

Name: _____

Student Number: _____



Midterm Exam I, Version I
ECO 1104 G: Introduction to Microeconomic Theory

Wednesday, February 3rd, 2016

Prof. Duangsuda Sopchokchai

Instructions:

There are **35** questions on the exam. True/False = 1 point each, Multiple Choices = 1 point each, and Short Answers = 6 points each. Total marks = **50**.

For the multiple choice questions, please circle the correct answer on the test paper. If you need to change your answer, please very clearly cross out your previous answer, circle and arrow to the correct answer. If the distinction between your old and new answer is not clear, no marks will be awarded.

Please answer all short answer questions in the spaces provided. Be sure to show all your work. Graphs should be clearly labeled (axes, curves and intercepts where relevant) and explained.

You have 1 hour and 15 minutes to complete the test.

No cellular phones are permitted.

Non-programmable calculators are permitted.

Good luck.

True / False

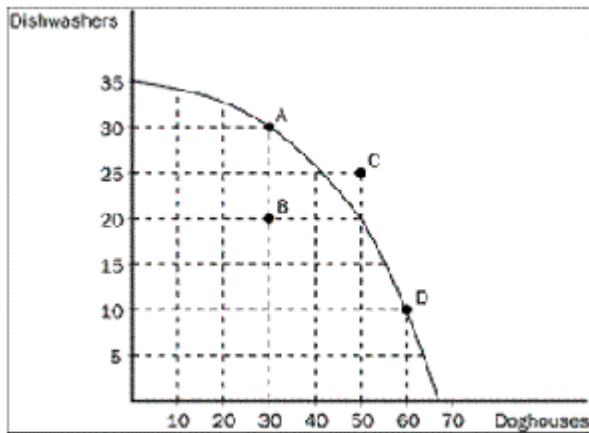
1. The tenth principle of economics shows the short-run tradeoff between inflation and economic growth.

- a. True
- b. False

2. An efficient outcome in economics is one in which the economy is conserving the largest possible amount of resources, while still meeting the needs of society.

- a. True
- b. False

Figure 2-11



3. Refer to Figure 2-11. The opportunity cost to the economy of moving from point A to point B is 10 dishwashers.

- a. True
- b. False

4. It takes Russell 6 hours to produce a bushel of corn and 2 hours to wash and polish a car. It takes Wilma 6 hours to produce a bushel of corn and 1 hour to wash and polish a car. Wilma and Russell cannot gain from specialization and trade, since it takes each of them 6 hours to produce 1 bushel of corn.

- a. True
- b. False

5. For a country producing two goods, the opportunity cost of one good will be the inverse of the opportunity cost of the other good.

- a. True
- b. False

6. Mark is a computer company executive and earns \$200 per hour managing the company and promoting its products. His daughter Regan is a high school student and earns \$6 per hour helping her grandmother on the farm. Mark's computer is broken. He can repair it himself in one hour. Regan can repair it in 10 hours. Mark has a comparative advantage repairing the computer.

- a. True
- b. False

7. When an increase in the price of one good lowers the demand for another good, the two goods are called complements.

- a. True
- b. False

8. Cross-price elasticity is used to determine whether goods are inferior or normal goods.

- a. True
- b. False

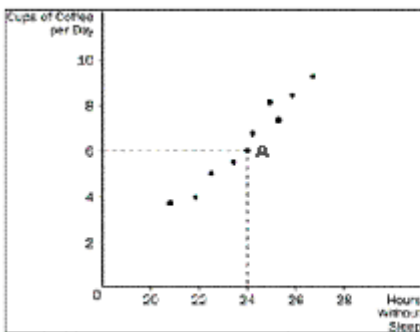
9. A linear demand curve has constant elasticity, but not constant slope.
- a. True
 - b. False
10. Normal goods have negative income elasticities of demand while inferior goods have positive income elasticities of demand.
- a. True
 - b. False
11. Surpluses drive price up while shortages drive price down.
- a. True
 - b. False
12. An increase in the price of pizza will shift the demand curve for pizza to the left.
- a. True
 - b. False

Multiple Choice

13. Which is the most correct statement about the relationship between inflation and unemployment?
- a. In the short run, reducing inflation is associated with falling unemployment.
 - b. In the short run, reducing inflation is associated with rising unemployment.
 - c. In the long run, reducing inflation is associated with falling unemployment.
 - d. In the long run, reducing inflation is associated with rising unemployment.
14. What does inflation cause?
- a. incomes to fall
 - b. productivity to increase
 - c. the government to lower taxes
 - d. the value of money to fall
15. What is one component necessary for markets to work?
- a. government intervention
 - b. a benevolent society
 - c. property rights
 - d. abundant resources

16. If France is better than Belarus at producing wine, but Belarus is better than France at producing crystal, what should happen?
- Belarus should sell crystal to France, and should buy French wine.
 - Belarus should impose a tariff on French wine in order to protect jobs in the Belarusian crystal industry.
 - Belarus should subsidize its wine industry so that it can compete with French wine.
 - Belarus should put a quota on the amount of French wine imported.
17. What happens when a relevant variable that is not named on either axis changes?
- There will be a movement along the curve.
 - The curve may or may not change depending on how the variables are related.
 - The curve will be unaffected since only the variables on the axis affect the curve.
 - The curve will shift.
18. What does a relatively steep demand curve mean?
- quantity demand will adjust slightly to a price change
 - quantity demand will adjust greatly to a price change
 - quantity demand will not adjust to a price change
 - the change in quantity demand will exactly equal a change in price

Figure 2-9



19. Refer to Figure 2-9. What do cups of coffee per day and the hours that someone can go without sleep have?
- a positive correlation
 - a negative correlation
 - a random correlation
 - no correlation
20. Regan grows flowers and makes vases. Jayson also grows flowers and makes vases, but Regan is better at producing both. Who has an absolute or comparative advantage in what activity?
- Regan has an absolute advantage in both activities.
 - Jayson has an absolute advantage in both activities.
 - Regan has a comparative advantage in growing flowers.
 - Jayson has a comparative advantage in growing flowers.

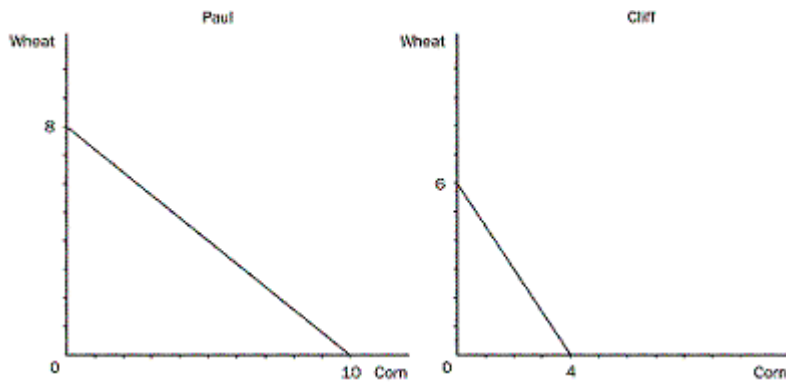
21. When will a production possibilities frontier be linear and not bowed out?
- if no tradeoffs exist
 - if the tradeoff between the two goods is always at a constant rate
 - if unemployment is zero
 - if resources are allocated efficiently

Table 3-1

| | Labour hours needed to make 1 kilogram: | Kilograms produced in 40 hours: | | |
|---------|---|---------------------------------|------|----------|
| | Meat | Potatoes | Meat | Potatoes |
| Farmer | 8 | 2 | 5 | 20 |
| Rancher | 4 | 5 | 10 | 8 |

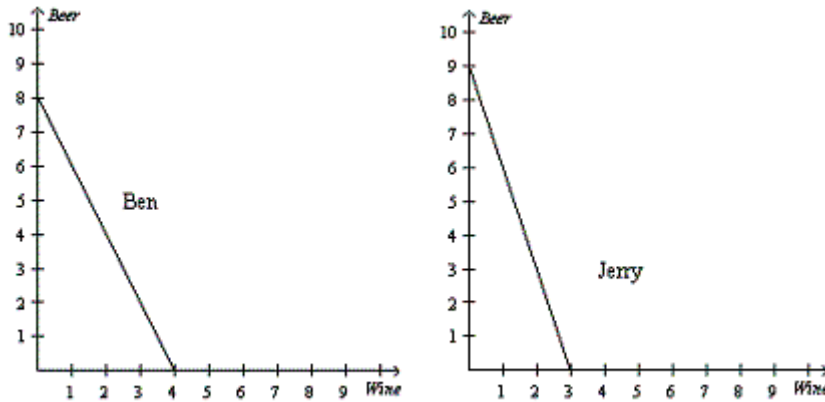
22. Refer to Table 3-1. How could the farmer and rancher both benefit?
- by the farmer specializing in meat and the rancher specializing in potatoes
 - by the farmer specializing in potatoes and the rancher specializing in meat
 - by the farmer specializing in neither good and the rancher specializing in both goods
 - by the farmer specializing in both goods and the rancher specializing in neither good

Figure 3-1



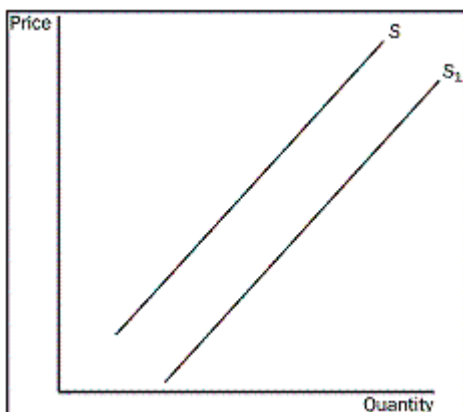
23. Refer to Figure 3-1. Assume that Cliff and Paul were both producing wheat and corn, and each was dividing their time equally between the two. Then they decide to specialize in the product they have a comparative advantage in and trade 3 bushels of wheat for 3 bushels of corn. What would Cliff now be able to consume?
- 4 bushels of wheat and 3 bushels of corn
 - 3 bushels of wheat and 4 bushels of corn
 - 3 bushels of wheat and 3 bushels of corn
 - 2 bushels of wheat and 3 bushels of corn

Figure 3-4



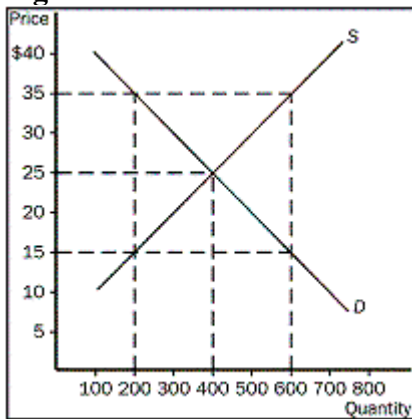
24. Refer to Figure 3-4. What does each of the two producers have a comparative or absolute advantage in?
- a. Ben has a comparative advantage in wine, and Jerry has an absolute advantage in both goods.
 - b. Ben has a comparative advantage in beer, and Jerry has an absolute advantage in both goods.
 - c. Ben has a comparative advantage in beer, and Jerry has an absolute advantage in wine.
 - d. Ben has a comparative advantage in wine, and Jerry has an absolute advantage in beer.
25. Refer to Figure 3-4. Suppose Ben and Jerry both spend half their time producing beer and half their time producing wine. How much wine and beer does each produce?
- a. Ben will produce 4 bottles of beer and 4 bottles of wine.
 - b. Ben will produce 4 bottles of beer and 2 bottles of wine.
 - c. Jerry will produce 1.5 bottles of beer and 4.5 bottles of wine.
 - d. Jerry will produce 8 bottles of beer and 4 bottles of wine.

Figure 4-1



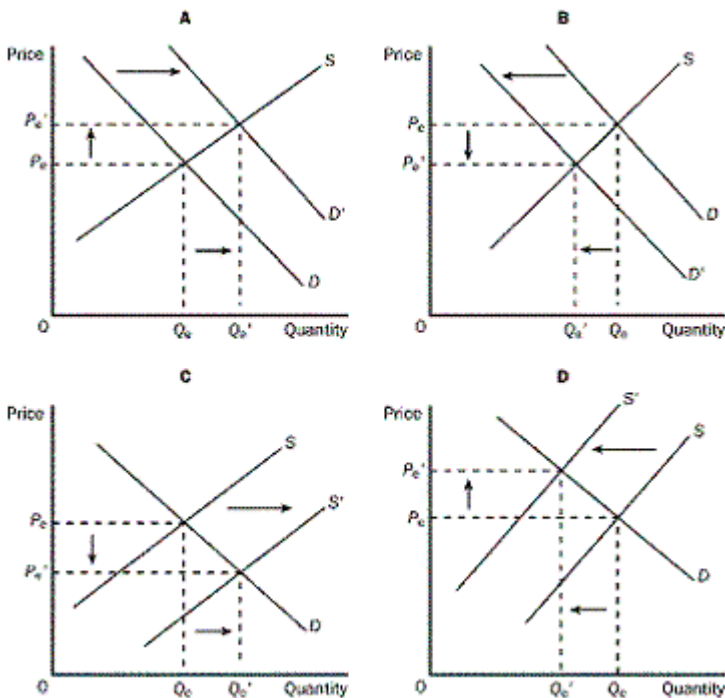
26. Refer to the Figure 4-1. What is the movement from S to S₁ called?
- a. a decrease in supply
 - b. a decrease in quantity supplied
 - c. an increase in supply
 - d. an increase in quantity supplied

Figure 4-2



27. Refer to the Figure 4-2. What would happen at a price of \$15?
- There would be a shortage of 400 units.
 - There would be a surplus of 400 units.
 - There would be a shortage of 200 units.
 - There would be a surplus of 200 units.

Figure 4-5



28. Refer to the Figure 4-5. Which of the four graphs represents the market for winter boots in June?
- graph A
 - graph B
 - graph C
 - graph D

29. Which chain of events is listed in the correct order?
- quantity supplied increases, price increases, demand increases
 - price increases, demand increases, quantity supplied increases
 - demand increases, price increases, quantity supplied increases
 - demand increases, quantity supplied increases, price increases
30. If a good is a luxury, what would demand for the good tend to be?
- inelastic
 - elastic
 - unit elastic
 - perfectly elastic
31. If a demand curve is vertical, what are its slope and elasticity?
- undefined and elasticity equals 0
 - 0 and elasticity is undefined
 - undefined, as is elasticity
 - 0, as is elasticity
32. Market demand is given as $Q^D = 220 - 4P$. Market supply is given as $Q^S = 2P + 40$. If price increases from \$42 to \$46, what is the price elasticity of demand?
- 0.3
 - 0.4
 - 4.0
 - 5.9

Short Answer

33. Gary and Diane must prepare a presentation for their marketing class. As part of their presentation, they must do a series of calculations and prepare 50 PowerPoint slides. It would take Gary 10 hours to do the required calculations and 10 hours to prepare the slides. It would take Diane 12 hours to do the calculations and 20 hours to prepare the slides.

- a. How much time would it take the two to complete the project if they divide the calculations equally and the slides equally?
- b. How much time would it take the two to complete the project if they use comparative advantage and specialize in calculating or preparing slides?
- c. If Diane and Gary have the same opportunity cost of \$5 per hour, is there a better solution than for each to specialize in calculating or preparing slides?

34. Suppose the market for standard one-family houses in a Canadian city is described by the equations $Q_d = (165 + IM) - 2.5P$, and $Q_s = -60 + 10P$, where Q represents the number of houses demanded or supplied per year (in 10s), P represents the price in 10 000s, and IM is the number of families immigrating into the city during the year, in 10s.

a) What is the equilibrium number of houses and the equilibrium price if there were no immigration ($IM=0$)? Show this situation in a graph.

Now, suppose 350 families have immigrated within the year ($IM=35$).

b) Show this new situation on your graph.

c) What are the new equilibrium price and number of houses?

d) How many of the “old” families (non-immigrant) have lost their ability to buy a house?

e) By how much does the number of houses supplied increase?

f) How many of the newcomers buy a house? How could you change the demand equation if you knew that only about 10 percent of the immigrating families buy a house in the year of their arrival?

35. Company E, Canada's largest ebook company, wants to increase its total revenue. One strategy is to offer a 15 percent discount on every ebook it sells. Company E knows that its customers can be divided into two distinct groups according to their likely responses to the discount. The accompanying table shows how the two groups respond to the discount.

| | Group I (books per day) | Group II (books per day) |
|---------------------------|-------------------------|--------------------------|
| Sales before the discount | 5000 | 4500 |
| Sales after the discount | 5400 | 5500 |

- Using the midpoint method, calculate the price elasticities of demand for group I and group II.
- Explain how the discount will affect total revenue from each group.
- Suppose Company E knows which group each customer belongs to when he logs on and can choose whether or not to offer the discount. If Company E wants to increase its total revenue, should discounts be offered to group I or to group II, to neither group, or to both groups?

SCRATCH PAPER