

## **Chapter 02 Supply and Demand**

### **Multiple Choice Questions**

1. Which is not true of market equilibrium?
  - A. All sellers who want to sell at the equilibrium price can find a buyer to sell to
  - B. The highest possible welfare is achieved even if many externalities exist**
  - C. All buyers who want to buy at the equilibrium price can find a seller to buy from
  - D. Circumstances can change from day to day which make any equilibrium very tentative

*LOD: 2*

2. The law of demand states that
  - A. Scarcity can never be solved
  - B. When the price of a product falls, people buy more of it**
  - C. Supply creates its own demand
  - D. Prices will continue to rise as long as the population grows

*LOD: 1*

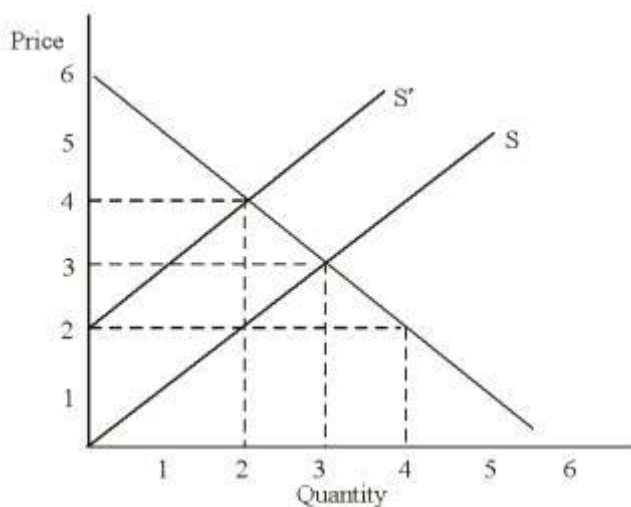
3. The real price of a product is
  - A. Its absolute level on any given day
  - B. Its absolute level on any given day divided by the relevant price index
  - C. Its absolute level on any given day minus any external costs of the production of the good
  - D. Its price relative to the price of other goods and services**

*LOD: 1*

4. The equilibrium price is the price
- A. From which there is always a tendency to move away
  - B. At which quantity supplied equals quantity demanded**
  - C. Where there are surpluses and shortages
  - D. Suppliers agree to charge

LOD: 1

Use the following to answer the next three questions:  
Please refer to the following diagram.



5. In the diagram if the supply curve is S, the equilibrium price is
- A. 4
  - B. 3**
  - C. 2
  - D. 0

LOD: 1

6. If the supply curve is S, at a price of \$4 there will be a
- A. Surplus of 1
  - B. Surplus of 2**
  - C. Shortage of 1
  - D. Shortage of 2

LOD: 2

7. A horizontal interpretation of the demand curve for a product
- A. Stipulates price as the independent variable in the price quantity relationship**
  - B. Tells what prices would be required to sell various quantities of output
  - C. Indicates that a seller can sell all he/she wants to sell at the given price
  - D. Indicates that a buyer can buy all she/he wants to buy at a given price

LOD: 2

8. If the supply curve is S, at a price of \$2 there will be a
- A. Surplus of 1
  - B. Surplus of 2
  - C. Shortage of 1
  - D. Shortage of 2**

LOD: 2

9. If the government decides to set the price of widgets below the equilibrium price
- A. Most economists would argue that one could reallocate resources and improve total welfare in the system**
  - B. People who buy the widgets are now worse off
  - C. Producers of widgets are now better off
  - D. The market quantity of widgets will increase

LOD: 2

10. If an airline overbooks it pays people who volunteer to leave the overbooked flight. This system is better than drawing randomly from a hat the people who should miss the flight because
- A. Those with the least to lose are the ones who miss the flight
  - B. It gives everyone a chance to get money they hadn't counted on
  - C. It is quicker and helps keep the flight on schedule
  - D. It is the most equitable way of solving the situation

LOD: 3

11. My income rose and the price of good y rose also. That means that my demand curve for good X shifted right.
- A. This statement is always true
  - B. This statement will always be true if good y is a substitute for good x
  - C. This statement will always be true if good x is a normal good
  - D. This statement will always be true if good y is a substitute for x and x is a normal good

LOD: 2

12. Most economists are against rent control because
- A. It leads to surpluses
  - B. It encourages landlords to build too many apartments
  - C. It discourages the building of new apartments
  - D. It discourages tenants from searching for apartments

LOD: 2

13. Which of the following statements would most economists agree with?
- A. Rent controls hurt everyone
  - B. Rent controls hurt poor people and help the rich
  - C. Rent controls decrease overall societal welfare
  - D. Rent control allow for a more equitable distribution of resources

LOD: 3

14. If income rises

- A. The demand curve will shift right
- B. The demand curve will shift left
- C. The demand curve will stay the same since only price effects it
- D.** One cannot tell which way demand shifts with the information given

*LOD: 1*

15. If the Surgeon General announces that colas cause cancer then we would expect

- A. The demand for cola will shift right.
- B.** The demand for cola will shift left.
- C) The demand for cola will stay the same
- D) One cannot tell

*LOD: 2*

16. A war in the Middle East causes the price of oil to rise. What would we expect to happen to the demand for automobile tires?

- A. The demand for automobile tires will shift right
- B.** The demand for automobile tires will shift left
- C. The demand for automobile tires will stay the same
- D. One cannot tell what will happen with the information given

*LOD: 2*

17. If the State of California decides to raise the drinking age to 25, what would happen to the demand for beer?

- A. The demand for beer will shift right
- B.** The demand for beer will shift left
- C. The demand for beer will stay the same, but people will move up the demand curve consuming less
- D. One cannot tell what will happen with the information given

*LOD: 2*

18. A new technology is announced which allows manufacturers to produce widgets for less. Widgets are a key input in the production of whatchamacallits. What would we expect to happen to the market for whatchamacallits?
- A. The demand curve would shift left
  - B. The supply curve would shift left
  - C. The demand curve would shift right
  - D.** The supply curve would shift right

LOD: 2

19. A hailstorm kills all of the wheat in Minnesota. What will happen to the price and quantity of wheat sold in the U.S.?
- A. Equilibrium price falls, equilibrium quantity increases
  - B.** Equilibrium price rises, equilibrium quantity falls
  - C. Equilibrium price falls, equilibrium quantity falls
  - D. Equilibrium price rises, equilibrium quantity rises

LOD: 2

20. The price of peanut butter rises due to a blight on the peanut crop; peanut butter and jelly are complements. What happens to the equilibrium quantity and price of jelly?
- A. Equilibrium price falls, equilibrium quantity increases
  - B. Equilibrium price rises, equilibrium quantity falls
  - C.** Equilibrium price falls, equilibrium quantity falls
  - D. Equilibrium price rises, equilibrium quantity rises

LOD: 3

21. If the number of suppliers in the microcomputer industry increases, what would we expect to happen?
- A. The number of microcomputers sold will fall
  - B. The price of microcomputers will rise
  - C. The supply curve will shift left
  - D.** Movement along the demand curve will occur

LOD: 3

22. A new discovery makes ink jet computer printers less expensive to produce. At the same time another type of computer printer, the laser printer, also becomes less expensive. What would you expect to happen to the equilibrium price and quantity of ink jet printers?
- A. Equilibrium price will rise, but the effect on quantity is uncertain
  - B. Equilibrium price will fall, but the effect on quantity is uncertain**
  - C. Equilibrium quantity will rise, but the effect on price is uncertain
  - D. The answer cannot be determined from the information given above

LOD: 3

23. Two factors are affecting the domestic auto industry: (1) an increase in cheap Korean imports (2) an increase in the cost of materials. What can we say about equilibrium price and quantity of domestic autos?
- A. Equilibrium price will rise
  - B. Equilibrium price will fall
  - C. Equilibrium quantity will fall**
  - D. The answer cannot be determined from the information given above

LOD: 3

24. The price in the market has fallen and so has the quantity. This could be happening because
- A. Technology is rapidly advancing
  - B. Factor prices are falling
  - C. Income has fallen for a normal good**
  - D. Factor prices are rising

LOD: 3

25. A long hot summer has increased the demand for beer; at the same time a tax is placed on alcohol. What can we say about the equilibrium price and quantity of alcohol?
- A. Equilibrium price rises; equilibrium quantity falls
  - B. Equilibrium price rises; equilibrium quantity rises
  - C. Equilibrium price rises; equilibrium quantity is unknown**
  - D. Equilibrium price falls; equilibrium quantity is unknown

LOD: 3

26. Pizza and beer are complements. The price of beer increases. What happens to the market for pizza?
- A. Equilibrium price rises; equilibrium quantity falls
  - B.** Equilibrium price falls; equilibrium quantity falls
  - C. Equilibrium price rises; equilibrium quantity rises
  - D. Equilibrium price falls; equilibrium quantity rises

LOD: 2

27. Let demand be given by  $P = 10 - Q$ ; let supply be given by  $P = Q$ . What is the equilibrium price?
- A. 10
  - B.** 5
  - C. 2
  - D. 0

LOD: 2

28. Let demand be given by  $P = 10 - Q$ ; let supply be given by  $P = Q$ . What is the equilibrium quantity?
- A. 10
  - B.** 5
  - C. 2
  - D. 4

LOD: 2

29. If a good is inferior, then an increase in income will cause the demand curve to
- A. Shift right
  - B.** Shift left
  - C. Stay the same
  - D. Rotate inward

LOD: 1



30. If price and quantity are not at their equilibrium positions, then
- A. It is possible to reallocate so that some people are better off without harming others
  - B. A move to another position will not hurt anyone
  - C. A move to another position will help everyone
  - D. Government must intervene

*LOD: 2*

31. In a market economy price serves to
- A. Allocate goods
  - B. Distribute resources more fairly
  - C. Increase sellers profits
  - D. Value goods in dollar terms

*LOD: 2*

32. If there is a technological advance that lowers the cost of producing x-ray machines, then we can say that
- A. The quantity demanded for those machines will increase
  - B. The demand for those machines will shift right
  - C. The quantity supplied of those machines will go up
  - D. The quantity supplied of those machines will decrease

*LOD: 3*

33. A price support system that raises price above the normal equilibrium will cause
- A. A decrease in the quantity demanded
  - B. A shift right in supply
  - C. A shift left in demand
  - D. A decrease in the quantity supplied

*LOD: 3*

34. Let demand be given by  $P = 20 - 3Q$  and supply by  $P = 5 + 2Q$ . Equilibrium quantity will be
- A. 5
  - B.** 3
  - C. 11
  - D. 10

LOD: 2

35. A good that is not scarce
- A. Would have a vertical supply curve over the relevant range
  - B.** Would have a zero price
  - C. Is not in demand
  - D. Would have an infinite price

LOD: 3

36. Which of the following represents a change in the quantity demanded?
- A.** People buy more computers as prices fall
  - B. People buy more computers because of a surge in the economy
  - C. People buy more computers due to a change in tastes
  - D. People buy more computers due to a change in income

LOD: 2

37. Which statement is true?
- A. You can have a shortage without scarcity
  - B.** You can have scarcity without a shortage
  - C. The terms "shortage" and "scarcity" are identical concepts in economics
  - D. No scarcity will exist at a market equilibrium price

LOD: 2

38. If a price above equilibrium is imposed on a market, welfare will increase when the price control is lifted. If a price control is below equilibrium and then is repealed and allowed to rise to equilibrium, welfare in the system will increase.
- A. The first statement is true and the second is false
  - B. The first statement is false and the second statement is true
  - C. Both statements are false
  - D.** Both statements are true

LOD: 2

39. (Appendix) A tax of 10 units on the seller can be shown graphically as a
- A. Leftward shift of demand
  - B.** Leftward shift of supply
  - C. Rightward shift of supply
  - D. Rightward shift of demand

LOD: 1

40. (Appendix) If a 20 unit tax is placed on a seller, then
- A. The seller will bear all of the tax burden
  - B. The buyer will bear all of the tax burden
  - C. Both parties will share the tax burden equally
  - D.** The distribution of the tax burden cannot be determined from the information given

LOD: 2

41. (Appendix) If the government wishes to raise revenue by taxing cigarettes, it
- A.** Makes no difference whether the consumer or the producer actually transfers the money to the government since the market effects are the same
  - B. Is best to have the consumers pay the tax since they view cigarettes as necessities
  - C. Is best to tax the producer since they will not cut production just because of the tax
  - D. Is foolish since a sales tax increase leads to less tax revenue in an industry like tobacco

LOD: 2

Use the following to answer the next three questions:

Let supply be given by  $P = 5Q$  and demand by  $P = 19 - 2Q$ . Suppose we now place a tax of 5 per unit of output on the seller.

42. (Appendix) The new supply curve is

- A.  $P = 5Q$
- B.**  $P = 5 + 5Q$
- C.  $P = 5Q - 5$
- D.  $P = 5Qt5$

LOD: 3

43. (Appendix) The new equilibrium quantity is

- A. 7
- B.** 2
- C. 3
- D. 5

LOD: 2

44. (Appendix) The new equilibrium price is

- A. 2
- B. 7
- C.** 15
- D. 10

LOD: 2

45. (Appendix) As the supply curve becomes steeper, the proportion of a sales tax paid by the seller

- A.** Increases
- B. Decreases
- C. Stays the same
- D. Gets closer to zero

LOD: 3

46. (Appendix) As the demand curve becomes steeper, the proportion of a sales tax paid by the seller
- A. Increases
  - B. Decreases**
  - C. Stays the same
  - D. Gets closer to zero

LOD: 2

47. (Appendix) Suppose that the supply curve for a good is vertical. In this case we would expect
- A. Nothing to be sold so no tax is collected
  - B. A tax placed on the buyer to be borne entirely by the seller**
  - C. A tax placed on the buyer to be borne entirely by the buyer
  - D. The tax to be shared equally by both buyer and seller

LOD: 2

48. (Appendix) Which is true?
- A. A per unit tax levied on the producer in an industry with a horizontal supply curve will be all paid by the producer
  - B. A per unit tax levied in an industry with a horizontal demand curve will be all paid by the producer**
  - C. A producer never pays all of a per unit tax no matter what the market conditions
  - D. A seller never pays all of a per unit tax no matter what the market conditions

LOD: 3

49. If the current price of Pizzas is above the equilibrium price of Pizzas then
- A. Sellers of pizzas have an incentive to increase the price
  - B. Sellers of pizzas have an incentive to decrease the price**
  - C. Buyers of pizzas have an incentive to buy more
  - D. Buyers of pizzas have an incentive to buy less

LOD: 2

50. If the price of roses increases:

- A. The demand curve for carnations will shift to the right
- B. The demand curve for carnations will shift to the left
- C. The demand curve for roses will shift to the right
- D. The demand curve for roses will shift to the left

LOD: 2

51. According to the model of supply and demand, an increase in the price of milk will cause a:

- A. Leftward shift in the supply for cheese
- B. Rightward shift in the supply for cheese
- C. Leftward shift in the supply for milk
- D. Rightward shift in the demand for cheese

LOD: 2

52. Suppose the football team at your university is wins 10 games in a row. The following will be a possible outcome of this event in the market for football tickets:

- A. The equilibrium price and the equilibrium quantity will increase
- B. The equilibrium price and the equilibrium quantity will decrease
- C. The equilibrium price will increase and the equilibrium quantity will decrease
- D. The equilibrium price will decrease and the equilibrium quantity will increase

LOD: 3

Use the following to answer the next two questions

Let supply be given by  $Q = -7.5 + 0.5P$  and demand by  $Q = 10 - 0.2P$ .

53. What will be the equilibrium price in this market?

- A. 25
- B. 5
- C. 10
- D. 20

LOD: 2

54. (Appendix) Suppose we now place a tax of \$7 per unit of output on the seller. The new equilibrium price will be:
- A. 4
  - B. 30**
  - C. 37
  - D. 10

LOD: 3

55. Say the price of MP3 songs increases. Other things equal the:
- A. Demand for MP3 songs will decrease.
  - B. The quantity demanded for MP3 songs will decrease.**
  - C. The supply for MP3 songs will increase.
  - D. The quantity supply for MP3 songs will decrease.

LOD: 2

56. Say at the current price there is an excess supply in the market for bicycles. In the future the price for bicycles will:
- A. increase
  - B. decrease**
  - C. stay the same
  - D. increase or decrease; but really can't tell.

LOD: 2

57. Say the market for cereal is initially in equilibrium when all the major newspaper published the findings from study that say that eating 2 cups of cereal each day significantly reduces the risk for a heart attack. Other things equal, the publication of this findings will:
- A. decrease the market quantity of cereal
  - B. decrease the market price of cereal.
  - C. increase the supply of cereal.
  - D. increase the quantity supply of cereal.**

LOD: 3

58. Supposed the government imposed a binding price ceiling in the market for bottle water. Other things equal, the effect of this price ceiling will be to:
- A. decrease the quantity of bottle water sold in the market.
  - B. give an incentive for buyers and sellers to of water to make illegal transactions.
  - C. allow less number of low-income people to buy water.
  - D.** All of the choice are correct.

LOD: 3

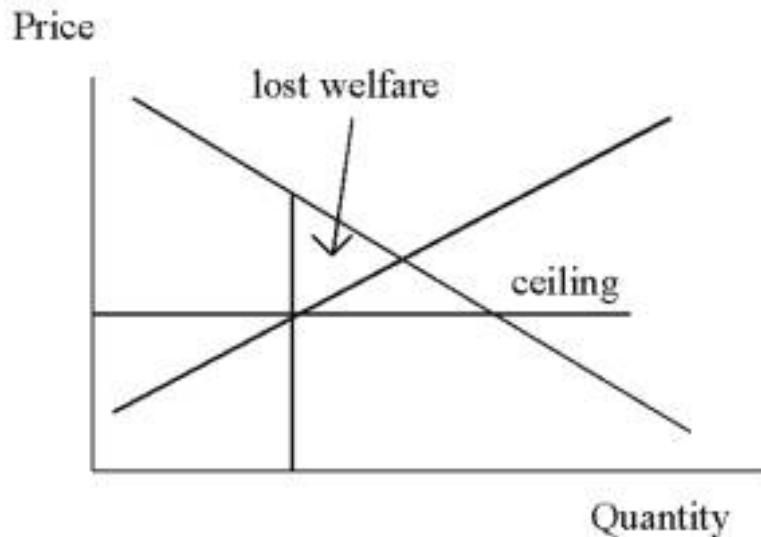
59. Suppose the demand for cigarettes was  $P = 100 - 5Q$ , and the supply for cigarettes was  $P = 0.5Q$ . The market equilibrium price in this market would be about:
- A.** \$18
  - B. \$22
  - C. \$100
  - D. \$50

LOD: 3

### Essay Questions

60. Explain why an equilibrium point in a free market is considered to be the socially efficient point. Sketch graph a situation where a government price ceiling below equilibrium leads to inefficiency. Explain in words why the inefficiency exists and shade in on your graph the lost benefit that creates the inefficiency.





At equilibrium all units for which benefit exceeded cost would be produced. Thus net benefit is maximized. At the ceiling equilibrium, output is under-produced, for which benefits exceed the cost.

61. If the demand curve of a market is  $P = 14 - Q$  and the supply curve is  $P = 2 + 2Q$ , what is the surplus created if a price support of 12 is imposed in the market?

The equilibrium price of 10 is now replaced with a price of 12. At 12 the quantity demanded will be 2 and the quantity supplied will be 5 leaving a surplus of 3.

62. If the demand and supply are identical to the question above but a price ceiling of 6 is imposed, what will the shortage be?

Quantity demanded will be 8 and the quantity supplied will be 2 so the shortage is 6.

63. (Appendix) What is the equilibrium quantity of a market with a demand curve  $P = 10 - Q$  and a supply curve equal to  $P = 2 + 2Q$  and a tax imposed on the seller of \$2 per unit? How does this tax effect resource allocation? What might justify the allocation effect of the tax?

Quantity = 2 because  $10 - Q = 4 + 2Q$ , or  $3Q = 6$ , so  $Q = 2$ . Before the tax the equilibrium was 2.67 units of output. Thus the tax reduces output. If the producer was discharging pollution equal to \$2 per unit of output, then the optimal output would be 2 and the tax would be pushing the allocation process toward efficiency rather than away from efficiency.

64. Suppose the market for Mexican food in your neighborhood was in equilibrium.
- Draw a diagram showing the demand and supply curve for Mexican food. Indicate the market equilibrium quantity and price in this market.
  - Suppose the government imposed a binding price ceiling in this market, with the goal of making Mexican food affordable to most residents. Add the price ceiling to your diagram, and then identify the quantity demanded and quantity supply in this market with the price ceiling.
  - Would the government be able to make Mexican food affordable to most people with the price ceiling? Explain your answer using the diagram you drew in part (b).

Answer:

