1: Short Answers

Instructions: Respond to each question with a few sentences.

(a) Country A wants to encourage their firms to start selling cell-phones on the world market. Give two policies that the government can enact to incentivize these firms.

(b) Why would a country raise a tariff? Provide 2 real world examples.

(c) Why would a small country want to engage in trade? Why would a large country?

(d) How might a country encourage FDI?

(e) How did the Internet re-shape global trade?

(f) Give three reasons to explain why labor is not mobile between industries and/or countries.

(g) Define "effective labor force" using a formula. Why is it difficult to measure the effective labor force? Name a proxy that could fix this problem.

2: Ricardian Model

Freedonia produces and consumes 50 computers and 100 beats. Oceania produces and consumes 10 computers and 10 beats. The total labor supply in Freedonia and Oceania is 100 workers and 50 workers, respectfully. Currently, the countries do not trade with each other.

(a) Let $\left(\frac{P_c}{P_b}\right)^F = 2$. Draw the PPF of Freedonia with computers on the x-axis and beats on the y-axis. Find the marginal product of labor in each sector. Let $\left(\frac{P_c}{P_b}\right)^O = 1$. Draw the PPF of Oceania with computers on the x-axis and beats on the y-axis. Find the marginal product of labor in each sector.

(b) Which country has the comparative advantage in computers? Which country has the absolute advantage in beats? Explain your answer in words using either MPL or unit labor requirements. Suggest a possible relative price of computers that would induce these countries to trade. Which country exports and which imports.

(c) Assume that the countries trade with $\left(\frac{P_c}{P_b}\right)^T = 1.25$. What are the wages in each country after trade? Who has the higher wage?

(d) Redraw the graphs from part A with the new price line. Mark to new production points for each country. Label the intercepts of the new price line in each graph.

(e) Freedonia finally masters cloning and doubles their workforce. Oceania, on the other hand, loses half their work force to the plague. Redraw the PPF for both countries. Which country now has the comparative advantage in computers? Can you tell how this labor shift will change

consumption? If so, how does consumption of computers change for each country?

3: Specific-Factors Model

A single country has two industries: rice and textiles. Let the total amount of workers ($\overline{L}$) in the economy be 50 workers. The total stock of capital (K) is 15, and the total stock of land (T) is 20. Let L_t stand for the number of workers in the textile industry and L_r stand for the number of workers in the rice industry.

(a) Let the price of rice be 1 ($P_r = 1$) while the price of textiles is also 1 ($P_t = 1$). The marginal product of labor in the rice industry is a constant 6 ($MPL_r = 6$). The marginal product of labor in the textiles industry can be defined as the following: $MPL_t = 24L_t^{\frac{-1}{2}}$. With wage (w) on the y-axis and both L_t and L_r on the x-axis, graph the equilibrium wage and equilibrium L_t and L_r values. Make sure to fully solve for these values and label them in the graph.

(b) Let $MPK = 10$ and $MPT = 5$ when $K = 15$ and $T = 20$. Find the rental rate of capital (r) and the rental paid to land (a). Using that information, find the amount of units produced of both rice and textiles.

(c) Suppose P_r increases and MPL_r also increases. Describe what happens to the equilibrium wage and number of rice workers. There is no need to calculate the specific changes, only the direction of the change. Explain these changes.

(d) Now instead of the change in part c, suppose P_r increases and MPL_r decreases. What must be true for the equilibrium wage to increase.

(e) Prove that any increase in the price of one good in the specific factors model yields a smaller percentage increase in wage than the percentage increase in price. That is $\frac{\Delta W}{W} < \frac{\Delta P}{P}$. What does this tell us about the change in the quantity consumed of this good? Assume, unlike in the above sections, that both industries display diminishing MPL's.

(f) In the specific factors model, the gains to trade can be described as the difference between what two curves?