

Economics 3250
Spring 2011

Dr. Lozada
Final Exam

Do Not Turn This Page Over Until You Are So Instructed!

This exam has 50 points. There are nine questions on the exam.

Put your answers to the exam in a blue book.

You have two hours (that is, until **3:00pm**) to take this test.

Answer the questions using as much precision and detail as the time allows. Correct answers which are unsupported by explanations will not be awarded points.

Answer all of the following questions.

1. **[5 points]** Here are four quotes from Adam Smith's *The Wealth of Nations*. None of them speak directly about environmental economics, but how do you think they fit in to what we have learned this semester?

Quote 1: "...by directing that industry in such a manner as its produce may be of the greatest value, he [a business owner] intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was not part of his intention... By pursuing his own interest he frequently promotes that of the society more effectually than when he really intends to promote it."

Quote 2: "It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest. We address ourselves, not to their humanity, but to their self-love, and never talk to them of our own necessities, but of their advantages."

Quote 3: "Our merchants and master manufacturers complain much of the bad effects of high wages in raising the price, and thereby lessening the sale of their goods both at home and abroad. They say nothing concerning the bad effect of high profits. They are silent with regard to the pernicious effects of their own gains. They complain only of those of other people."

Quote 4: "People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices." [The word "but" here means, in modern English, "except that." A modern version of the entire sentence might be: 'Whenever people in the same line of business meet, even if it is just to have fun, their conversation almost always ends up in a conspiracy against the public interest, or in some plan to raise prices.']

2. **[7 points]** Figure 1 is a partially-finished diagram showing the inefficiency of a tariff on food; " P " stands for the price of food on the graph, " Q " stands for the quantity of food, " D " stands for

demand, and “S” stands for supply. Finish the graph and use it to explain why a tariff on food is inefficient.

3. **[6 points]** Suppose two economists agree that, correctly measured, the cost of an initiative to improve the environment will be \$1 billion now (or in the near future—you can consider it to be “now”), and the benefits will be \$2 billion ten years from now. What might still lead them to disagree about whether society should carry out the environmental improvement or not?
Your answer should contain simple mathematical expressions.
4. **[6 points]**
 - (a) Give an example of each of the following values:
 - i. direct
 - ii. indirect
 - iii. option
 - iv. bequest
 - v. existence
 - (b) Which of the values in part (a) are use values and which are nonuse values? Why?
5. **[6 points]** What is wrong with the following statement?

Carbon taxes will just hurt consumers because Firms will pass 100% of any new carbon taxes on to consumers, so such taxes won’t hurt firms, they will just hurt consumers.
6. **[5 points]** Explain why some economists (perhaps not many, but some) think establishing “Marine Reserves” is a very good idea.
7. **[5 points]** Explain the contrast between the success (or lack thereof) of international negotiations regarding reduction of sulfur dioxide pollution versus carbon dioxide pollution.
8. **[5 points]** Define and explain the importance of “Institutional Weakness” regarding environmental and natural resource problems.

9. **[5 points]** In the *Journal of Chemical Education* (1999), Frank L. Lambert published a paper entitled “Shuffled Cards, Messy Desks, and Disorderly Dorm Rooms—Examples of Entropy Increase? Nonsense!” Its abstract reads:

Simply changing the location of everyday macro objects from an arrangement that we commonly judge as orderly to one that appears disorderly is a “zero change” in the thermodynamic entropy of the objects because the number of accessible energetic microstates in any of them has not been changed.

Reflect on how this could affect the way economists view entropy in economics.