patent seeking contests?

d. Discuss the pros and cons of patent laws for economic development.

8. A takings clause requires governments to compensate persons whose property is taken for public use. Develop two game matrices to show how a takings clause may affect economic development.

a. In the first matrix, assume that there is no takings clause, so the government can take what ever its wants and use it for revenue.

b. In the second matrix assume that the government has to pay for the resources taken.

c. Find the Nash equilibrium in both cases and compare the wealth produced under these different constitutional regimes.

[To construct your game matrices, assume that the asset to be taken is produced by labor and that each hour of labor requires the sacrifice of 1 unit of leisure, but produces 2 units of value. Assume that leisure cannot be

taken, but the produced good or service can. Calculate the payoffs for 0, 4, 8, and 12 hour days and for 0, one half, and full takings under the two regimes. The two "players" in this game are the productive individual and the revenue maximizing government.] (A similar problem is devoped in the web notes and was covered in the review session.)

III. Other Thought Questions

1. **Discuss the relative merits of regulatory and common law solutions to externality problems.**
   a. Discuss the advantages of legislative, bureaucratic, and judge made laws.
   b. Discuss the disadvantages of legislative bureaucratic and judge made laws..
   c. Is one of these procedures more likely to discourage external cost generating activities than the other? Why or why not?
   d. Discuss briefly how (and why) many bureaucratic laws are ultimately determined by judicial decisions.

2. **Societies can be said to have both economic and political constitutions--eg fundamental rules that remain in place for long periods of time and serve as the "rules of the game."**
   a. Explain why a "takings" provision of a modern constitution has effects that are similar to the property rights given producers in the first lectures of this class.
      - Illustrate the effects of a "takings clause" with a 3x3 game matrix with government choices along the horizontal and a typical investor's decision along the vertical dimensions of the matrix.
      - Show the nature of the dilemma associated with unconstrained governance.
      - Show how a takings clause solves this problem.
   b. The commerce clause limited federal regulations to goods and services that cross state boarders (interstate trade).
      - Is there a reason why such limits may have been adopted in the U.S. constitution?
      - Is there a reason why such limits might have outlived their usefulness.
      - Could this principle have been over turned through ordinary legislation?
      - If not, discuss why it might be easier to change a constitutional rule through the courts than through a formal amendment process.

3. **Explain why a Supreme court with powers to review laws passed by a government's legislature may prevent violations of constitutional protections of minorities.**
   a. Is there any reason why a majority might want to reduce a minority's rights under a constitution?
   b. If so, provide some examples. If not, explain why not.
   c. Are there any dangers associated with Supreme court powers of review?

4. **The Commerce Clause served as a check on Federal regulation for approximately 150 years (until the 1930s).**
   a. Discuss how courts interpreted the commerce clause. (Refer to examples from Supreme court decisions.)
   b. Discuss why courts changed their interpretation of that clause in the 1930s and how it has affeccted the scope of regulation in the United States.
   c. Which interpretation to you find most plausible? Explain.

5. **Gordon Tullock has often argued that the US Court System with its "adversarial" proceedings is less efficient than the Continental one with its judge-run trials. Discuss the merits of Tullock's view.**