Econ 160A Summer 2013 International Trade Philip A. Luck

Name________________________________ Student ID______________________

MIDTERM EXAMINATION
July 8th, 2013

Instruction: Read all instructions carefully before answer each question. If you have any question don't hesitate to ask, the worst thing that will happen is I'll say "I can't tell you that." Answer all questions in your blue book. When you have completed the test place your test form inside your blue book and hand in both.

TRUE FALSE UNCERTAIN: For questions 1-6 begin your answer with the quick assertion "true", "false", or "uncertain" and justify your answer with a few sentences. Do not spend too much time answering any of these questions: 1-2 sentences at most will suffice. (5 points each)

1. In the Ricardian model, if both countries have identical technologies, but one country has twice as much labor, trade can be mutually beneficial.

2. An early study of the Heckscher-Ohlin theory by Wassily Leontief found that US imports had a higher capital-labor ratio than US exports.

3. When the world relative trade prices changes, there are is always at least one country that gains from that change, and at least one country that loses from that change.

4. In a two country, two good, Ricardian model under free trade, if the MPL in the industry you are *not specialized* in increases, without changing patterns of comparative advantage, real wages will not change. (*assume world prices don't change*)

For questions 5-6 regarding the Heckscher-Ohlin (HO) model assume the following: there are two countries, Home and Foreign, abundant in capital and labor respectively. There are two goods (airplanes and bicycles) which are produced by two factors of production. Further, assume airplane production is capital intensive and bicycle production is labor intensive. Assume both countries produce both goods.

5. In the HO model with **fixed world prices,** if immigration increases the labor force in the Home country, the Home country will *decrease* its production of airplanes.

6. In the HO model with **fixed world prices,** if immigration increases the labor force in the Home country, wages will fall and the return to capital will rise.

Short Answer Questions:

7. Assume we have a Ricardian model of trade with two countries (US, Mexico) producing two goods (apples, wheat). (18 points)

	Mexico	US
Total Labor	200	100
Total Possible Output of Each Good (if all labor were used to produce only that good)		
Apples	100	50
Wheat	40	40

   a. What is the marginal product of labor for each good in each country? (4 points)

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b. What is the price of Apples relative to Wheat in each country? (4 points)

c. Which country has the absolute advantage in the production of apples and wheat? (4 points)

d. Which country has the comparative advantage in the production of apples and wheat? (6 points)

8. Assume we have a Hecksher-Ohlin model from class. There are two countries (US, Mexico) producing two goods (shoes (S), computers (C)). Assume C is relatively capital intensive in production and the US is relatively capital abundant. (32 points)

   a. State the H-O Theorem. What will be the pattern of trade between the US and Mexico? (5 points)

   b. Show graphically what the trade equilibrium will look like using PPFs. Make sure to table: 1) the world price line 2) the production point of both countries 3) the consumption point of both countries 4) imports and exports for both countries and 5) the trade triangles. (10 points)

   c. Focusing on the U.S. compare the relative price of computers after trade with the autarky price (write an inequality). (4 points)

   d. Again, focusing on the U.S. and assume $\Delta P_s = 0$ and $\Delta P_C > 0$. Use the relative demand graph to show that the real wage declines and the real rental rate increases. In a few sentences explain your answer. (***Hint:*** *use the relative labor demand in both industries. It is not enough to show that the relative wage goes down.)* (8 points)

   e. Based on your answers to d. and e. which factor of production would oppose trade in the U.S.? (5 points)

9. Assume a country face **fixed world prices**. Suppose that there are two goods (fuel and wine). In the short run there are three factors of production: land used for oil fields (OIL), land used for vineyards (VY) and labor (L). Labor used in fuel production is L_F and Labor used in wine production is L_W. Suppose that the Home country has an influx of new labor through migration, which increases total labor force, $\bar{L}$. (20 points)

   a. What will happen to factor prices W, R_{OIL} and R_{VY}? Justify your answer with a diagram. (8 points)

   b. What will happen to the amount of labor utilized in both industries L_F and L_W? Justify your answer with the same diagram. (6 points)

   c. What will happen to the production of wine and fuel in the Home country? Graph the PPF before and after the change in labor and illustrate the change in production. (6 points)