

Economics 3250  
Fall 2003

Dr. Lozada  
Final Exam

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

There are thirteen questions on the exam, six in Part 1 and seven in Part 2. You should work all the questions in Part 1 and six of the seven questions in Part 2. This will give a total of twelve questions in all.

All the questions are worth 4 points each except for Questions 5 and 6, which are worth 5 points each. Hence this exam has 50 points.

Put your answers to the exam in a blue book or on blank sheets of paper.

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.

**Part 1**

**Answer all of the following six questions.**

1. [4 points] Would an environmentalist prefer higher or lower discount rates? Why? Explain fully.
2. [4 points] Illustrate the use of the McKelvey Box in the debate between “Malthusians” and “Ricardians” (also called “resource pessimists” and “resource optimists”).
3. [4 points] In Figure 1 (accompanying the exam), there are two polluting firms, and the amount of pollution is 4 each (8 total) if neither firm abates pollution. The marginal abatement cost curves are given in the figure for each of the two firms. Suppose the government has decided to reduce the total amount of pollution by 50%, to 4 total. Which regulatory scheme would the industry prefer to achieve this goal:
  - (a) a standard of a maximum of 2 units of pollution per firm; or
  - (b) a tradeable permit scheme with 4 permits in total and two permits initially given to each firm for free?Defend your answer by working out appropriate numerical analyses of the options.
4. [4 points] Give three examples of economic incentive instruments for reducing damage to the environment, and briefly describe them and why they are economic incentive instruments.
5. [5 points] Explain everything you know about the Coase Theorem.

**Part 1 continues on the next page...**

6. [5 points] Referring to Figure 2 (attached to the exam):

- (a) Fill out a table like this one, giving the correct areas from Figure 2:

|                       | tariff | no tariff |
|-----------------------|--------|-----------|
| Foreign Firm revenue  |        |           |
| Domestic Firm revenue |        |           |
| Foreign Firm costs    |        |           |
| Domestic Firm costs   |        |           |
| Foreign Firm profits  |        |           |
| Domestic Firm profits |        |           |

- (b) Comment on the role of the quantity FE in illustrating the economic desirability (or lack thereof) of a tariff. Also comment on the role of the quantity KL in illustrating the economic desirability (or lack thereof) of a tariff.

**Part 2 begins on the next page...**

## Part 2

Answer only **SIX** of the following **SEVEN** questions.

7. [4 points] List and briefly explain as many of the costs and benefits of global warming as you can.
8. [4 points] Comment on the following passage from your textbook:

“Biological diversity is important for both moral and economic reasons. But if the morality of conservation can be disputed, the economic case for conservation is becoming increasingly powerful.”
9. [4 points] Give two examples of how insecure tenancy can cause or worsen environmental damage.
10. [4 points] Explain the materials balance approach and contrast it with the standard circular flow approach. Is this related to entropy?
11. [4 points] Is there a necessary contradiction between a teleologist/consequentialist approach to ethics (such as most economists use) and a contractarian approach such as Rawls’s? (Both students who answer “yes” to this question and students who answer “no” to this question will be able to get full credit: the grading depends on how well you’ve defended whichever position you took.)
12. [4 points] A reproduction of Box 3.5 of your textbook is attached to this exam. Critically interpret it.
13. [4 points] Which is easier to achieve: weak sustainability or strong sustainability? Why?

\$/unit of  
pollution abatement

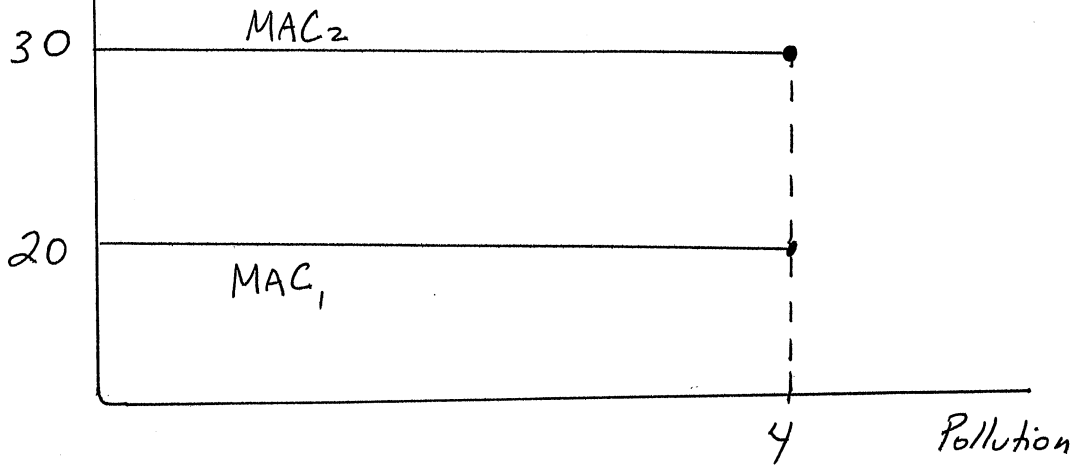
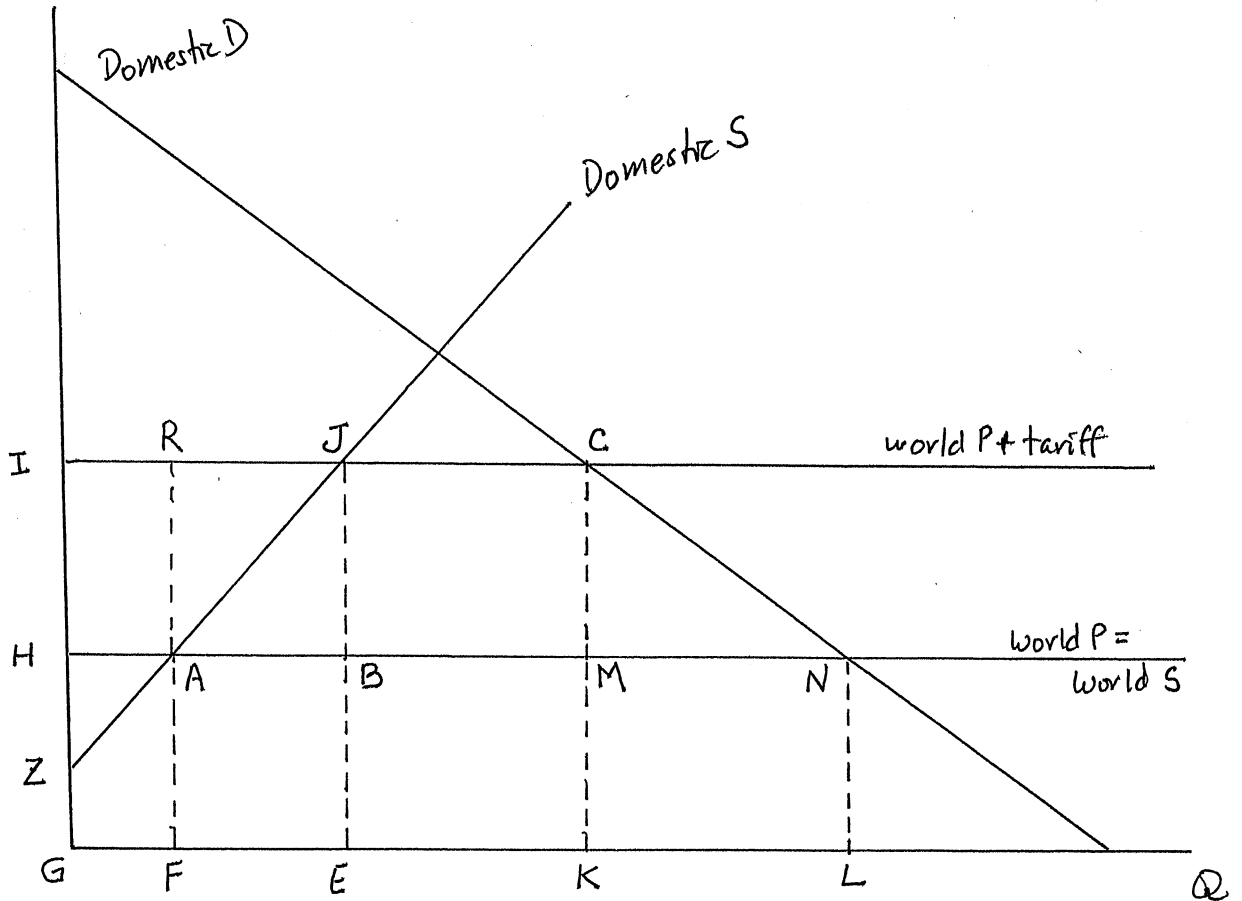


Figure 1

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Figure 2



*Economic growth, population growth and the environment*

**Box 3.5** Carrying capacities for world regions in the year 2000  
(potentially supportable population divided by expected population)

| Input level  | Africa | SW Asia | South America | Central America | SE Asia | Average |
|--------------|--------|---------|---------------|-----------------|---------|---------|
| Low          | 1.6    | 0.7     | 3.5           | 1.4             | 1.3     | 1.6     |
| Intermediate | 5.8    | 0.9     | 13.3          | 2.6             | 2.3     | 4.2     |
| High         | 16.5   | 1.2     | 31.5          | 6.0             | 3.3     | 9.3     |

Source: FAO (1986) p. 16.