

ECO 101 Principles of Economics

Exam 1 Form A Answers

7 February 2013

Name: _____

1 Multiple Choice

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| <p>Circle the letter corresponding to the best answer. Each question is worth 1 point. Answers in <i>italics</i>.</p> |
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1. If the income elasticity of demand for a good is negative, it must be:
A. an elastic good. B. a normal good. C. *an inferior good*. D. a luxury good.
2. Since people respond to incentives, we would expect that, if the average salary of accountants increases by 50% while the average salary of teachers increases by 20%, then
A. fewer students will take degree courses in accounting and more will take education courses.
B. *fewer students will take degree courses in education and more will take accounting courses*.
C. fewer students will attend university.
D. none of these answers.
3. If demand is linear (a straight line), then price elasticity of demand is
A. *elastic in the upper portion and inelastic in the lower portion*.
B. inelastic in the upper portion and elastic in the lower portion.
C. inelastic throughout.
D. constant along the demand curve.
E. elastic throughout

4. Suppose that the elasticity of demand for a product is 2.0 and price decreases by 10%. By what percentage will quantity demanded increase?
A. 200% B. 20% C. 2% D. 10%
5. Suppose there is an increase in both the supply and demand for personal computers. In the market for personal computers, we would expect
 - A. the equilibrium quantity to rise and the equilibrium price to rise.
 - B. the equilibrium quantity to rise and the equilibrium price to fall.
 - C. the equilibrium quantity to rise and the equilibrium price to remain constant.
 - D. the change in the equilibrium quantity to be ambiguous and the equilibrium price to rise.
 - E. *the equilibrium quantity to rise and the change in the equilibrium price to be ambiguous.*
6. The law of supply states that an increase in the price of a good
 - A. is negatively related to a shift in supply
 - B. decreases the quantity demanded for that good.
 - C. increases the supply of that good.
 - D. decreases the demand for that good.
 - E. *increases the quantity supplied of that good.*
7. According to the principle of comparative advantage, countries
 - A. should specialize in the production of goods that they enjoy consuming.
 - B. with a comparative advantage in the production of every good need not specialize.
 - C. *should specialize in the production of goods for which they have a lower opportunity cost of production than their trading partners.*
 - D. should specialize in the production of goods for which they use fewer resources in production than their trading partners.
8. Which of the following would cause a demand curve for a good to be price inelastic?
 - A. The good is a luxury.
 - B. There are a great number of substitutes for the good.
 - C. *The good is a necessity.*
 - D. The good is an inferior good.
9. The burden of a tax falls more heavily on the sellers in a market when
 - A. both supply and demand are elastic.

- B. demand is inelastic and supply is elastic.
 - C. both supply and demand are inelastic.
 - D. *demand is elastic and supply is inelastic.*
10. If the price of a good is below the equilibrium price,
- A. there is a shortage and the price will rise.
 - B. the quantity demanded is equal to the quantity supplied and the price remains unchanged.
 - C. *there is a shortage and the price will fall.*
 - D. there is a surplus and the price will rise.
 - E. there is a surplus and the price will fall.
11. Suppose a drought destroys much of the Bulgarian cucumber crop. At the same time, suppose consumer tastes shift toward Shopska Salad, a salad where cucumbers are an important ingredient. What would we expect to happen to the equilibrium price and quantity in the market for Shopska Salad?
- A. Price will decrease; quantity is ambiguous.
 - B. The impact on both price and quantity is ambiguous.
 - C. Price will increase; quantity will increase.
 - D. Price will increase; quantity will decrease.
 - E. *Price will increase; quantity is ambiguous.*
12. Compared to coffee, we would expect the cross elasticity of demand for:
- A. both tea and milk to be negative.
 - B. tea to be negative, but positive for milk.
 - C. both tea and milk to be positive.
 - D. *tea to be positive, but negative for milk.*
 - E. both tea and milk to be zero.
13. If a nation has a comparative advantage in the production of a good it,
- A. *can produce that good at a lower opportunity cost than its trading partner.*
 - B. can benefit by restricting imports of that good.
 - C. can produce that good using fewer resources than its trading partner.
 - D. must be the only country with the ability to produce that good.
14. An ineffective price ceiling (i.e., one that does not work as intended) will:
- A. *clear the market.*
 - B. induce new firms to enter the industry.

- C. result in a product surplus.
 - D. result in a product shortage.
15. Which of the following statements is true about the impact of an increase in the price of lettuce?
- A. Both the demand for lettuce will decrease and the equilibrium price and quantity of salad dressing will fall.
 - B. The supply of lettuce will decrease.
 - C. The demand for lettuce will decrease.
 - D. *The equilibrium price and quantity of salad dressing will fall.*
 - E. The equilibrium price and quantity of salad dressing will rise.
16. If a buyer's willingness to pay for a new Honda is \$20,000 and she is able to actually buy it for \$18,000, her consumer surplus is
- A. \$0. B. \$2,000. C. \$18,000. D. \$20,000. E. \$38,000.
17. Suppose you find 20 leva. If you choose to use the 20 leva to go to a football match (because you love football), your opportunity cost of going to a football match is
- A. nothing, because you found the money.
 - B. *20 leva (because you could have used the 20 leva to buy other things) plus the value of your time spent at the football match.*
 - C. 20 leva (because you could have used the 20 leva to buy other things) plus the value of your time spent at a football match, plus the cost of souvenirs you bought at the football match.
 - D. 20 leva (because you could have used the 20 leva to buy other things).
 - E. none of these answers.
18. An effective price floor (i.e., one that works as intended) will:
- A. *result in a product surplus.*
 - B. clear the market.
 - C. force some firms in this industry to go out of business.
 - D. result in a product shortage.
19. If the demand for product X is inelastic, a 4 percent increase in the price of X will:
- A. *decrease the quantity of X demanded by less than 4 percent.*
 - B. increase the quantity of X demanded by less than 4 percent.
 - C. decrease the quantity of X demanded by more than 4 percent.
 - D. increase the quantity of X demanded by more than 4 percent.

20. In which of the following instances will total revenue *decline* when the price increases?
- A. demand is inelastic B. *demand is elastic* C. demand is unit elastic
21. Suppose that the price of peanuts falls from \$3 to \$2 per bushel and that, as a result, the total revenue received by peanut farmers changes from \$16 billion to \$14 billion. Thus:
- A. no inference can be made as to the elasticity of demand for peanuts.
B. the demand for peanuts is elastic.
C. *the demand for peanuts is inelastic.*
D. the demand curve for peanuts has shifted to the right.
22. Which of the following would *not* shift the demand curve for beef?
- A. a change in the incomes of beef consumers
B. a widely publicized study that indicates beef increases one's cholesterol
C. *a reduction in the price of cattle feed*
D. an effective advertising campaign by pork producers
23. The supply of known Roy Lichtenstein (1923–1997) paintings is:
- A. relatively elastic.
B. perfectly elastic.
C. relatively inelastic.
D. *perfectly inelastic.*
24. Assume a drought in the Great Plains reduces the supply of wheat. Noting that wheat is a basic ingredient in the production of bread and that potatoes are a consumer substitute for bread, we would expect the price of wheat to:
- A. fall, the supply of bread to increase, and the demand for potatoes to increase.
B. rise, the supply of bread to decrease, and the demand for potatoes to decrease.
C. rise, the supply of bread to increase, and the demand for potatoes to increase.
D. *rise, the supply of bread to decrease, and the demand for potatoes to increase.*
25. A leftward shift of a product supply curve might be caused by:
- A. an increase in consumer incomes.
B. an improvement in the relevant technique of production.
C. *some firms leaving an industry.*
D. a decline in the prices of needed inputs.

2 Problems

Answer the questions in the spaces provided. If you run out of room for an answer, continue on the back of the page. The point value of each question is in brackets.

1. The market for peanuts is given by:

$$\text{D: } Q = 200 - 5P$$

$$\text{S: } Q = 40 + 3P$$

where Q is in pounds and P is in euro.

- (a) (5 points) Find the equilibrium price and quantity for peanuts.

Answer:

$$P = 20$$

$$Q = 100$$

- (5 points) Show on a properly labeled graph the equilibrium in the peanut market.

- (5 points) Calculate the total surplus for the peanut market at this equilibrium.

Answer:

$$CS = 1/2(40 - 20)(100)$$

$$PS = 1/2(20 - 13.33)(100)$$

2. Now, the government has decided to add a 2 euro *subsidy* to help peanut farmers. Re-analyze the market including the subsidy by answering the following questions:

- (a) (5 points) Find the equilibrium price and quantity for peanuts.

Answer: Supply is now $Q = 40 + P$ since the subsidy *reduces* minimum willingness to accept.

$$P_{recd} = 26.67$$

$$P_{paid} = 16$$

$$Q = 120$$

- (5 points) Show on a properly labeled graph the equilibrium in the peanut market.

- (5 points) How much does the government spend on this subsidy?

Answer:

$$Cost = (2)(120) = 240$$