

Econ2010  
Practice Exam#2

**I. Multiple Choice (12 questions – 4 points apiece)** Select the best answer to each of the following questions. Place your response to each question in the space provided on the last page. Only answers placed in these blanks will receive consideration.

1) Suppose that Kathy drinks coffee and tea and is in consumer equilibrium. The marginal utility of the last cup of coffee that she drank was 8, while the marginal utility of the last cup of tea she had was 7. If the price of the tea is \$0.70 per cup, what is the price of a cup of coffee?

- a. \$1.14
- b. \$0.80
- c. \$0.88
- d. \$0.61

2) Suppose that a consumer's annual income decreased by \$300, causing a 15% decrease in the units of prime rib the consumer demands. If the consumer has an income elasticity of demand of 1 for prime rib, what is her new income?

- a. \$2700.
- b. \$3000.
- c. \$1700.
- d. \$3300.

3) Jeff is a freelance photographer who could work for the Bloomington Herald-Times at a salary of \$32,000. Instead, Jeff works for himself for \$44,000. Jeff faces business expenses of \$5,000 for photographic equipment and \$6,000 for rent on his studio. Jeff's accountant says that he had a profit of \_\_\_\_\_ last year, while Jeff's economist determines that he had a profit of \_\_\_\_\_ last year.

- a. \$12,000 , \$33,000
- b. \$21,000 , \$12,000
- c. \$33,000 , \$33,000
- d. \$33,000 , \$1,000

4) The Rocky Mountain Spring Water company experiences a surge in orders for its product because the spring water of one of its major competitors is taken off the market as a result of news that samples of the competitor's water are contaminated with benzene. As the Rocky Mountain Spring Water company struggles to increase its production of bottled water it finds that the marginal product of labor, its only variable input, approaches zero. When the marginal product of labor becomes zero later this month, this firm:

- a. will still be able to fill additional orders this month without hiring more workers.
- b. will not be able to fill any additional orders this month.
- c. will be able to fill additional orders this month by hiring more workers.
- d. will achieve maximum output per unit of labor.

5) A producer can make either frozen yogurt or ice cream. If the demand for frozen yogurt increases, then the

- A. demand for ice cream will increase.
- B. supply of ice cream will increase.
- C. demand for ice cream will decrease.
- D. supply of ice cream will decrease.

6) Which of the following correctly describes how price adjustment eliminates a shortage?

- A. As the price rises, the quantity demanded decreases while the quantity supplied increases.
- B. As the price rises, the quantity demanded increases while the quantity supplied decreases.
- C. As the price falls, the quantity demanded decreases while the quantity supplied increases.
- D. As the price falls, the quantity increases while the quantity supplied decreases.

7) Joanna can buy either pizza or soda. If the price of pizza and soda doubles, and so does Joanna's money income for that month, we can deduce that Joanna's budget constraint for that month will

- a. remain unchanged.
- b. shift in but remain parallel to the old one.
- c. shift out but remain parallel to the old one.
- d. swivel in so that the slope of the budget constraint is doubled.

8) A popular song in Texas during the early 1970's was entitled "Freeze a Yankee." This song title was cited as evidence of a growing concern among Texas citizens that too much of the state's limited natural gas resources were being sold to other states. Using conventional supply and demand analysis, what would have been the most likely effect on the price of natural gas if the Texas government had imposed a quota reducing out-of-state sales of natural gas?

The price of natural gas in Texas would have tended to:

- a. fall, as would the price in other states.
- b. rise, as would the price in other states.

- c. fall, and the price in the other states would have tended to rise.
- d. rise, and the price in other states would have tended to fall.

9) A consumer's annual income increases by \$200, causing a 10% increase in the number of units of salmon the consumer demands. If the consumer has an income elasticity of demand for salmon of 1, what is her new income?

- a. \$2400.
- b. \$2600.
- c. \$2200.
- d. \$1800.

10) If a \$20 per-unit tax on CD players raises the equilibrium price paid by consumers by \$4, then the supply curve is

- a. less elastic than the demand curve.
- b. more elastic than the demand curve.
- c. shifted upward by \$4.
- d. shifted downward by \$4.

11) The current equilibrium price of wheat is \$4 per bushel. Suppose that the US Government agrees to support the price of wheat at a price level of \$6 per bushel by buying and storing any surplus that cannot be sold on the free market. The quantity of wheat purchased by the US Government will be greater

- a. the greater the elasticity of supply of wheat.
- b. the greater the elasticity of demand of wheat.
- c. the greater the inelasticity of supply of wheat.
- d. either a or b.
- e. both b and c.

12) Suppose that you own a small grocery store. You manage the store yourself and put in 40 hours a week doing so. You also own the building that houses the store. At the end of the year your accountant tells you that you broke even because total revenues just equaled your accounting cost. This implies

- a. your normal profit was zero.
- b. your implicit costs were zero.
- c. your economic profit was positive.

d. your economic profit was negative.

**II. Analytical Problem (15 points) Given the following situation, answer each of the following questions. For each part, circle your final answer. Partial credit will be given. If you need more room, use the back of this page.**

Bagels				Milk			
<u>Qty.</u>	<u>TU(B)</u>	<u>MU(B)</u>	<u>MU(B)/P(B)</u>	<u>Qty.</u>	<u>TU(M)</u>	<u>MU(M)</u>	<u>MU(M)/P(M)</u>
0	0	_____	_____	0	0	_____	_____
1	600	_____	_____	1	400	_____	_____
2	1120	_____	_____	2	750	_____	_____
3	1620	_____	_____	3	1010	_____	_____
4	1620	_____	_____	4	1260	_____	_____
5	1970	_____	_____	5	1420	_____	_____

Assume for all questions that your income is \$5

- 1) (2 point) Given that the price of bagels ( $P(B)$ ) is \$2.00, and the price of a cup of milk ( $P(M)$ ) is \$0.50. Draw and completely label your budget constraint. Label this Graph A.
- 2) (2 points) For the situation in (1), determine  $MU(B)$ ,  $MU(B)/P(B)$ ,  $MU(M)$ ,  $MU(M)/P(M)$ .
- 3) (4 points) At the consumer equilibrium, what is  $MU/P$  for both bagels and milk? How much of each good is consumed at the equilibrium? Show this combination on Graph A, labeling it point X.
- 4) (3 points) Now, suppose that  $P(M)=\$2.00$ . Draw and completely label your new budget constraint. Label this Graph B.
- 5) (4 points) From this situation in (4), determine  $MU(M)/P(M)$ . What are the new quantities of each good that are consumed at equilibrium? Label this point Y on graph B.

**III. Analytical Problem (15 points)** Given the following situation, answer each of the following questions. For each part, circle your final answer. Partial credit will be given. If you need more room, use the back of this page.

Suppose the schedule below depicts the demand and supply for bushels of corn in Monroe County, Indiana in October, 1997.

<u>Price (\$)</u>	<u>Quantity Demanded</u>	<u>Quantity Supplied</u>
4	850	115
3.75	900	1100
3.50	950	1050
3.25	1000	1000
3.00	1050	950
2.75	1100	900
2.50	1150	850

- 1) (2 point) What is the equilibrium price and quantity of bushels of corn for this month in Monroe County?
- 2) (2 points) Farms are going bankrupt and leaving the business, as they cannot make a living producing at the current equilibrium price. The federal government, concerned over this face, passes legislation stating that prices for bushels of corn cannot fall below \$3.75 per bushel. In this new shortage or surplus, and how large is it?
- 3) (3 points) In (2), if there is a surplus of corn, how can this surplus be eliminated? If the government buys this

surplus, how much must it spend to do so?

4) (4 points) Now, instead of the above legislation in part (2), the government now decides to provide a subsidy of \$0.50 per bushel to each farmer. What is the new equilibrium quantity of bushels of corn? How much do consumers pay for each bushel in this situation? How much do the farmers receive for each bushel in this situation?

5) (4 points) Under the subsidy in part (4), what is the total government expenditure for this subsidy program?