

Name: _____
ECON 202—Montgomery College
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EXAM 4

- There are 110 possible points on this exam. The test is out of 100.
- You have two hours 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 be capable of storing equations. 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 multiple farmers draw from to water their crops |
| 4. ___ Deadweight loss | D. Example: city roads |
| 5. ___ Demand curve | E. Example: dating websites |
| 6. ___ Natural monopoly | F. Example: potatoes |
| 7. ___ Negative externality | G. Example: talking loudly in public |
| 8. ___ Pigou's solution | H. Example: wearing a nice shirt |
| 9. ___ Public good | I. Excellent economies of scale for the whole market |
| 10. ___ Rivalry | J. Gains that go to no one |
| | K. Many marginal benefits |
| | L. Marginal cost is greater than zero |
| | M. Stays constant as output increases |

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

3 points each.

11. If a maximum production quota is set below equilibrium, what happens to the price?
- It increases
 - It stays the same
 - It decreases
 - It depends on the elasticity of the good or service
 - It depends on how big the production quota is
12. Keeping in mind that most new novels fail, the most likely reason why movies tend to be based on a previous idea, compared to books which tend to be original, is that:
- People enjoy watching movies more than reading books.
 - Authors create a positive externality on readers.
 - Movies have a higher fixed cost.
 - A & B
 - None of the above

13. What determines who (supply or demand) pays the majority of a tax?
- Who is legally assigned to pay the tax
 - The elasticity of supply
 - The elasticity of demand
 - B & C
 - None of the above
14. 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
15. A Pigouvian subsidy is supposed to:
- Discourage people from producing a good
 - Discourage people from demanding a good
 - Encourage people to produce a good
 - B & C
 - None of the above
16. Using the table of maximum capacities, who has the comparative advantage in what?
- | | <i>Max Lumber</i> | <i>Max Wine</i> |
|-------------------|-------------------|-----------------|
| <i>Oregon</i> | 400 | 100 |
| <i>California</i> | 1000 | 750 |
- Oregon for Wine; California for Lumber
 - Oregon for Lumber, California for Wine
 - Oregon for both Lumber and Wine
 - California for both Lumber and Wine
 - None of the above / It is impossible to tell with the information provided
17. Which of the following (somewhat fictional) headlines are inconsistent with Julian Simon's claim that resources are infinite?
- "Toyota to develop new fuel efficient vehicle"
 - "Tuna on verge of extinction due to overfishing"
 - "Copper prices rise as China continues its staggering growth"
 - A & C
 - None of the above

18. On April 17, 2014, *Forbes* published an article by economist Michael Saltzman describing the economic research on the minimum wage.¹ The overwhelming body of research (roughly 85%) points to empirical evidence for increasing unemployment due to the minimum wage (just as theory would predict). Saltzman also notes:

[A] study published in the *Journal of Human Resources* found that a higher minimum wage can actually increase the proportion of families living at or near the poverty line, as the resulting reduction in work hours (or a loss of employment altogether) leads to less take-home pay rather than more.

- What idea does this lower actual wage represent?
- True price
 - Deadweight loss
 - Shortage
 - Market price
 - None of the above
19. 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
20. A price ceiling set above equilibrium creates:
- A surplus.
 - A shortage.
 - Deadweight loss.
 - A & C
 - None of the above
21. 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
22. Which of the following is a public good?
- Public housing
 - Re-education programs for fired workers
 - Health care for the poor
 - B & C
 - None of the above

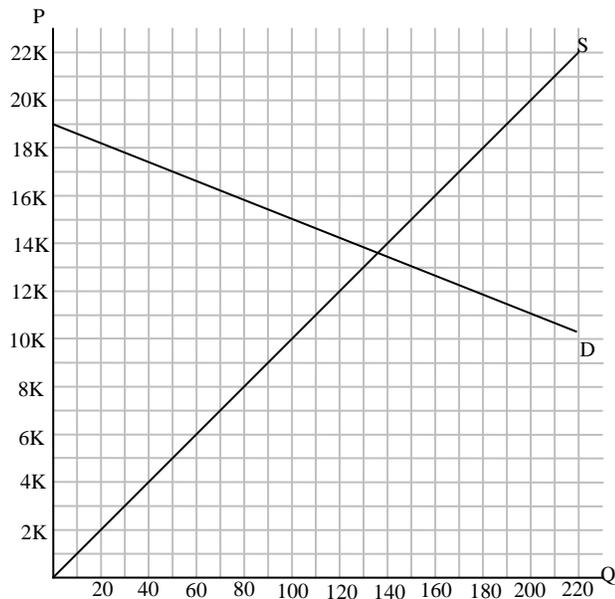
¹ <http://www.forbes.com/sites/realspin/2013/04/17/the-record-is-clear-minimum-wage-hikes-destroy-jobs/>

23. Which of the following is a true statement?
- The demand for beds is less elastic than the demand for furniture.
 - Monopolies can charge whatever price they want and still earn a profit.
 - The tragedy of the commons captures both the problems created by externalized costs (negative externalities) and the problems created by externalized benefits (positive externalities).
 - A & C
 - None of the above
24. Suppose a hurricane knocks over many trees, blocking the roads into a city and knocking out its power. What changes about the market for ice in the city?
- Its supply curve becomes more inelastic.
 - Its demand curve becomes more elastic.
 - Its demand curve becomes more inelastic.
 - A & C
 - None of the above

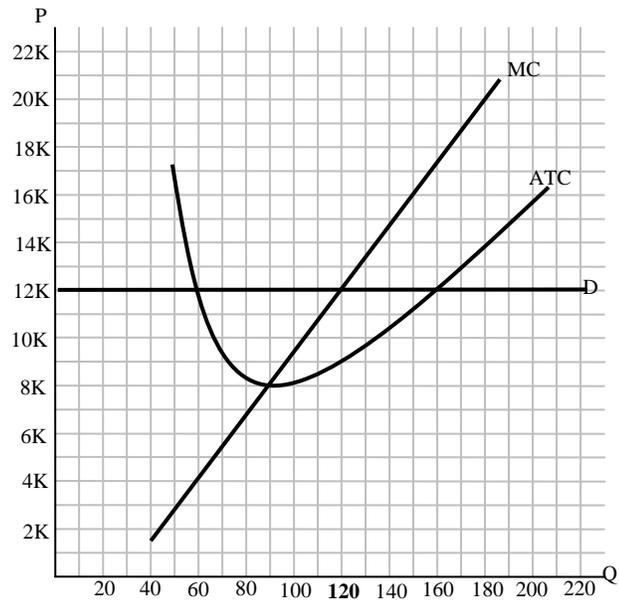
Part III: Short Answer. *Answer the following.*

12 points each.

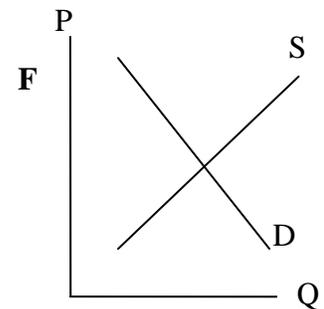
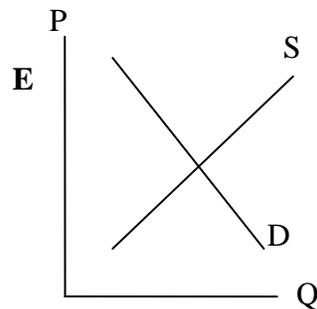
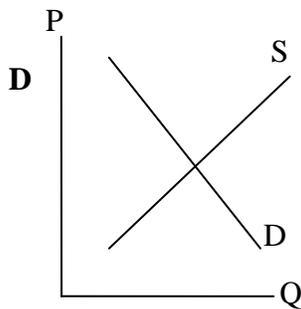
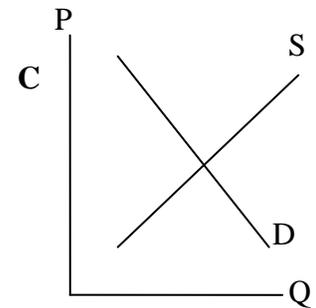
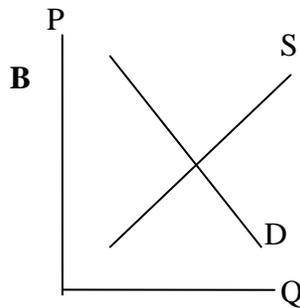
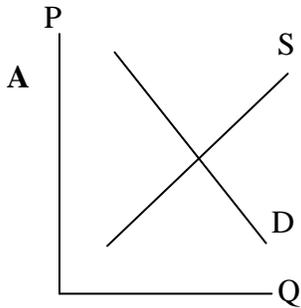
25. Consider the market for used cars in the graph below. Illustrate the effects of a \$5,000 excise tax on the market for used cars. Highlight the area of deadweight loss. **Indicate on the lines** the following values (estimate, if needed): the new quantity sold, the price consumers pay, the price 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.)



26. Consider this perfectly competitive firm. Graphically indicate how much the firm should produce and where its profit or loss is. Also graphically illustrate any deadweight loss, if any.



27. Using the diagrams below, illustrate the effects of the following (2 points each).
- The market for baseball tickets after a baseball player is accused of using steroids.
 - The market for trees after people start recycling paper.
 - The market for steel after the invention of a cheap way to purify aluminum.
 - The market for food after the invention of the tractor.
 - The market for healthcare after people continue to grow older and older.
 - The market for cars after the government taxes steel imports.



28. Using the arc-price elasticity of demand method and the following information, calculate the price elasticity of demand. Then indicate if the good is elastic, unit elastic, or inelastic.

- a. $Q_1 = 11, P_1 = 6$ $Q_2 = 9, P_2 = 10$
- b. $Q_1 = 50, P_1 = 1$ $Q_2 = 10, P_2 = 3$
- c. $Q_1 = 2, P_1 = 10$ $Q_2 = 4, P_2 = 5$
- d. $Q_1 = 200, P_1 = 11$ $Q_2 = 500, P_2 = 3$