Econ 2010-011
Spring 2014
29th April 2014

Final Exam (40 Points)

Section I: Multiple choice questions (Difficulty→ Easy)
(15 x 1 point = 15 points) (Refer to Diagram Sheet)

1) **Refer to Figure I.** Which graph represents a market with no externality?

a. Panel (a)

b. Panel (b)

c. Panel (c)

d. None of the above is correct.

2) **Refer to Figure I.** Which graph represents a market with a positive externality?

a. Panel (a)

b. Panel (b)

c. Panel (c)

d. Both (b) and (c) are correct.

3) **Refer to Figure I.** Which graph represents a market with a negative externality?

a. Panel (a)

b. Panel (b)

c. Panel (c)

d. Both (b) and (c) are correct.

4) **Refer to Figure I, Panel (b).** The market equilibrium quantity is

a. Q2, which is the socially optimal quantity.

b. Q3, which is the socially optimal quantity.

c. Q2, and the socially optimal quantity is Q3.

d. Q3, and the socially optimal quantity is Q2.

5) **Refer to Figure I, Panel (b).** The market equilibrium price is

a. P2.

b. P3a.

c. P3b.

d. P3a - P3b.

6) **Refer to Figure I.** The overuse of antibiotics leads to the development of antibiotic-resistant diseases. Therefore, the market for antibiotics is shown in

a. Panel (a).

b. Panel (b).

c. Panel (c).

d. Both (b) and (c) are correct.

7) **Refer to Figure I, Panel (b) and Panel (c).** The overuse of antibiotics leads to the development of antibiotic-resistant diseases. Therefore, the socially optimal quantity of antibiotics is represented by point

a. Q2.

b. Q3.

c. Q4.

d. Q5.

8) **Refer to Figure I, Panel (b) and Panel (c).** The overuse of antibiotics leads to the development of antibiotic-resistant diseases. Therefore, the external cost of antibiotic overuse is represented by

a. Q3 - Q2.

b. Q5 - Q4.

c. P3a - P3b.

d. P4a - P4b.

9) **Refer to Figure I, Panel (b) and Panel (c).** The overuse of antibiotics leads to the development of antibiotic-resistant diseases. Therefore, a government policy that internalized the externality would move the quantity of antibiotics used from point

a. Q2 to point Q3.

b. Q3 to point Q2.

c. Q4 to point Q5.

d. Q5 to point Q4.

10) A good is excludable if

a. one person's use of the good diminishes another person's enjoyment of it.

b. the government can regulate its availability.

c. it is not a normal good.

d. people can be prevented from using it.

11) Which of the following would be considered a private good?

a. national defense

b. a public beach

c. local cable television service

d. a bottle of natural mineral water

12) In a certain city, the government is considering acquiring some land and turning it into a park (without any fences or gates). In an attempt to determine the extent to which residents of the city would value the park, residents are asked to fill out a questionnaire. Which of the following is correct?

a. On the questionnaire, some residents are likely to exaggerate the value they associate with the park.

b. On the questionnaire, some residents are likely to exaggerate the costs they associate with the park.

c. The use of such a questionnaire in cost-benefit analysis is likely to produce only rough approximations of residents' perceptions of the costs and benefits of a park.

d. All of the above are correct.

13) The Tragedy of the Commons occurs because

a. a common resource is rival in consumption.

b. a common resource is underutilized.

c. crimes are committed in public places.

d. common resources are subject to exclusionary rules.

14) An economics professor, upset about the rising cost of textbooks, proposed that his department purchase 50 copies of a statistics book so the students in the statistics class would not have to purchase their own books but rather could borrow a book for the semester and then return it for the next class to use. Which of the following strategies would *not* prevent a common resource problem with the textbooks?

a. Students will be required to pay a deposit for the textbook, which is refundable at the end of the semester when the book is returned in good condition.

b. The textbooks are placed in a common area of the department so students can borrow and return them as needed.

c. Students must sign a form agreeing to return the book or pay a fine equal to the replacement cost of the book.

d. The textbooks are placed in the professor's office and will only be given to students who are registered members of the class. These students will not receive their final course grades until the books are returned.

15) Which of the following is *not* a way for the government to solve the problem of excessive use of common resources?

a. regulation

b. taxes

c. turning the common resource into a public good

d. turning the common resource into a private good

Section II: Complete all the blank entries in the given table. Then use the data to graph (to scale) the Fixed, Variable, Average Fixed, and Average Variable cost curves on one graph and graph (to scale) the Marginal, Total and Average Total cost curves on another graph. Do the shapes of all the curves conform to conventional economic knowledge? **(5 points)** **(Difficulty→ Easy)**

Betty's Bakery

Quantity of cakes	**Fixed Cost**	**Variable Cost**	**Total Cost**	**Average Fixed Cost**	**Average Variable Cost**	**Average Total Cost**	**Marginal Cost**
1		$13	$38				
2		$28					
3			$70				
4		$64					
5			$110				
6		$108					
7		$133					
8			$185				

Section III: Short and Long answers

Question A) Distinguish between Perfect Competition, Monopoly on the basis of the following: Number of Sellers, Ease of entry and exit, Nature of the product, existence of deadweight loss, determination of Prices, Shape of the demand curve faced by the firm and the extent of Government intervention. In addition give an example for each of the following markets in the USA, also comment on which definition of markets seems the most realistic. **(4 points) (Difficulty → Easy)**

Question B)

	Tom (Swerves)	**Tom (Drives Straight)**
Bryan (Swerves)	**0,0**	**-1,+1**
Bryan (Drives Straight)	**+1,-1**	**-10,-10**

Consider two drivers, Bryan and Tom, both are headed for a single lane bridge from opposite directions, each player has to options, first to Swerve and yield the bridge to the other player, second to continue to Drive Straight.

The following table shows the possible outcomes for each decision combination. The numbers in each cell represent the players outcomes (+1= best outcome, -10 = worst outcome)

What is the equilibrium for this game? Is there a dominant Strategy for this game? Is the equilibrium a Nash Equilibrium? Define Pareto Optimality, is the equilibrium Pareto Optimal?

(4 Points) (Difficulty→ Moderate)

Question C) Consider the following scenario (Hypothetical)

Four roommates; Keats, Shelly, Byron and Coleridge each have independent, individual internet connections, Keats' monthly internet usage is never more than 4 GB, Shelly's monthly internet usage is never more than 3 GB, Byron's monthly internet usage is 5 GB and Coleridge's monthly internet usage is never more than 4GB.

All four of them decide to switch to a common internet connection for the apartment and share the cost of the internet equally. The common internet connection costs a total of $20 a month and allows for 20GB of usage (downloads and uploads), after the 20 GB of usage is exhausted, every additional GB used costs $3.

Six months into using the common internet connection, the roommates realize that they are on a monthly basis using more than 20GB and paying more than they had initially intended.

Based on what we've studied in class, why do you think the roommates are overshooting the 20GB limit ? Propose atleast 3 solutions to the problem (either internal or external) ?

(Difficulty → Moderate) (4 points) (Hint: Start by classifying the common internet connection into one of the four categories of goods we've studied in class. Be as detailed and explicit with your explanation of the source of the problem and the solutions to the problem)

Question D) One example of price discrimination occurs in the publishing industry when a publisher initially releases an expensive hardcover edition of a popular novel and later releases a cheaper paperback edition. Use this example to demonstrate the benefits and potential pitfalls of a price discrimination pricing strategy. **(4 points) (Difficulty→ Difficult) (Hint: Assume different points of view of benefit, the Monopolist, the consumer and the economist) [Do draw relevant diagrams wherever necessary]**

Question E) Draw a graph to demonstrate the circumstances that would prevail in a perfectly competitive market where firms are experiencing Supernormal economic profits . Identify costs, revenue, and the economic profits on your graph. Would the firm continue to make supernormal economic profits in the long run ? Explain with a Diagram. **(4 points) (Difficulty →Easy) (Hint: Draw short run and long run diagrams for both the Individual firm as well as that for the market equilibrium. Show appropriate shifts in market equilibrium)**