

Name: **KEY**
ECON 202—Montgomery College
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EXAM 2

- There are 110 possible points on this exam. The test is out of 100.
- You have one class session to complete this exam, but you should be able to complete it in less than that.
- Please turn off all cell phones and other electronic equipment.
- You are allowed a calculator for the exam. This calculator cannot double as a cell phone.
- Be sure to read all instructions and questions carefully.
- Remember to show all your work.
- Try all questions! You get zero points for questions that are not attempted.
- *Please print clearly and neatly.*

Part I: Matching. Write the letter from the column on the right which best matches each word or phrase in the column on the left. You will not use all the options on the right and you cannot use the same option more than once.

2 points each.

- | | |
|------------------------------|--|
| 1. ____ Club good | A. Corrects externalities through corrective taxes or subsidies |
| 2. ____ Coase theorem | B. Corrects externalities through exchange |
| 3. ____ Commons | C. Example: a long river many farmers draw from to water their crops |
| 4. ____ Negative externality | D. Example: city roads |
| 5. ____ Pigou's solution | E. Example: dating websites |
| 6. ____ Public good | F. Example: potatoes |
| 7. ____ Rivalry | G. Example: talking loudly in public |
| | H. Gains that go to no one |
| | I. Marginal cost is greater than zero |

Part II: Multiple Choice. Choose the best answer to the following.

4 points each.

8. If a maximum production quota is set below equilibrium, what happens to the price?
 - a. It increases
 - b. It stays the same
 - c. It decreases
 - d. It depends on the elasticity of the good or service
 - e. It depends on how big the production quota is
9. During an interview Steve Cole, a sales manager at a car dealership, revealed that he considers how much the customer appears to know about the car when he's negotiating a price. Ignorant people tend to pay a premium on their car. How is this "ignorance premium" explained with price discrimination?
 - a. People who don't bother to research probably don't want a car that much.
 - b. People who do research probably know that gas is very expensive and thus require a cheaper car.
 - c. People who don't bother to research are probably less sensitive to price.
 - d. A & C
 - e. None of the above
10. If a good is elastic, it is most likely due to:
 - a. Its low price
 - b. Its large number of complements
 - c. Its large number of substitutes
 - d. B & C
 - e. None of the above

11. Some economists suggest that that price of popcorn at the movies is a form of price discrimination: the movie experience is a tied good composed of tickets and popcorn. Those who really value the experience of the movies pay more because such people tend to get popcorn. If the price of popcorn is **not** a form of price discrimination, which fact would challenge the theory?
- The theater has a monopoly on selling popcorn
 - The popcorn gets cold very quickly (it cannot be resold)
 - The theater needs to clean up after popcorn eaters (the costs aren't uniform)
 - A & B
 - None of the above.
12. US Highway 12 is part of a crucial two-lane artery from the seaports in Washington State to the tar sands in Canada. Extracting oil from the tar sands requires very large equipment: transporting it takes up both lanes of US 12. In August of 2010, Idaho granted ConocoPhillips a road permit which allowed it to transport four oil processing units. Without this permit, ConocoPhillips would have to transport those units a much longer distance to get to their destination. If no permits for US 12 were allowed, how would that affect the elasticity of which curve in the market for oil?
- The supply curve would become more elastic
 - The supply curve would become less elastic
 - The demand curve would become more elastic
 - A & C
 - None of the above
13. Former judge Andrew Napolitano argued in March of 2014 that President Lincoln buying up all the slaves in the South and setting them free would have been cheaper (both in lives and money) than fighting the Civil War.¹ At the time, the international slave trade was abolished by an act of Congress; no slaves were imported into the United States. Assume this was strongly enforced. Based on this information, would such slave redemption be more successful or less successful than modern-day slave redemption (as we discussed in class)?
- More successful because the supply of slaves was more elastic then
 - More successful because the supply of slaves was less elastic then
 - Less successful because the supply of slaves was more elastic then
 - Less successful because the supply of slaves was less elastic then
 - They would be equally unsuccessful

¹ Ignore the fact that when the Civil War began, both sides believed it would be a short war and thus comparing the cost of the entire war with the cost buying up all the slaves is a comparison that is only relevant in hindsight.

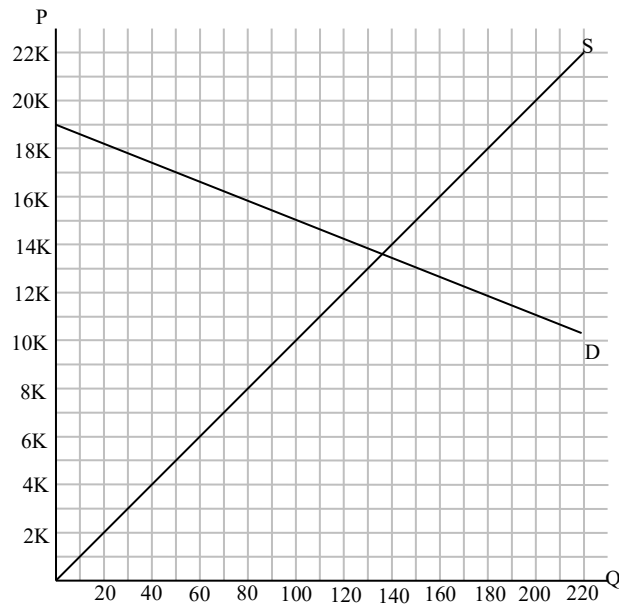
14. Imagine you work at a movie theater that offers student discounts. To demonstrate they are eligible of the discount, customers must show a student ID. This is pure price discrimination; students are not less expensive to serve compared to other patrons of the theater. Suppose a man in his 40s shows his obviously expired student ID. Is it a smart business decision to accept it and give him the discount?
- No, because the discount is for students and he's not a student.
 - No, because if he's in his 40s, he can surely afford to pay full price.
 - Yes, because it will show other customers how seriously you take your discounts.
 - Yes, because he's demonstrating he is sensitive to price.
 - None of the above
15. Food used to take up one-third of the average budget. Now it is closer to one-sixth. All other things being equal, what can we say has happened?
- Food is more elastic.
 - Food is now a normal good.
 - Food has fewer substitutes.
 - A & C
 - None of the above
16. What is the relationship between flexibility of production and elasticity of supply and why?
- Greater flexibility means more elastic supply because producers can easily leave low-priced production and enter high-priced production.
 - Greater flexibility means more elastic supply because it becomes easier to find substitutes for inputs of production.
 - Greater flexibility means less elastic supply because it cuts into the time allowed to produce something.
 - Greater flexibility means less elastic supply because it would require more inputs to be that flexible, thus it's harder to adapt to changing prices.
 - None of the above
17. Which of the following is a positive externality?
- Buying a house
 - Getting vaccinated
 - Giving a homeless person some food
 - B & C
 - None of the above
18. Which of the following would cause the elasticity of supply of robots in Pittsburgh to decrease?
- Other cities get smaller
 - Other cities get larger
 - Pittsburgh gets larger
 - A & C
 - None of the above

19. If a baby is crying in a restaurant, its guardian(s) is/are
- Externalizing costs onto other patrons.
 - Demonstrating a market failure.
 - Illustrating an example of a public good.
 - A & B
 - None of the above

Part III: Short Answer. *Answer the following.*

16 points each.

20. Consider the market for used cars in the graph below. Illustrate the effects of a \$5,000 excise tax on the market for used cars. Highlight the area of deadweight loss. **Indicate on the lines** the following values (estimate, if needed): the new quantity sold, the price consumers pay, the price suppliers receive, and the total tax revenue. Does one side (demand or supply) pay more of the tax? Why or why not? (Note that the price is in thousands of dollars...2K is \$2,000, etc.)



The quantity sold is _____.

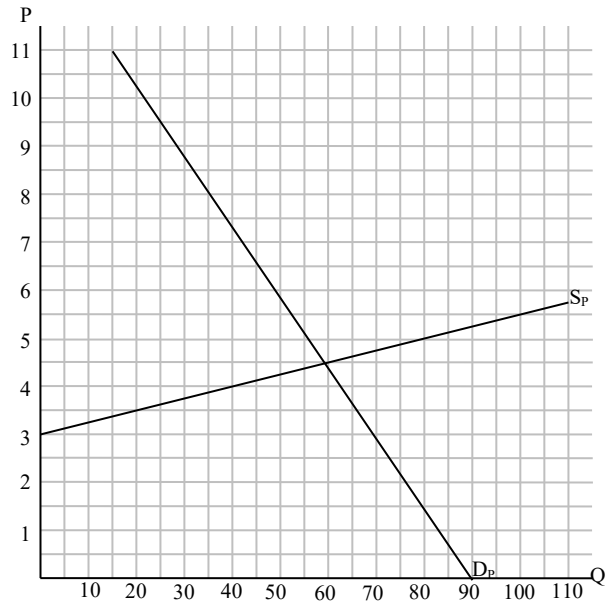
Consumers pay (per unit) _____.

Suppliers get (per unit) _____.

Total tax is _____.

Don't forget the last questions on the back!

21. Consider the following diagram depicting the market for flu vaccines. Both the supply curve and demand curve are private. Suppose each flu vaccine includes a positive externality of \$3.50. **Carefully** sketch the social curve capturing this benefit and then sketch the proper Pigouvian correction so there's no deadweight loss. Highlight the area of total tax revenue or total subsidy cost. If there is deadweight loss, highlight it.



22. For each of the following pairs of prices and quantities, calculate the elasticity of demand using the midpoint method (aka arc price elasticity).

	Quantity 1	Quantity 2	Price 1	Price 2
a.	50	100	\$9	\$6
b.	20	22	\$3	\$1
c.	14	8	\$5	\$17
d.	900	100	\$15	\$135