

ECON 102 – Principles of Microeconomics

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Midterm Exam 1

N A M E

1. Adam Smith's concept of the invisible hand refers to his belief that:
 - A) market failure is a myth.
 - B) self-interest can lead to a "prisoner's dilemma" where everyone is worse off than before.
 - C) the self-interest of individuals is best promoted when governments pursue the public interest.
 - D) individuals' pursuit of self-interest leads to market failure.
 - E) the public interest is best promoted when individuals pursue their own self-interest.

2. Zoe's grandparents are excited about finally paying off their mortgage, because, as they say, "Our cost of housing is now zero." Zoe should explain to them the economic principle of:
 - A) *marginal analysis*: if the additional cost of housing is zero, then their additional benefit is also zero.
 - B) *opportunity cost*: by living in the house, they are giving up the opportunity to sell the house, buy a smaller one, and pocket the difference.
 - C) *efficiency*: if their cost of housing is now zero, they should let Zoe move in without charging her any rent. Zoe is better off, and her grandparents aren't hurt.
 - D) *equity*: it is unfair that some people are still paying off their mortgage.

3. The University recently inherited a large mansion at Lake Tahoe from a wealthy alumnus. The University plans to use the mansion for faculty parties and to house distinguished guests. The cost of the mansion to the university is:
 - A) zero, because it was a gift.
 - B) the cost of upkeep—maintenance, utilities, and so forth.
 - C) how much the university would receive if it rented or sold the mansion.
 - D) both B and C.
 - E) none of the above.

4. In a single growing season, the country of Pastoral can raise 1000 tons of beef or produce 8000 bushels of wheat. In the same growing season, the country of Bucolic can raise 2000 tons of beef or produce 10,000 bushels of wheat. We then know that:
 - A) Pastoral has the comparative advantage in raising beef.
 - B) Bucolic has the comparative advantage in growing wheat.
 - C) Bucolic has the comparative advantage in raising beef.
 - D) Pastoral has the absolute advantage in raising beef.
 - E) Pastoral has the absolute advantage in growing wheat.

(4.b). **Draw PPFs for the countries of Pastoral and Bucolic**, with wheat on the horizontal axes. Find the slopes, and show the production points where each specializes at its comparative advantage) (4 points)

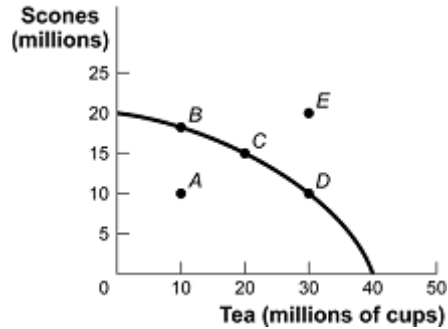
5. Economic models that make unrealistic assumptions may be useful in analyzing some economic problems.
 - A) True
 - B) False

6. Bangladesh produces much of the clothing we wear because they are more productive in producing clothes than we are in the United States.

- A) True B) False

7. In this figure, Tealand is currently producing at point C on its production possibilities frontier. What is the opportunity cost in Tealand of increasing the production of tea from 20 million cups to 30 million cups?

- A) 10 million cups of tea
B) 10 million scones
C) 5 million scones
D) The answer is impossible to determine from the information given.



8. Individuals gain from trade because:

- A) of specialization in production.
B) they can sell at a lower price than they can buy at.
C) self-sufficiency is efficient.
D) some individuals are better at everything.
E) of all of the above.

9. In terms of the production possibilities frontier, inefficient use of available resources is shown by:

- A) an increase in the labor force growth rate.
B) a movement from one point to another along the production possibilities frontier.
C) an inward shift of the production possibilities frontier due to the lack of opportunity.
D) a point located inside the production possibilities frontier.

10. When the forces of supply and demand operate freely, the effects of running out of petroleum will be indicated in the market by:

- A) an increase in the price of oil and its byproducts.
B) government-imposed limits on individuals' purchases of oil.
C) advertisements in the newspapers advising people to reduce consumption of energy.
D) a reduction in the price of oil.

11. Which of the following will not cause a change in demand?

- A) Change in income.
B) Change in the good's own price.
C) Change in the number of buyers.
D) Change in the price of related goods, such as complements and substitutes.
E) Change in expectations of future prices.

12. Consider the supply curve for cotton shirts.

12(b) Show this on a supply and demand graph.

An increase in the price of cotton will:

- A) increase the supply of cotton shirts.
B) decrease the demand for cotton shirts.
C) decrease the supply of cotton shirts.
D) not affect the market for cotton shirts.
E) increase the demand for cotton shirts.

13. If two goods are substitutes and the price of one good decreases, then the demand for the other will

- A) increase.
B) decrease.
C) not be affected.
D) not change, but quantity-demanded will fall.
E) not change, but quantity-demanded will rise.

14. Suppose that consumer income rises for a good with an income elasticity of 0.5. The equilibrium price is expected to _____, the equilibrium quantity is expected to _____, and total consumer expenditures on the good are expected to _____.

- A) increase; decrease; decrease
- B) increase; increase; increase
- C) increase; decrease; increase
- D) decrease; decrease; decrease

14(b) **Show this on a supply and demand graph.**

15. An ambiguous change in quantity and a decrease in price is most likely caused by:

- A) no shift in supply and a shift to the left in demand.
- B) a shift to the left in supply and a shift to the left in demand.
- C) a shift to the right in supply and a shift to the left in demand.
- D) a shift to the left in supply and a shift to the right in demand.

16. More police and security workers become aware that wearing bulletproof vests can protect them from injury and decide to start wearing bulletproof vests. At the same time, the price of ceramics used to produce the vests falls. Then, the equilibrium relative price of bulletproof vests _____ and the equilibrium quantity produced _____.

- A) increases; increases
- B) decreases; decreases
- C) probably changes, but in an ambiguous direction; probably changes, but in an ambiguous direction
- D) probably changes, but in an ambiguous direction; increases

17. The Cozy Chair Company believes it can sell 10 chairs per day at \$300 per chair, or 20 chairs at \$200 per chair. Using the midpoint formula, you can calculate that the price elasticity of demand for Cozy Chairs is:

- A) $-1/10$.
- B) $-3/5$.
- C) -1 .
- D) $-5/3$.
- E) -3 .

18. You manage a popular nightclub and lately revenues have been disappointing. Your bouncer suggests that lowering drink prices will increase revenues, but your bartender suggests that raising drink prices will increase revenues. You aren't sure who is right, but you do know that:

- A) both the bouncer and bartender think the demand for drinks is elastic.
- B) your bouncer thinks the demand for drinks is elastic, while your bartender thinks the demand for drinks is inelastic.
- C) both the bouncer and bartender think the demand for drinks is inelastic.
- D) your bouncer thinks the demand for drinks is inelastic, while your bartender thinks the demand for drinks is elastic.

19. Rapidly increasing health costs have been a major political concern since at least 1992. Suppose that to control rising health costs the government sets the maximum price for a normal doctor's visit at \$35, but the current market price is \$50. Then:

- A) more people will try to visit the doctor, but doctors will see fewer patients.
- B) fewer people will try to see the doctor, and the doctors will see fewer patients.
- C) more people will be able to see the doctor, since the price is lower.
- D) the same number of people will try to visit the doctor, but doctors will charge them more.

20. Although most economists agree that price floors and ceilings lead to inefficiency, governments continue to impose such price controls. A possible reason for this is:

- A) some people do benefit from such price controls.
- B) people fear that prices will change dramatically if the price controls were removed.
- C) it is politically expedient to enact regulations that benefit influential voting groups.
- D) all of the above.

21. What will likely happen to the market price and quantity for an inferior good if technological improvements occur simultaneously with an increase in incomes?

- A) Price will fall, but quantity is indeterminate.
- B) Quantity will rise, but price is indeterminate.
- C) Both price and quantity will fall.
- D) Price will fall and quantity will rise.
- E) Both price and quantity are indeterminate.

21(b) **Show this on a supply and demand graph.**

22. The American Medical Association has a licensing process for people who aspire to become doctors. This licensing process has probably led to lower earnings for doctors over time.

- A) True
- B) False

23. A binding minimum wage will generally cause increased unemployment for low-skilled workers.

- A) True
- B) False

24. If the state of Nevada created a price floor in the market for sheep that was double the current market-clearing price, this would lead to an inefficient number of sheep herders in Nevada.

- A) True
- B) False

25. A rancher in Nevada decides to raise the price of her beef by 19% over what the prevailing market price equals. If the demand for this rancher's beef is perfectly elastic, this rancher's quantity-demanded will:

- A) rise slightly.
- B) not change.
- C) fall slightly.
- D) fall to zero.

26. Suppose the University president believes that increasing student tuition by 5% will increase revenues. If the president is correct that revenues will increase, then the tuition increase will reduce the number of students enrolling by:

- A) less than 5%.
- B) more than 5%.
- C) exactly 5%.
- D) 0%, since there will be no change in the number of students enrolling.
- E) the number of students will increase.

27. You are the manager of a supermarket, and know that the cross-price elasticity of peanut butter to jelly is exactly -2.0 . Due to a bad grape harvest, grape jelly prices are expected to rise by 10% next year. Knowing this, you should stock 10% more peanut butter.

- A) True
- B) False

28. The deadweight loss of an excise tax arises because the tax prevents some mutually beneficial transactions.

- A) True
- B) False

29. If demand is perfectly inelastic, the deadweight loss caused by a tax will be zero.

- A) True
- B) False

30. Suppose the government imposes a \$4 excise tax on good Y. If the demand for good Y is inelastic and the supply curve is elastic, then the price of good Y will:

- A) increase by more than \$4.
- B) increase by exactly \$4.
- C) increase by more than \$2, but by less than \$4.
- D) increase by less than \$2.
- E) remain constant.

For 31-38. The farmer's market also includes a vibrant market for paintings by local artists. Suppose that on a typical busy market day, the quantity-supplied and demanded are a function of the price, as follows:

<u>P</u>	<u>Qd</u>	<u>Qs</u>
\$30	900	300
40	850	400
50	800	500
60	750	600
70	700	700
80	650	800
90	600	900
100	550	1000

31(b) **Draw the supply and demand curves**, and carefully label the market-clearing price and quantity.

31. The market-clearing price on a typical day is:

- A) \$50
- B) \$60
- C) \$70
- D) \$80
- E) \$90

32. The equilibrium market quantity is:

- A) 600
- B) 700
- C) 800
- D) 900

33. Suppose the city government imposes a tax of \$30 on every painting sold, in order to pay for improvements to the farmer's market. The new equilibrium market quantity will be:

- A) 600
- B) 700
- C) 800
- D) 900

33(b) **Draw the new equilibrium** with the tax wedge on your graph above (2 more points).

34. The new price that the buyer will pay is:

- A) \$50
- B) \$60
- C) \$70
- D) \$80
- E) \$90

35. The new price that the seller will receive is:

- A) \$50
- B) \$60
- C) \$70
- D) \$80
- E) \$90

36. The tax revenue raised per day will equal:

- A) \$27,000
- B) \$24,000
- C) \$21,000
- D) \$18,000
- E) \$0

37. The deadweight loss from the tax will equal:

- A) \$1,500
- B) \$3,000
- C) \$6,500
- D) \$13,000
- E) \$18,000

38. The majority of this tax will be paid for by:

- A) the sellers
- B) the buyers
- C) the tax will be shared equally by buyers and sellers

39. If government wants to maximize the revenue from a tax, it should levy taxes on products where demand is:

- A) unit elastic
- B) downward-sloping
- C) elastic
- D) inelastic

40. The deadweight loss from a tax will:

- A) rise proportionately with the tax.
- B) rise more than proportionately with the tax.
- C) rise with the tax, but at a decreasing rate.
- D) rise to a maximum, and then fall as the tax keeps rising.

41. The price floors on U.S. agricultural goods do not create any deadweight loss. Instead, the consumer surplus is only shifted to producer surplus.

- A) True B) False

42. Suppose a firm is considering buying a machine for \$15,000 that will save them \$5000 in labor costs for three years. The machine must be paid for now, while the labor savings come at the end of the first, second, and third years. At the end of three years, the machine can be sold for a scrap value of \$3000. If the firm is able to earn 10% per year on investments of similar riskiness, what is the net present value of the investment?

- A) \$15,000 B) \$14,688 C) \$3,000 D) -\$312 E) -\$1,476

43. Your textbook costs \$120, and you can resell it in one year's time for \$50. If the interest rate is 8%, then the cost of the textbook (to the nearest dollar) in net present value terms is:

- A) \$74. B) \$66. C) \$63. D) \$61. E) \$111.

BONUS QUESTION – Choose one:

A. From Miller, Benjamin, and North., chapter two. How does the structure of the drug industry and the incentives facing government officials affect the likelihood of Type I versus Type II errors in the introduction of new drugs? Explain.

B. From Miller, Benjamin, and North., chapter seven. Evaluate the following statement: “Although taxpayers foot the bill for federal water sold to farmers at subsidized prices [one example found that farmers paid only 2% of the cost of delivering their water], they also eat the crops grown with that water. Because the crops are cheaper due to the subsidized water, taxpayers get back exactly what they put in, so there is no waste from having subsidized water for farmers.” Would you give the author of this quote an A or F in economics? Explain.