Final Exam
August 15, 2003

Answer all questions, in blue book. Plan and budget your time. The questions are worth a total of 100 points, as indicated, and you will have 120 minutes to complete the exam.

1. [25 points] You are an economic advisor to Ilovia, a relatively labor abundant developing country. The country imports flarks from the more capital-abundant rest of the world, and you've just learned that, for reasons you do not know, the relative price of flarks is about to fall on world markets. The government of Ilovia wants to know whether this change will be good or bad for the country, and also whether the separate owners of capital and or labor will gain or lose from this change. Use the Heckscher-Ohlin Model to answer these questions under each of the following assumptions, using the tools of the respective models to show how you arrive at your answer.
   a. [15 points] The two-good model, with Ilovia producing both goods.
   b. [10 points] The two-cone model, with Ilovia producing two goods, but *not* producing flarks.

2. [10 Points] Consider a small open economy producing two goods using capital and labor. Good *X* is relatively labor intensive, and good *Y* is relatively capital intensive. Suppose that in the short run labor is perfectly mobile between the two industries, but capital cannot move at all, while in the long run both factors are perfectly mobile. Show how the output of good *Y* will respond, in the short run and in the long run, to an increase in the country's endowment of labor. Assume that its endowment of capital, as well as the prices of the goods, remain unchanged.

3. [15 Points] Using the model of External Increasing Returns to Scale,
   a. [10 Points] Show and explain how it is possible for a country to lose from trade.
   b. [5 Points] Suppose that you knew that a country in this model would find the free trade relative price of the good that it exports – regardless of which good that is – being lower than its price in autarky. Would you, or would you not, then know that the country has lost from trade? Explain.

4. [20 Points] Suppose that a small country, starting from free trade, levies a tariff on a good that it initially imports. Unlike what usually happens, and even though the country does produce the imported good, its output of that good does not increase. First, show how this can happen, in either a partial equilibrium or a general equilibrium trade model. Then, based on your analysis, say *and explain* whether each of the following i) must be true in this situation ("true"), ii) cannot be true ("false"), or iii) could be true or not depending on information that you do not have ("it depends").
   a. The quantity of imports does not fall.
   b. Those who produce this imported good do not gain from the tariff.
   c. The dead weight loss due to the tariff is zero.

5. [15 Points] What is the optimal policy in each of the following situations? Explain briefly, in words only, why that is the case.
   a. The optimal tax or subsidy on imports for a large country.
   b. The optimal tax or subsidy on imports from a foreign monopoly firm that has no domestic competition.
   c. The optimal tax or subsidy on exports for a country that is home to one of two firms in a duopoly engaged in Cournot competition selling to a third country's market.

6. [15 Points] The small country of Jimmyjohns both produces and imports bread, the world price of which is $1.00 per loaf. Production of the bread causes a pleasant smell, which the producers of bread are unable to charge for, and which the people in the country enjoy. In fact, it has been ascertained that the value of this smell to society is $0.50 per loaf.
   a. Show and explain why, in the absence of any other policy, a tariff on bread in this country might be beneficial to the country as a whole.
   b. Would a tariff of $0.50 per loaf necessarily be beneficial? Why or why not?
   c. Suppose, again in the absence of any other policy, that you knew that a tariff of a certain size per loaf would be beneficial to the country as a whole, and also that a tariff of this size would reduce imports of bread by a certain percentage, say X% compared to free trade. How would the welfare of Jimmyjohn be affected if, instead of using the tariff, the country were to persuade foreign producers of bread to reduce by X% the quantity of bread that they export to the country. In other words, compare the effects on Jimmyjohn of the tariff to those of an import quota that reduces imports by the same amount, with the quota implemented by the foreign producers.