Review Questions for Econ. 4/5535 - Natural Resource Economics

First Set (There will be additional review questions for section I.)

I. An Introduction to NR Economics

Soon you will have a short in class exam. Concentrate on the first seven questions for that short exam.

1. Define the following terms in a way that an Econ. 2010 student would understand:
   efficiency, equity, market failures, and nonmarket failures.

2. Define an efficient allocation of resources in an intertemporal context.

3. Who should be included in the definition of society when one considers equity and efficiency? Why?

4. What is a market failure? Give me an example of an environmental market failure, and explain why it is a market failure. Choose an example that has not been discussed in class. Note that this question has three parts.

5. Does a system of perfectly competitive markets result in an efficient allocation of society's scarce resources? Explain.

6. Assume a world that consists of two time periods. Denote the individuals in period 1 as generation 1, and denote the individuals in period two as generation 2. Assume a world of just two goods, cases of beer and copies of the book David Copperfield. Further assume individuals in generation 1 are willing to trade beer for books at the rate of 2 cases for one book, and generation 2 is willing to trade beer for books at the rate of one case for one book. Currently each generation has 10 cases of beer and 10 books. Is the current intertemporal allocation of beer and book efficient? Explain. Which generation is the literary generation? (Assume books are divisible. That is, generation 1 would trade one
case of beer for a half of a book.)

7. Would you expect the number and magnitude of perceived environmental and recreational externalities to increase or decrease over time? Defend your answer.

8. Many people are concerned that long-run growth is limited by the fact that natural resource stocks are finite. Argue as effectively as you can that the market will mitigate natural resource scarcity such that growth will not be seriously limited. What assumptions form the basis of this conclusion. Now argue as effectively as you can that natural resource scarcity will severely limit long-run growth. What assumptions form the basis of this conclusion. You might want to utilize isoquant and isocost graphs in each answer. Direct your two essays to an undergraduate econ major who has just completed intermediate micro theory

9. Argue that a change in the relative price of a natural resource is a good indicator of a change in the scarcity of that natural resource. Now argue that it is a bad indicator.

10. Define the term rent (resource royalty) within the context of nonrenewable natural resources. Does this concept of "rent" bear any relationship with the "rent" on a piece of land? Explain

11. Develop an economic argument that explains why there has historically been more recycling (particularly of buildings) in Europe than in the U.S. Does our tendency not to recycle imply that we are wasteful in the way we produce goods and services? As part of your answer, define wasteful production.

12. Individuals like Al Bartlett and models like those assumed in "Limits to Growth" reach the conclusion that natural resource scarcity will lead to a sudden collapse of economic
production. What assumptions would logically generate such a conclusion.

13. Assume that the price of a natural resource rises. Convince me that this will cause price rises in goods whose production is relatively intensive in the use of this natural resource. Reconcile your argument with the fact that the increase in the price of the natural resource will cause producers to substitute, if possible, away from this natural resource.

14. What, other than increased scarcity and/or increased market power, might explain the recent increases in the relative prices of some natural resources? Explain your answer.

15. What was Paul Elrich's critical mistake in his bet with Julian Simon?

16. Write a short essay (a page or two) discussing how one might measure the relevant stock of a specific natural resource. Assume that your sole audience is an undergraduate at C.U. who hasn't had any economics courses.

17. Define conservation. Convince the reader that increased conservation is not always socially desirable.