

ECON 645, Spring 2019  
International Economics  
Midterm 1  
Instructor: Travis Freidman

**Exam Instructions:** This exam is worth a total of 100 points. You will have 1 hour and 20 minutes to complete the exam. All answers must be written on the white printer paper that I provided, nothing written on this question sheet will be graded. Please hand in both your question sheet and answer key at the end of the exam. Don't forget to write your name on your answer key!

**Part 1. Multiple Choice (30 points):** Please choose the appropriate answer for each of the following questions. Write your answer on your answer sheet.

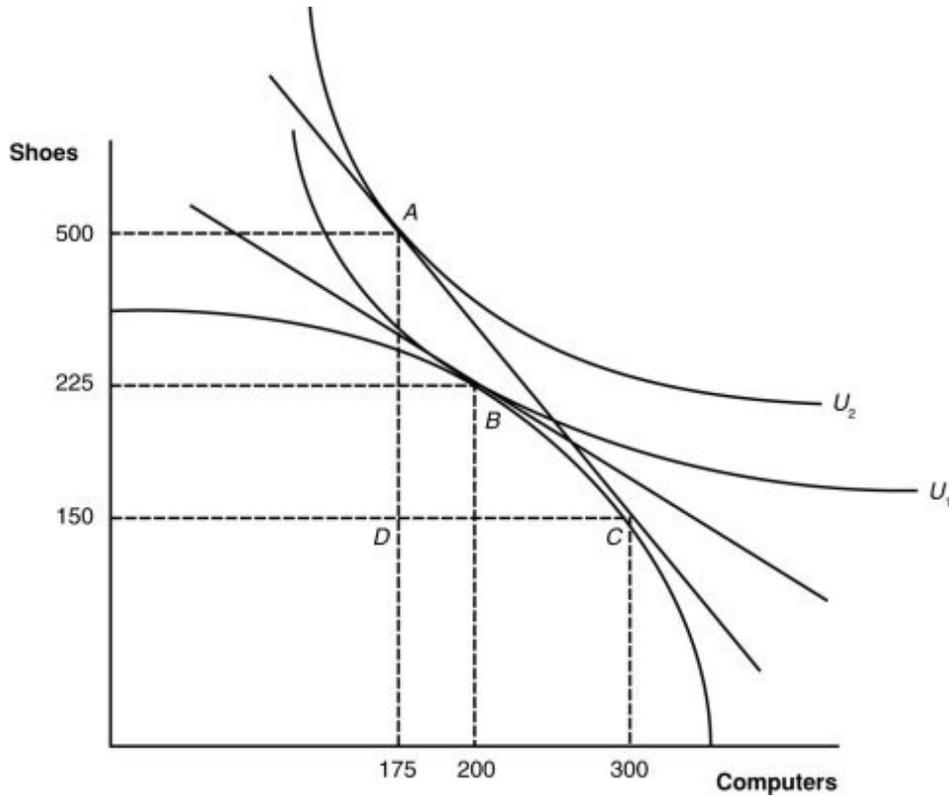
1. The United States requires 20 hours of labor to produce 1 ton of steel and 30 hours of labor to produce 1,000 board feet of lumber. In Canada, 20 hours of labor are required to produce 1 ton of steel and 25 hours of labor to produce 1,000 board feet of lumber. Which country has an absolute advantage in the production of steel?  
A) Neither the United States nor Canada has an absolute advantage.  
B) the United States  
C) Both the United States and Canada have an absolute advantage.  
D) Canada
  
2. Assume that Germany and China can produce beer and cloth. If the  $MPL_c/MPL_b$  for Germany is  $2/5$  and  $MPL_c/MPL_b$  for China is 1, then Germany and China have a comparative advantage in:  
A) beer and cloth, respectively.  
B) beer.  
C) cloth.  
D) cloth and beer, respectively.
  
3. Moving to a lower indifference curve means that a country is:  
A) lowering production.  
B) better off.  
C) worse off.  
D) indifferent.

4. In the two-sector (manufacturing and agriculture) specific-factors model, an increase in the price of manufactured goods will cause a(n):
- decrease in the nominal wage in the manufacturing sector.
  - change in the real rental of capital.
  - increase in the real rental of capital.
  - decrease in the real rental of capital.
5. In the two-sector (manufacturing and agriculture) specific-factors model, suppose that a country has a comparative advantage in manufacturing output. Will workers be better or worse off following the opening of trade with other countries?
- Workers will be better off because both nominal and real wages increase.
  - Workers may be better off or worse off because the real wage in terms of the agricultural good falls and the real wage in terms of the manufactured good rises.
  - Workers will be better off because the nominal wage increases.
  - Workers may be better off or worse off because the real wage in terms of the agricultural good rises and the real wage in terms of the manufactured good falls.
6. As a nation increases its production of exports, demand for *specific* or *fixed factors* (such as capital and land) used in the exporting sector will:
- fall.
  - remain the same.
  - decrease but only slightly.
  - rise.
7. (Table: Production and Prices in Two Industries) According to the information provided in the table, the wage rate in the agriculture sector is:

Marginal Product of Labor in Agriculture ( $MPL_a$ )	Marginal Product of Labor in Manufacturing ( $MPL_m$ )	Price of Agriculture Good ( $P_a$ )	Price of Manufacturing Good ( $P_m$ )
5	3	\$10	\$10

- \$30.
  - \$50.
  - \$10.
  - \$15.
8. LCD TVs are capital intensive, and tennis racquets are labor intensive. Suppose Canada has \$100 billion of capital and 2 million workers and Mexico has \$10 billion of capital and 20 million workers. According to the Heckscher–Ohlin model:
- Mexico will specialize in and export LCD TVs.
  - Mexico will import tennis racquets.
  - Canada will specialize in and export LCD TVs.
  - Canada will specialize in and export tennis racquets.

9. (Figure: A Country's Before and After Trade Equilibria) Suppose that the new international relative price of computers increases from the pre-trade price. If we then subtract the number of computers purchased domestically at the new international price from the number of computers produced, we will get one point on \_\_\_\_\_ for computers.



- A) the export supply schedule  
 B) the indifference curve  
 C) the import demand schedule  
 D) the production possibilities frontier
10. According to the Rybczynski theorem, how will immigration affect the receiving country's production of labor-intensive and capital-intensive goods?
- A) Production of both labor-intensive and capital-intensive goods will decrease.  
 B) Production of the labor-intensive goods will increase and production of capital-intensive goods will decrease.  
 C) Production of both labor-intensive and the capital-intensive goods will increase.  
 D) Production of labor-intensive goods will decrease and production of capital-intensive goods will increase.

**Part 2. Long Answers (70 points):** On your answer sheet, please respond to each question as thoroughly as possible, using any graphs that you may find useful in articulating your point.

11. Suppose that:

- In Malaysia, one worker can produce 10 pounds of rice or 5 pencils;
- In Indonesia, one worker can produce 6 pound of rice or 4 pencils;
- each country has 1000 workers to allocate between the production of rice and pencils; and
- in autarky, Malaysia consumes 5,000 pounds of rice and 2,500 pencils.
- when trade occurs, the international price of rice becomes  $3/5$  pencils per pound of rice.

Given this information tell me:

A) Which nation has an absolute advantage in each good?

B) What are the relative autarky prices of rice and pencils in each country?

C) In which product will each country specialize in and why?

D) Draw Malaysia's PPF, autarky price line, autarky consumption/production point, and autarky utility curve (labeled  $U_1$ )

E) To your graph from (D) illustrate the effects of trade to Malaysia by adding the world price line, a new utility curve (labeled  $U_2$ ), their new consumption point, and their new production point.

*EXTRA CREDIT (+5 points):* Tell me what the real wages are for both Malaysia and Indonesia with free trade.

12. Let's think about the specific-factor model, where the two-sector are manufacturing and agriculture. We can think of labor being used in both these industries, while land is only used in agriculture and capital is only used in manufacturing. When a country, with a comparative advantage in agricultural output, moves from an autarky to a free trade, tell me broadly what will happen to real rental rate on capital and land? Make sure to use any appropriate graphs to help with your explanation.

13. Consider the Heckscher–Ohlin model, one of the key results is the Stolper–Samuelson theorem.

A) What does the Stolper-Samuelson theorem say broadly?

B) Given your answer to (A), what does this suggest about who (ie which individuals in our H-O model) are the gainers and the losers from international trade if we have a nation with a high endowment of labor?