

Name: _____

Student Number: _____

Midterm Exam I
ECO 1104 F: Introduction to Microeconomic Theory

Monday, February 5th, 2018

Prof. Catherine Deri Armstrong

Instructions:

There are **27** questions on the exam – points for each question are in brackets beside the question number. Total marks = **45**.

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 space 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.

Multiple Choice Questions (1 mark each)

1. Approximately what percentage of the world's economies experience scarcity?
 - a. 25%

ANS: B

REF: 27

7. Which of the following concepts is NOT illustrated by the production possibilities frontier?
- a. efficiency
 - b. opportunity cost
 - c. equity
 - d. tradeoffs

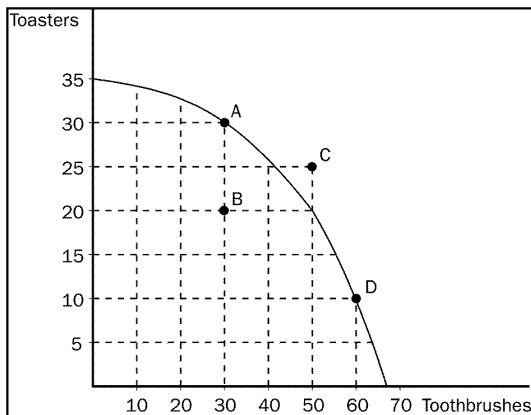
ANS: C

REF: 27

8. Which of the following is an example of a normative statement?
- a. If the price of a product decreases, quantity demanded increases.
 - b. Reducing tax rates on the wealthy would be good for the country.
 - c. If the national saving rate were to increase, so would the rate of economic growth.
 - d. All of the above are correct.

ANS: B

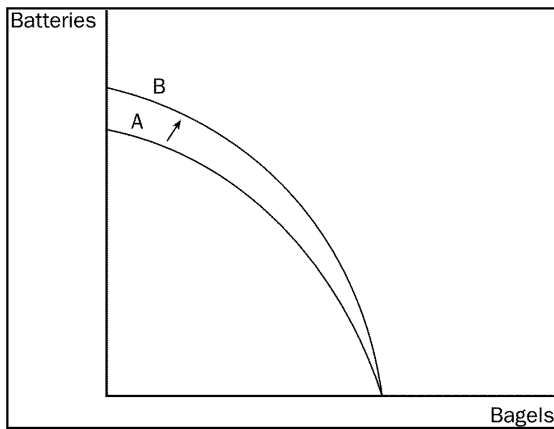
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9. **Refer to the Figure above.** The opportunity cost of getting 15 additional toasters by moving from point D to point C is
- a. 10 toothbrushes.
 - b. 20 toothbrushes.
 - c. 30 toothbrushes.
 - d. It is impossible for the economy to move from point D to point C.

ANS: D

REF: 27



10. **Refer to the Figure above.** The shift of the frontier from A to B was most likely caused by which of the following?
- technological improvement in the production of batteries
 - more labour available in the economy
 - a general technological breakthrough
 - more capital available in the economy

ANS: A REF: 27

11. Suppose that Korea produces shoes and soccer balls. For Korea,
- it should specialize in the product in which it has an absolute advantage.
 - it would be impossible to have an absolute advantage in both goods.
 - it would be difficult to benefit from trade since Korea is efficient in the production of both goods.
 - the opportunity cost of shoes will be the inverse of its opportunity cost of soccer balls.

ANS: D REF: 53

Table

	Labor Hours Needed to Make 1 Pound of:		Pounds produced in 40 hours:	
	Meat	Potatoes	Meat	Potatoes
Farmer	8	2	5	20
Rancher	4	5	10	8

12. **Refer to the Table above.** The opportunity cost of 1 pound of meat for the farmer is
- 1/4 hour of labour.
 - 4 hours of labour.
 - 4 pounds of potatoes.
 - 1/4 pound of potatoes.

ANS: C REF: 53

13. **Refer to the Table above.** The Farmer has an absolute advantage in
- meat, and the Rancher has an absolute advantage in potatoes.
 - potatoes, and the Rancher has an absolute advantage in meat.
 - meat, and the Rancher has an absolute advantage in meat.
 - neither good, and the Rancher has an absolute advantage in both goods.

ANS: B REF: 53

14. Buyers and sellers who have no influence on market price are referred to as
- price makers.
 - market pawns.
 - price takers.
 - powerless.

ANS: C REF: 66

15. If Francis receives a decrease in his pay, we would expect
- Francis's demand for each good he purchases to remain unchanged.
 - Francis's demand for normal goods to increase.
 - Francis's demand for luxury goods to increase.
 - Francis's demand for inferior goods to increase.

ANS: D REF: 70

Table 4-3

	An Increase in Supply	A Decrease in Supply
An Increase in Demand	A	B
A Decrease in Demand	C	D

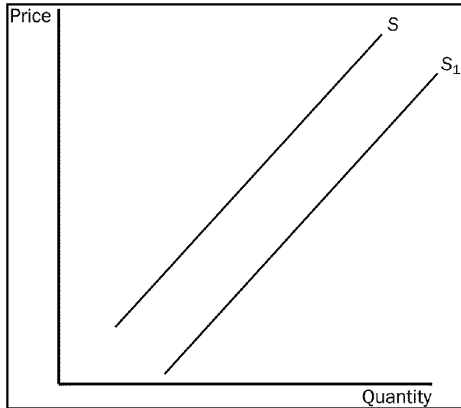
16. **Refer to Table 4-3.** The space that would represent an increase in equilibrium quantity and an indeterminate change in equilibrium price would be
- A
 - B
 - C
 - D

ANS: A DIF: Challenging REF: 82

17. **Refer to Table 4-3.** The space that would represent an increase in equilibrium price and an indeterminate change in equilibrium quantity would be
- A
 - B
 - C
 - D

ANS: B

DIF: Challenging REF: 82

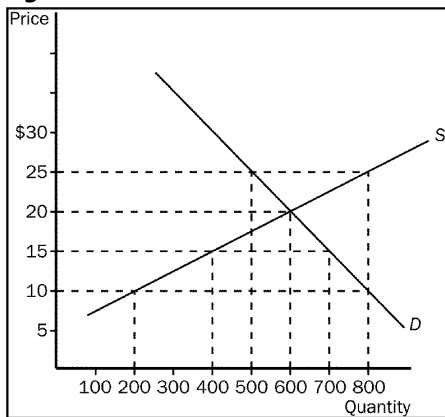


18. Refer to the Figure above. The movement from S to S_1 could be caused by
- a. a decrease in the price of the good.
 - b. an improvement in technology.
 - c. an increase in income.
 - d. an increase in input prices.

ANS: B

REF: 76

Figure



19. Refer to the Figure above. If the price is \$10, there would be a
- a. shortage of 200 and price would rise.
 - b. surplus of 200 and price would fall.
 - c. shortage of 600 and price would rise.

d. surplus of 600 and price would fall.

ANS: C REF: 79

20. In general, elasticity is

- a. the friction that develops between buyers and sellers in a market.
- b. a measure of how much government intervention is prevalent in a market.
- c. a measure of how competitive a market is.
- d. a measure of how much buyers and sellers respond to changes in market conditions.

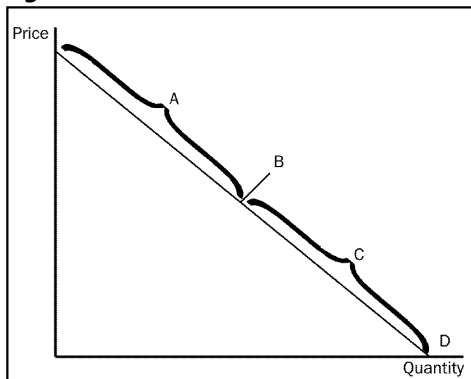
ANS: D REF: 92

21. If a good is a luxury, demand for the good would tend to be

- a. inelastic.
- b. elastic.
- c. unit elastic.
- d. horizontal.

ANS: B REF: 92

Figure



22. Refer to Figure above. The section of the demand curve labeled A represents the

- a. elastic section of the demand curve.
- b. inelastic section of the demand curve.
- c. unit elastic section of the demand curve.
- d. perfectly elastic section of the demand curve.

ANS: A REF: 98

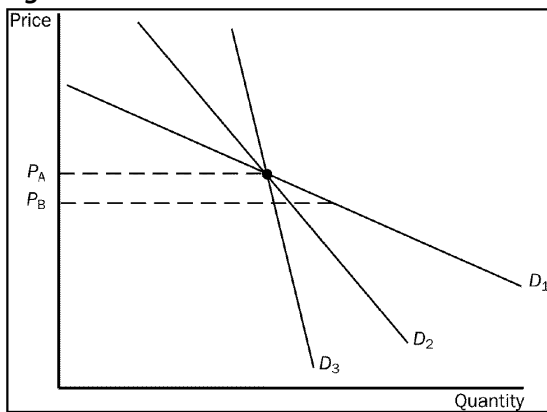
23. A key determinant of the elasticity of supply is

- a. the ability of sellers to change the price of the good they produce.
- b. the number of firms in the market.
- c. how responsive buyers are to changes in sellers' prices.
- d. the ability of sellers to change the amount of the good they produce.

ANS: D

REF: 103

Figure 5-4



24. Refer to Figure 5-4. As price falls from P_A to P_B , which demand curve is most elastic?

- a. D_1
- b. D_2
- c. D_3
- d. All of the above are equally elastic.

ANS: A

REF: 97-103

25. If two goods are substitutes, their cross-price elasticity will be

- a. positive.
- b. negative.
- c. zero.
- d. 1.

ANS: A

REF: 105-106

Short Answer Please answer the following questions in the space below.

26. A German worker takes 400 hours to produce a car and 2 hours to produce a case of wine. A French worker takes 600 hours to produce a car and X hours to produce a case of wine. **(4 marks)**

- a. For what values of X will gains from trade be possible? Explain.

Answer

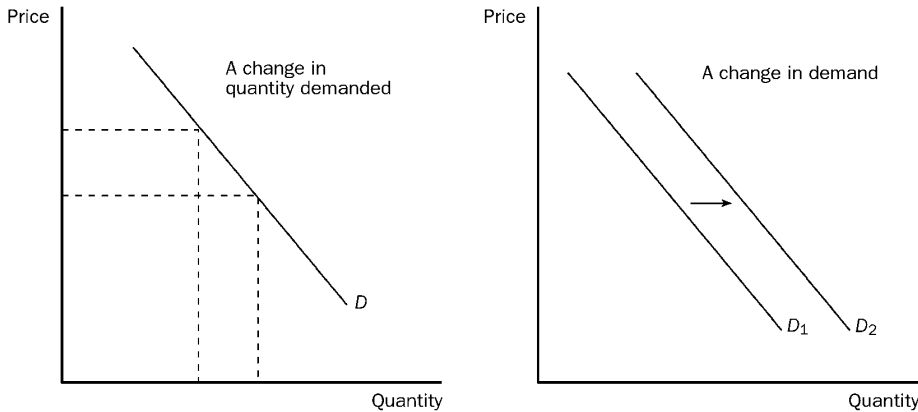
a. Gains from trade will be possible when X does not equal 3. Gains from trade are possible when a comparative advantage exists. The opportunity cost of 1 car in Germany is 200 cases of wine (400 hours/2 hours per case of wine). Likewise, the opportunity cost of 1 case of wine in Germany is 1/200 car. When $X = 3$, the opportunity cost of 1 car in France is 200 cases of wine (600 hours/3 hours per case

of wine). In this instance, neither country has a comparative advantage. At all other values of X , a comparative advantage will exist.

27. What is the difference between a "change in demand" and a "change in quantity demanded"? Graph your answer. (5 marks)

ANS:

A. A change in demand refers to a shift in the demand curve. A change in quantity demanded refers to a movement along a fixed demand curve.



REF: 70

28. Because bagels and cream cheese are often eaten together, they are complements.

We observe that both the equilibrium price of cream cheese and the equilibrium quantity of bagels have risen. What could be responsible for this pattern? A fall in the price of flour or a fall in the price of milk? Illustrate and explain your answer. (4 marks)

((We observe that the equilibrium price of cream cheese has risen but the equilibrium quantity of bagels has fallen. What could be responsible for this pattern? a rise in the price of flour or a rise in the price of milk? Illustrate and explain your answer. (4 marks)))

Answer

- a. If the price of flour falls, since flour is an ingredient in bagels, the supply curve for bagels would shift to the right. The result, shown in Figure 27, would be a fall in the price of bagels and a rise in the equilibrium quantity of bagels.

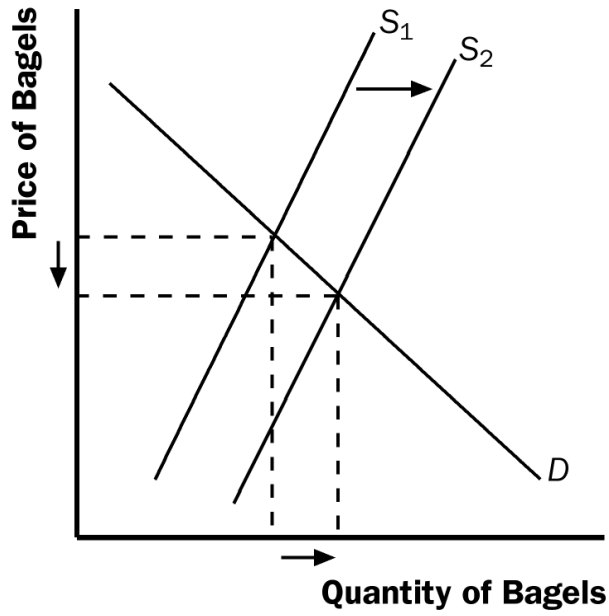


Figure 27

Since cream cheese is a complement to bagels, the fall in the equilibrium price of bagels increases the demand for cream cheese, as shown in Figure 28. The result is a rise in both the equilibrium price and quantity of cream cheese. So, a fall in the price of flour indeed raises both the equilibrium price of cream cheese and the equilibrium quantity of bagels.

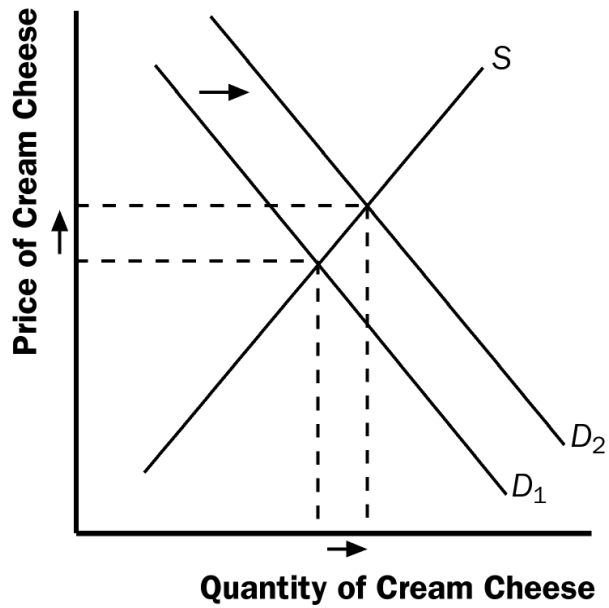


Figure 28

What happens if the price of milk falls? Since milk is an ingredient in cream cheese, the fall in the price of milk leads to an increase in the supply of cream cheese. This leads to a decrease in the price of cream cheese (Figure 29), rather than a rise in the price of cream cheese. So a fall in the price of milk could not have been responsible for the pattern observed.

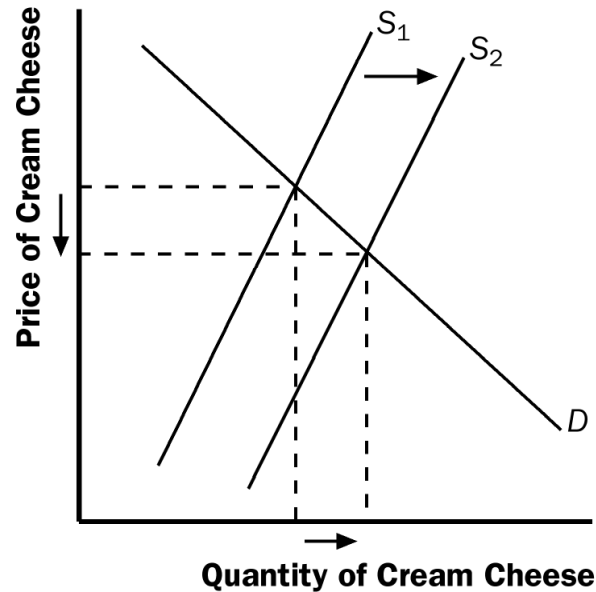
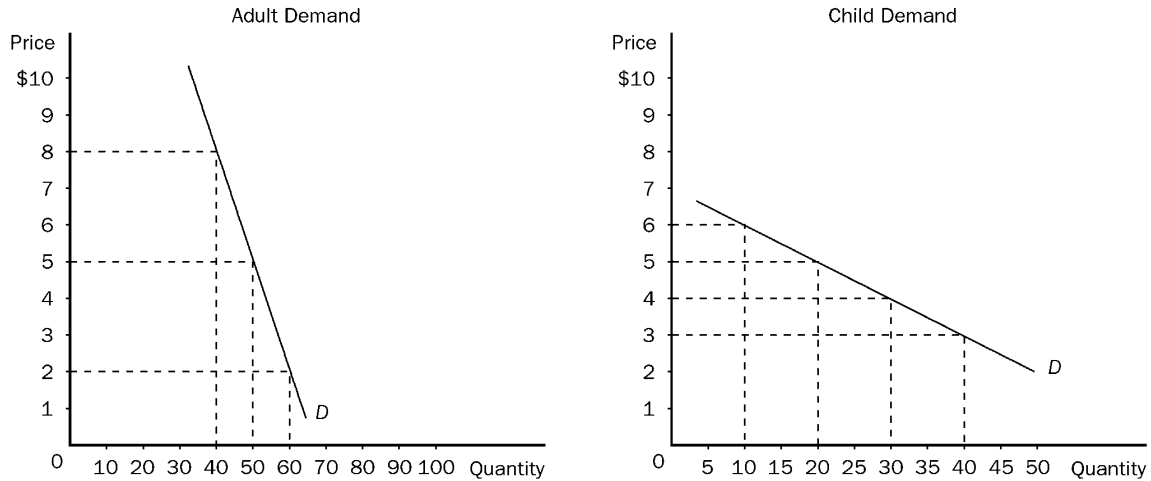


Figure 29

- b. In part (a), we found that a fall in the price of flour led to a rise in the price of cream cheese and a rise in the equilibrium quantity of bagels. If the price of flour rose, the opposite would be true; it would lead to a fall in the price of cream cheese and a fall in the equilibrium quantity of bagels. Since the question says the equilibrium price of cream cheese has risen, it could not have been caused by a rise in the price of flour.

What happens if the price of milk rises? From part (a), we found that a fall in the price of milk caused a decline in the price of cream cheese, so a rise in the price of milk would cause a rise in the price of cream cheese. Since bagels and cream cheese are complements, the rise in the price of cream cheese would reduce the demand for bagels, as Figure 30 shows. The result is a decline in the equilibrium quantity of bagels. So a rise in the price of milk does cause both a rise in the price of cream cheese and a decline in the equilibrium quantity of bagels.

29. You own a small town movie theatre. You currently charge \$5 per ticket for everyone who comes to your movies. Your friend who took an economics course in college tells you that there may be a way to increase your total revenue. Given the demand curves shown, answer the following questions.



- What is your current total revenue for both groups? **(3 marks)**
- What is the price elasticity of demand between the prices of \$5 and \$2 in the adult market? Is this elastic or inelastic? Be sure to include a general equation and your calculations. **(3 marks)**
- What is the elasticity of demand between \$5 and \$3 in the children's market? Be sure to include a general equation and your calculations. Is this elastic or inelastic? **(3 marks)**
- Given the graphs and what your friend knows about economics, he recommends you increase the price of adult tickets to \$8 each and lower the price of a child's ticket to \$3. How much could you increase total revenue if you take his advice? **(3 marks)**

ANS:

- Total revenue from children's tickets is \$100 and from adult tickets is \$250. Total revenue from all sales would be \$350.
- The elasticity of demand between \$5 and \$2 is 0.26 or inelastic.
- The elasticity of demand between \$5 and \$3 is 1.33 or elastic.
- If price is increased to \$8 for adult tickets (maximum for the graph) and price decreased to \$3 for child tickets (minimum for graph), total revenue would increase to \$440 (\$8 (40 + \$3 (40) or \$90 more than before.

End