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UF ID#: _____

**UNIVERSITY OF FLORIDA
WARRINGTON COLLEGE OF BUSINESS
DEPARTMENT OF ECONOMICS**

**ECO 3703
Fall 2006**

Instructor: Mujde Z. Erten
Course Examination

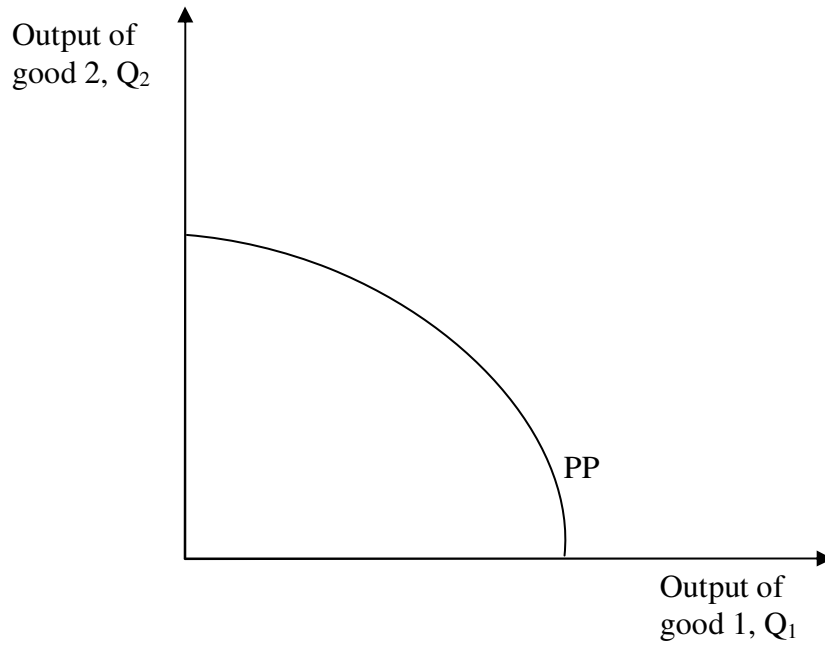
This is a closed book examination. You may only use a **non-programmable** calculator.

This examination consists of three sections. You are required to answer all of the questions. Part I consists of four short answer questions, total of 30 points. Part II consists of four True-False questions, each 5 points. Finally, Part III consists of two problems, each 25 points. You must show all of your work in order to receive credit for correct answers. Please indicate your reasoning, the intermediate steps of your analysis and the relevant intersections and tangencies in your diagrams.

Your total time is 115 minutes.
Good luck!

Initials: _____

3. (10 pts) Write down the Rybczynski Theorem (Chapter 4). Show the effect of an increase in the supply of land using the below graph of production possibilities (assume that good 1 is the land intensive good.). Explain briefly.



Initials: _____

4. (6 pts) Discuss the Heckscher–Ohlin Theorem briefly (explain the main idea and cite two of the underlying assumptions in a 2 countries-2 goods-2 factors of production model). Does this theory explain the North–South trade (discussed in class)? Explain briefly.

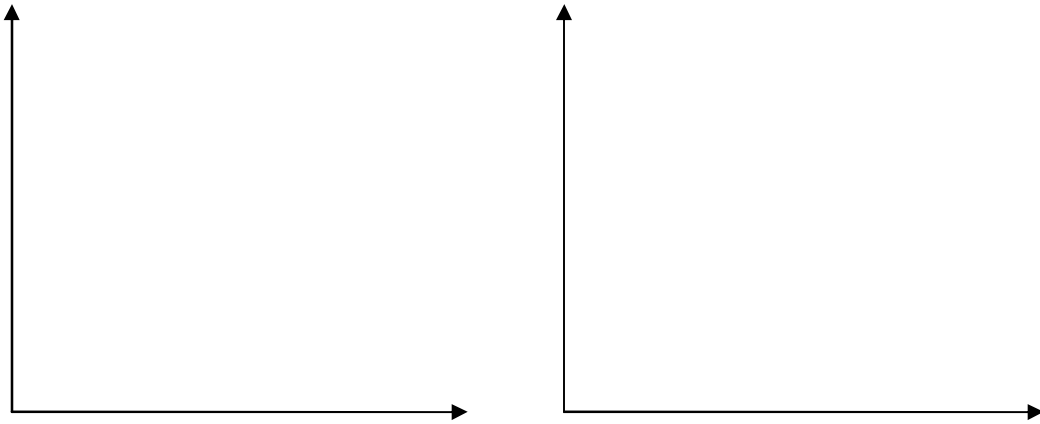
PART II

1. (5 pts) “Free trade is beneficial only if a country is more productive than foreign countries (Chapter 3).” True-False. Explain why.

PART III

1. Assume we have two countries: Home and Foreign. Home country has 2000 total supply of labor hours and the Foreign country has 2400 total supply of labor hours. Each country can produce two goods: cheese and wine. The unit labor requirements in Home country are 5 hours per cheese and 2 hours per wine. Foreign unit labor requirements for both cheese and wine are 3 hours per unit.

- (a) (5 pts) Write down the production possibility equation for each country. Also, draw both countries' production possibility frontier with cheese on the horizontal axis and wine on the vertical axis.



- (b) (5 pts) Identify absolute advantage and comparative advantage of Home and Foreign countries. Explain why.

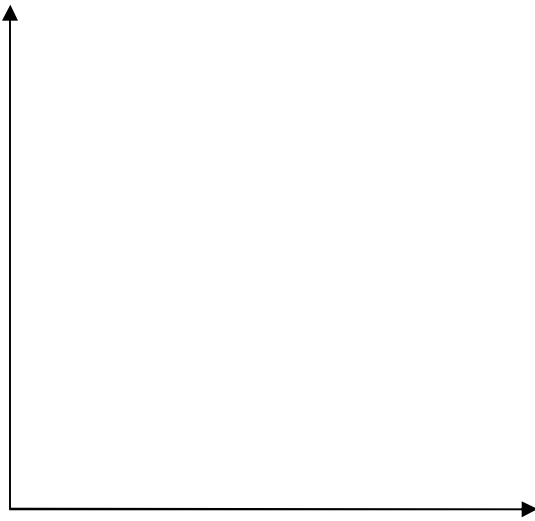
Initials: _____

- (c) (5 pts) Graph the world relative supply curve (Relative price of cheese - P_C / P_W - on the vertical axis and relative quantities of *world* production - $(Q_C + Q_C^*) / (Q_W + Q_W^*)$ - on the horizontal axis.). Suppose world relative demand takes the following form:

Demand for cheese/ Demand for wine = Price of wine/ Price of cheese

$$\text{i.e. } \left(\frac{D_C}{D_W} \right) = \left(\frac{P_W}{P_C} \right).$$

What is the equilibrium relative price of cheese? Show all your work.



Initials: _____

(d) (5 pts) What is the pattern of trade in free trade equilibrium? Why?

(e) (5 pts) Now assume that Home and Foreign countries are both able to produce and consume 2 more goods (apples and bananas) under autarky according to the unit labor requirements provided below.

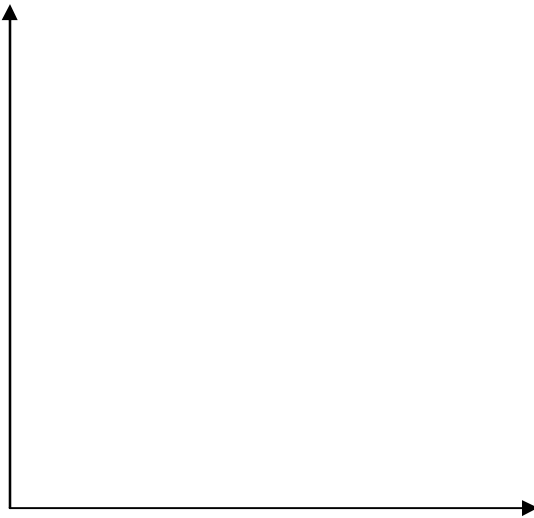
<i>Good</i>	<i>Home Unit Labor requirement</i>	<i>Foreign Unit Labor requirement</i>
Cheese	5	3
Wine	2	3
Apple	4	8
Banana	2	10

If wage rate in Home Country is 4 times that of the Foreign wage rate, which good(s) will be produced by Foreign country when there is free trade? Explain briefly.

Initials: _____

2. Assume that there is monopolistic competition in Home market for production of automobiles. Each firm incurs fixed production costs of \$5,000,000 and marginal costs of \$1,000. The demand parameter is $b = 1/50,000$. The total annual automobile sale in the Home market is 250,000 units.

- (a) (10 pts) Graph the price and cost curves for the home automobile industry with the price on the vertical axis and the number of firms on the horizontal axis. In the absence of trade, how many firms will produce automobiles, what would be the price, what would be the AC? Show all your work.



Initials: _____

(b) (10 pts) Suppose Home country engages in free trade with another country, Foreign, which has a market size of 750,000 units of automobiles. Furthermore assume that, when the two countries open up to trade due to knowledge spillovers between countries, the marginal cost of production in both countries decreases to $c = \$800$. If the consumers and producers are identical in both countries, find the number of firms, the price they charge, and the profit of each firm in the free-trade equilibrium.

(c) (5 pts) Compare the free trade equilibrium (given in part (b)) and autarky equilibrium (given in part (a)); explain the gains from trade for Home consumers.