**ANSWERS MID TERM 342 VERSION 1 PINK EXAM**
**THESE ANSWERS ONLY PROVIDE SHORT ANSWERS.**

**Question 1:** What is the difference between horizontal and vertical FDI?
**Answer:** Horizontal FDI refers to the type of direct investment between industrialized countries as ways to avoid trade barriers, gain better access to the local economy, or draw on technical expertise in the area by locating near other established firms.
Vertical FDI, by contrast, occurs when a firm in an industrialized country lowers cost by relocating the production process to low-wage countries.

**Question 2:** Using the Ricardian model, explain why Canadian workers receive higher wages in the production of automobiles than Chinese workers.
**Answer:** Canadian automobile workers receive higher wages than Chinese automobile workers because Canada has an absolute advantage in the production of many goods, including automobiles. Be careful here, comparative advantage does not determine wage, absolute advantage does.

**Question 3:** When labor shifts from agriculture to manufacturing, why does the marginal product of capital increase while the marginal product of land falls?
**Answer:** When labor shifts from agriculture to manufacturing, the marginal product of land falls because there are fewer laborers to work on each acre of land. By contrast, the increase in the quantity of labor used in manufacturing will raise the marginal product of the capital because there are more laborers available to work on the machinery.

**Question 4:**
a. What is the opportunity cost of 1 unit of telephones in terms of televisions in Thailand?
**Answer:** 5. This is the case because by moving 1h of labor from television to telephone the economy loses 50 televisions and gains 10 telephones.
b. What is the opportunity cost of 1 unit of telephones in terms of televisions in Indonesia.
**Answer:** 2. This is the case because by moving 1h of labor from television to telephone the economy loses 10 televisions and gains 5 telephones.
c. Determine whether each of the following statements is true or false. Provide a brief explanation of why it is true or false.
i. Thailand has an absolute advantage in the production of both telephones and televisions.
**Answer:** TRUE: Thailand can produce more of both goods per hour than Indonesia.
ii. Indonesia has a comparative advantage in the production of telephones.
**Answer:** TRUE: Indonesia has a lower opportunity cost of producing telephones relative to Thailand.
iii. One possible production combination for Indonesia is 40 units of telephone and 80 units of televisions per hour.
**Answer:** FALSE: With a labor supply of 8, it is not possible for Indonesia to produce 40 units of telephone AND 80 units of televisions in an hour. This production requires 40/4+80/10hours=16 hours.
d. If the two countries engage in international trade, what will Thailand produce and how many?
**Answer:** Because Indonesia has the lower opportunity cost in the production of telephones and hence comparative advantage in producing this good, Thailand has a comparative advantage in

the production of televisions. Thus, Thailand will specialize in the production of televisions. Thailand will produce 50 (4)= 200 per hour.
e. What is the real wage in Thailand in terms of television?
**Answer:** The real wage in Thailand in terms of television is *MPLThai* =50 units of televisions.
f. What is the real wage in Indonesia in terms of telephone?
**Answer:** The real wage in Indonesia in terms of telephone is *MPLindo* =5 units of telephone.
g. Will Thailand and Indonesia trade if the international relative price of telephone is 3? Briefly explain why or why not.
**Answer:** Because the no-trade relative price of telephone with respect to television is 5 in Thailand and equal to 2 in Indonesia,the two countries will engage in trade if the international relative price of telephone is 3. In particular, Indoneisa will export telephones because the international relative price of telephone is higher than its no-trade equilibrium price. By contrast, Thailand will import telephones because the international relative price of telephone is lower than its no-trade equilibrium price.

**Question 5:** Saskaland, a small open economy, uses a mobile factor (labor) and two specific factors (drylands and wetlands) to produce two goods, wheat and rice. Dryland is only productive in growing wheat and wetlands can only grow rice. Suppose the world relative price of wheat increases and becomes higher than the relative price of wheat in Saskaland. Determine the effect of this price increase on the real wage and real returns on the different types of land.
**Answer:** Because the world-relative price of wheat is higher than in Saskaland, Saskaland will export wheat, which will lead to an increase in the real rental on drylands. Real wage will increase in terms of rice because of the increase in the price of wheat but will fall in terms of wheat because the percentage rise in the price of wheat is higher than the percentage increase in wage. The reasoning is the same as in Figure 3.6 of the textbook (relative change in price of manufacture corresponding to the relative change in price of wheat).

**Question 6:** Consider two countries, Spain and Italy,where the only two factors of production are capital and labor. Spain has 100 units of capital and 400 units of labor and Italy has 200 units of capital and 100 units of labor. Both countries produce two goods, wine and suits. The labor share in total production costs is 75% for wine but only 25% for suits.
a. Which country is labor abundant?
**Answer:** Because the labor/capital ratio is higher in Spain than Italy (i.e., $L\_S / K\_S > \_L\_I / K\_I = 400 / 100 > 100 / 200$), Spain is labor abundant.
b. Which industry is capital intensive?
**Answer:** Wine is more labor-intensive than suits because the share of total revenue paid to labor in the former (75%) is more than that share in the latter (25%).
c. Which country exports suites?
**Answer:** The no-trade relative price of suits in Italy is lower than the free-trade relative price because Italy is capital-abundant. According to the Heckscher-Ohlin theorem, when the two countries engage in trade, Italy will export the good that uses intensively the factor of production it has in abundance. Therefore, Italy will export suits.
d. In Italy the production of which good decreases under trade?
**Answer:** The answer to the previous question implies that the production of suits should rise in Italy and thus that the production of wine will decrease with trade.
e. In Spain the production of which good increases with trade?

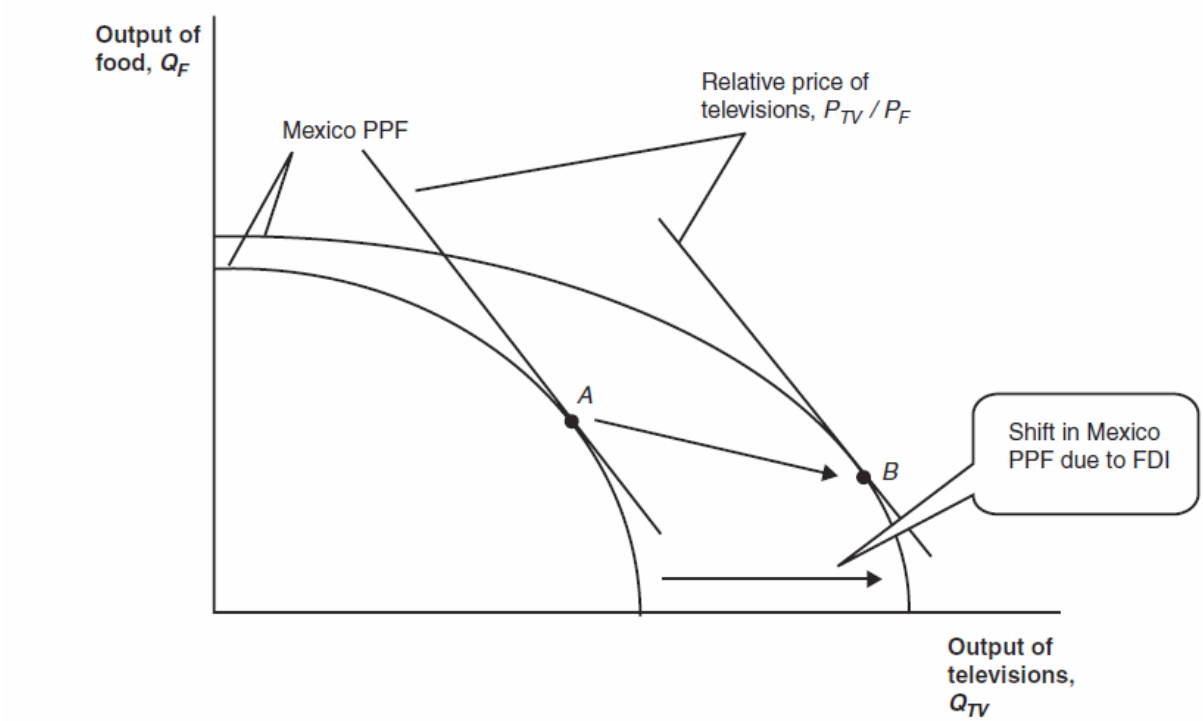
**Answer:** Spain has a comparative advantage in wine and will export wine to Italy. Thus it will specialize relatively in this product. The production will thus increases with trade.

**Question 7:** "Professionals and highly educated workers are more likely to oppose limits on free trade as compared with high-school–educated workers because they have a better understanding of international trade." Comment.
**Answer:** This statement is likely to be incorrect for Canada because Canada is relatively abundant in skilled labor as compared with trading partners such as China or India. Therefore, the Stolper-Samuelson theorem predicts that professionals and other skilled workers will gain in real earnings because Canada will export the goods that use intensively the factor of production it has in abundance (i.e., skilled labor). The reasoning can be opposite if it is done between say Canada and Germany in which case Germany may well be abundant in skilled workers relative to Canada.

**Question 8:** Assume that Mexico receives an inflow of FDI. Suppose two factors (labor and capital) are used in the production in two industries (food and televisions). Further assume that televisions are capital intensive as compared with food. Use the long-run specific-factors model to answer the following questions.

a. Show the impact of the inflow of FDI on Mexico in an illustration with output of food (televisions) on the vertical (horizontal) axis.

Answer:




b. What happens to the output of each good

**Answer:** Due to the inflow of FDI, more labor and more capital are in televisions so that the output of that industry goes up. By contrast, less labor and less capital are devoted to the production of food, leading to a fall in the output in this industry. As predicted by the Rybczynski theorem, the additional capital increased the output of the capital-intensive industry

(televisions) and decreased the output of the labor-intensive industry (food). See graph above.