

ECO 352 – International Trade – Spring Term 2010
SAMPLE MIDTERM EXAM – ANSWER KEY

QUESTION 1: 20 points, 15 minutes

[1] (12 points) Krugman argues that nations don't compete in the sense that firms compete. A firm is uncompetitive if its market position is unsustainable: if, out of the revenue it can get by selling its products in the marketplace, it cannot pay its workers, suppliers and bondholders what they would earn in their alternative opportunities. This can never happen to a nation, mostly because the wages of a nation's citizens are not set exogenously in a world marketplace. If the country's average labor productivity is low, its wages will be low. Its products will cost less than those coming from other countries in those sectors or industries where its wage advantage outweighs its productivity disadvantage. Therefore it will be able to export those goods where it has a relatively smaller productivity disadvantage, that is, where it has a comparative advantage. To be sure, its standard of living will be lower than that of higher-productivity nations, and this is a cause for concern. But it simply cannot happen that a country cannot produce any goods at lower labor cost than other countries.

He also points out that if one country's productivity increases, this does not by itself reduce the standard of living in any other country. Any such effect operates through changes in the terms of trade, and there is no significant evidence of any systematic change of this kind.

Obsession with national competitiveness is dangerous because it can direct government policies and expenditures in wrong ways, instead of being properly directed to address specific market failures. It can also lead to protectionist policies that invite retaliation by other countries, to an even greater detriment of one's own country's standard of living than that caused by the initial low productivity.

[2] (8 points) “Industry A is said to be more capital-intensive than country B if, in the long run under free trade, capital earns a higher rate of return in A than in B.” This definition is false. In fact, in the long run where factors are mobile across sectors, capital must earn the same return in A as in B, regardless of whether the country is or is not trading goods.

The correct definition is: “Industry A is said to be more capital-intensive than country B if, at any given ratio of the wage rate to the capital return rate, the cost-minimizing capital/labor ratio is higher in A than in B.”

QUESTION 2: 40 points, 30 minutes

The two top figures show the indifference map, the autarkic or endowment point A, and the offer curve for England and Italy respectively. Variables have subscripts E for England and I for Italy. In each case, various possible budget lines through A are shown dashed. The optimal choices (the offer curve) are shown as the thick lines.

For Italy, note that when the budget line has slope 2, the optimal choice is indifferent all along the budget line. If slope < 2, only Gin is consumed.

In autarky, England can consume no Martinis (call this utility = 0), and Italy can consume alcohol equal to 100 Gin units.

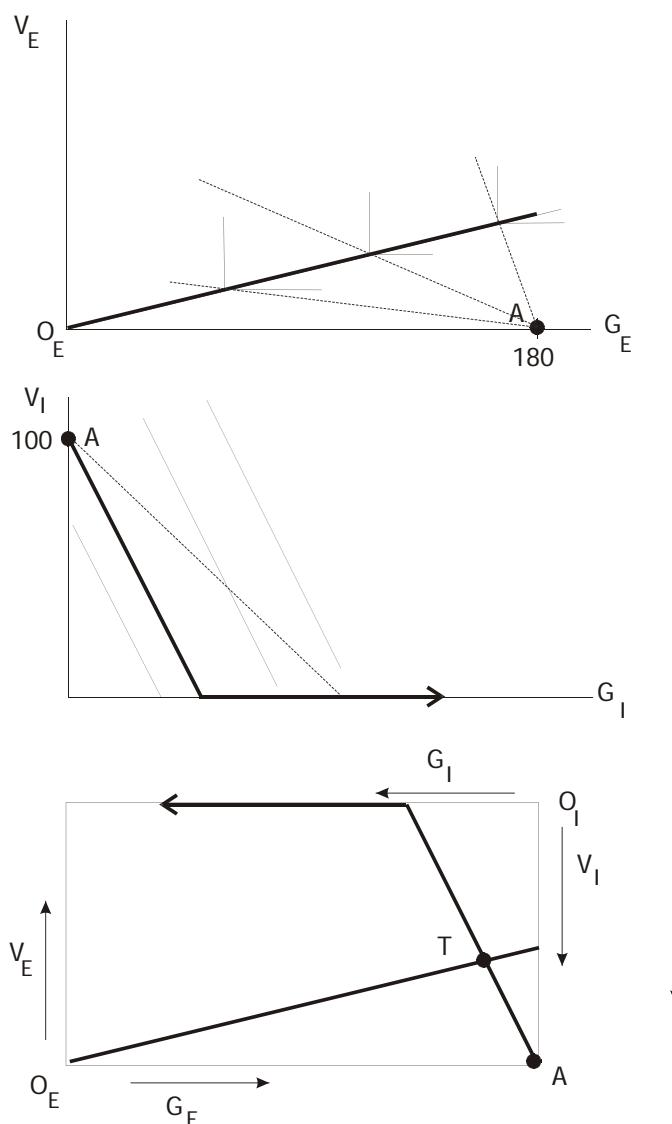
The third figure puts the offer curves in the Edgeworth box diagram and shows the trading equilibrium at T. There the relative price of Gin is 2.

By calculating the coordinates of T, we see that:

England consumes 160 units of Gin and 40 of Vermouth to get 40 Martinis, while Italy consumes 20 of Gin and 60 of Vermouth to get alcohol equal to 100 units of Gin.

England gets all the gain from trade. Italy gets no gain (but no loss either).

Grading: 10 points for each figure, 8 points for calculating the four consumption quantities, 2 points for the gains from trade question.



QUESTION 3: 40 points, 30 minutes

Since Canada exports Wheat, an improvement in its terms of trade means a rise in the price of Wheat relative to Clothing. (Of course when this happens Canada will continue to export Wheat.)

[A] Table of gains and losses (2.5 points per cell)

	Capital initially in		Labor initially in	
	Wheat	Clothing	Wheat	Clothing
Short run	Gain	Lose	Gain	Lose
Medium run	Gain	Lose	Ambiguous	Ambiguous
Long run	Gain	Gain	Lose	Lose

[B] Capital initially in Wheat gains in all runs:

(1 point) in the short run because it is specific to the sector whose relative price has risen,

(2 points) even more in the medium run as its marginal product increases because it works with more labor that is drawn in from the Clothing sector, so K/L in wheat goes down and MPK goes up,

(2 points) in the long run because Wheat is more capital-intensive (the Stolper-Samuelson effect).

[C] Capital initially in clothing

(1 point) loses in the short run because of its specificity to the sector whose relative price has fallen,

(2 points) it loses even more in the medium run as labor moves to the Wheat sector so the K/L ratio in Clothing increases and the marginal product of capital in Clothing falls,

(2 points) but gains in the long run by being itself able to move to the Wheat sector which is relatively capital-intensive (the Stolper-Samuelson effect).