

Exam #3

Time: 2 hours

Date: 6 May 2014

Name \_\_\_\_\_

Instructor: Brian B. Young

The value of this exam is 100 points.

Please show your work where appropriate!

**Multiple Choice**3 points each

- 1) If a good has an external cost, then the marginal private cost curve
  - a. lies below then the marginal social cost curve.
  - b. lies above the marginal social cost curve.
  - c. is negative.
  - d. is the same as the marginal external cost curve.
  
- 2) When production of a good results in an external cost, the unregulated competitive market equilibrium is
  - a. the efficient level of output.
  - b. greater than the efficient level of output.
  - c. less than the efficient level of output.
  - d. unattainable.
  
- 3) The efficient quantity of a public good is the quantity at which marginal cost is
  - a. greater than marginal benefit.
  - b. less than marginal benefit.
  - c. equal to marginal benefit.
  - d. zero
  
- 4) The tragedy of the commons is the absence of incentives to
  - a. correctly measure the marginal cost.
  - b. prevent under use of the common resource.
  - c. prevent overuse and depletion of the common resource.
  - d. discover the resource.

- 5) Neither the demand nor the supply of sugar is perfectly elastic or inelastic. If the government imposes a 5 percent tax on sugar, the
- price of sugar falls by 5 percent.
  - price of sugar increases by less than 5 percent.
  - price of sugar does not change.
  - quantity of sugar increases.
- 6) For a given supply elasticity, the more inelastic the demand for a good, the larger the share of the tax on a product paid by the
- buyers.
  - sellers.
  - participants other than the buyers and sellers.
  - government.
- 7) Other things remaining the same, as U.S. imports increase, the quantity of
- U.S. dollars supplied decreases.
  - U.S. dollars demanded increases.
  - foreign currency supplied increases.
  - foreign currency demanded decreases.
  - foreign currency demanded increases.
- 8) If the government assigns private property rights to a common resource, then the
- resource is under-utilized.
  - marginal private benefit becomes equal to the marginal social benefit.
  - government needs to set a quota to achieve efficiency.
  - None of the above answers is correct.
- 9) If the exchange rate is constant and U.S. imports increase, then in the foreign exchange market the
- supply of U.S. dollars increases.
  - demand for U.S. dollars increases.
  - quantity of U.S. dollars supplied increases.
  - quantity of U.S. dollars supplied decreases.
  - supply of U.S. dollars decreases.
- 10) Which of the following is true?
- Comparative advantage drives international trade.
  - Compared to a no-trade situation, imports make domestic producers better off.
  - Tariffs lower the domestic price of imported goods.
- Only iii
  - Only i
  - i and iii
  - Only ii

- 11) Suppose the elasticity of demand for a product is 0 and elasticity of supply is 1. If the government imposes a tax on the product, then
- buyers and sellers pay exactly the same share of the tax.
  - buyers pay all of the tax.
  - sellers pay all of the tax.
  - buyers pay a smaller share of the tax than do sellers but both buyers and sellers pay some of the tax.
- 12) Of the following, who gains from tariffs and why?
- domestic buyers because they can be sure of buying high-quality products
  - foreign government because they gain more revenue
  - domestic producers of protected goods because they can sell at a higher price
  - domestic buyers because they pay a lower price
  - foreign producers because they earn more total revenue
- 13) During the 1980s, Harley-Davidson, the American motorcycle maker asked Congress for tariff protection from large motorcycles imported from Japan. Harley-Davidson argued that their company needed protection so the company could reorganize and, after some time had passed, could become more competitive. Harley-Davidson's argument is similar to the \_\_\_\_\_ argument for protection.
- bring diversity and stability
  - infant-industry
  - national security
  - save domestic jobs
  - anti-dumping
- 14) Suppose scientific research generates external benefits. Without government intervention, the market for scientific research would
- produce the efficient amount.
  - produce too much.
  - produce too little.
  - produce zero research.
- 15) Workers in the United States pay 1.45 percent of their earnings and employers also pay 1.45 percent of the worker's earnings as a Medicare tax. Which of the following is definitely true?
- The incidence of the Medicare tax is that the workers and employers each pay an equal amount of the tax.
  - Employers pay the full amount of the tax.
  - Workers pay the full amount of the tax.
  - More information is needed to determine the incidence of the tax.

- 16) The Coase theorem states that
- the level of pollution should be equal to zero to maximize social net benefit.
  - profit making producers pollute because they are forced to.
  - the efficient level of output is where marginal social cost equals marginal benefit.
  - if property rights exist and are freely enforced, private transactions are efficient.
- 17) In 2002, President Bush imposed a tariff on imported steel. He did so in response to rent seeking by
- foreign steel producers.
  - domestic steel consumers.
  - foreign politicians.
  - domestic steel producers.
  - foreign steel consumers.
- 18) Suppose Honda purchases a car factory in the United States. This purchase is entered into which of the balance of payments accounts?
- capital account
  - trade account
  - business purchases account
  - current account
  - official settlements account
- 19) Which of the following generally becomes positive when the value of U.S. exports exceeds the value of U.S. imports?
- the exchange rate
  - the balance of payments account
  - current account
  - the official settlements account
  - capital account
- 20) If the exchange rate is constant and U.S. exports increase, then in the foreign exchange market the
- demand for U.S. dollars decreases.
  - supply of U.S. dollars increases.
  - quantity of U.S. dollars demanded increases.
  - demand for U.S. dollars increases.
  - quantity of U.S. dollars demanded decreases.

### Short Answer

10 points each

1) The following is a supply and demand schedule for ethylene glycol:

Price (\$/gallon)	Quantity supplied (1000's gls./day)	Quantity demanded (1000's gls./day)	Price - tax (\$/gallon)	Quantity supplied after tax (1000's gls./day)
3.50	16	4		
3.00	14	5		
2.50	12	6		
2.00	10	7		
1.50	8	8		
1.00	6	9		
0.50	4	10		

- What is the equilibrium price and quantity for ethylene glycol?
- Suppose that the government places a tax of \$1.50 on each gallon of ethylene glycol. What is the new equilibrium price and quantity for ethylene glycol?
- How is the burden of the new tax divided among buyers and sellers?
- How much revenue does the government collect each day from the tax?

2)

<b>Quantity (tons of paper)</b>	<b>Marginal private cost (dollars)</b>	<b>Marginal external cost (dollars)</b>	<b>Marginal social cost (dollars)</b>
100	10	5	
200	20	10	
300	30	15	
400	40	20	
500	50	25	

The table above gives the private costs and external costs of producing paper.

- Complete the table by finding the marginal social cost at each level of production.
- If the market is perfectly competitive and is left unregulated and 400 tons of paper is produced, what is the price of a ton of paper?
- If the government imposes a tax equal to the external cost at each level of production, what price would be charged if 400 tons are produced?

3)

<b>Quantity (lights per block)</b>	<b>Marginal benefit (dollars per year)</b>	<b>Marginal cost (dollars per year)</b>
0	0	0
1	14	4
2	12	7
3	10	10
4	8	13
5	6	16
6	4	19

The table above provides information about the marginal cost and marginal benefit of streetlights, which are a public good.

- What quantity would a private company provide? Why?
- What is the efficient quantity?

4)

The short-term interest rate on Sylvania's silvo currency is 2% while the short-term interest rate on Freedonia's freedo currency is 12%. In the spot market, one silvo buys two freedos. If interest rate parity holds, how many freedos can we expect to buy with one silvo 12 months from today?

The 12-month futures contract for silvos is trading at US\$0.7700; the same contract on freedos is trading at US\$0.3500. If you cover a currency carry trade position with futures, is there an opportunity to profit? If so, exclusive of leverage and transactions costs, what is your annual rate of return?

If you feel as though you did not fully comprehend all the topics we covered in this course, remember this astute admonition:

*"If you understood what I said, I must have misspoken."*  
--- Federal Reserve Chairman Alan Greenspan, 1993.