

EXAM 1

Principles of Economics EC 110-001
June 14, 2007

Name: _____

by writing my name i swear by the honor code

Read all of the following information before starting the Exam:

- Show all work, clearly and in order, if you want to get full credit. I reserve the right to take off points if I cannot see how you arrived at your answer (even if your final answer is correct).
- Justify your answers algebraically whenever possible to ensure full credit. When you do use your calculator, sketch all relevant graphs and explain all relevant mathematics.
- Circle or otherwise indicate your final answers.
- Please keep your written answers brief; be clear and to the point. I will take points off for rambling and for incorrect or irrelevant statements.
- This assignment has 6 problems and is worth 100 points. It is your responsibility to make sure that you have all of the answers!
- This exam is 25% of your final grade.
- Good luck!

1. (*36 points*) PROBLEM 1: This question has 15 parts. Answer any **12**. Briefly define the following economic terms:

a. (*3 pts*) Efficiency and Equity

b. (*3 pts*) Market failure

c. (*3 pts*) Externality

d. (*3 pts*) Productivity

e. (*3 pts*) Positive statement

f. (3 pts) Normative statement .

g. (3 pts) Competitive market

h. (3 pts) Monopoly

i. (3 pts) Normal Goods vs. Inferior Goods

j. (3 pts) Law of Supply

k. (3 pts) Law of Demand

l. (3 pts) Price Ceiling

m. (3 pts) Price Floor

n. (3 pts) Tax Incidence

o. (3 pts) Binding Constraint

2. (10 points) PROBLEM 2: A small country produces two goods: beer (measured in packs) and potassium (measured in pounds). The country can switch her workers between the production of the two goods, but incurs costs with the retraining and reallocation of workers. Imagine the following combination of production levels:

	A	B	C	D	E	F
<i>Beer</i>	0	20	30	40	50	55
<i>Potassium</i>	30	25	20	14	5	0

a. (5 pts) PART A: Approximately draw the PPF of this country and compute the opportunity cost of increasing the number of packs of beer from (a): 20 to 30 and from (b): 40 to 50. Which one is higher? Why?

b. (5 pts) PART B: Assume that initially this economy is at point G where it is producing 20 packs of beer and 20 pounds of potassium. Is this point an efficient allocation of resources? If not, what would be the shortest way to full efficiency? (Note: Consider only points B and C).

3. (*12 points*) **PROBLEM 3:** Suppose that in a year an American worker can produce 100 shirts or 20 computers, while a Chinese worker can produce 100 shirts or 10 computers.

a. (*3 pts*) **PART A:** Graph the production possibilities frontier for the two countries.

b. (*3 pts*) **PART B:** What is the opportunity cost of a shirt for an American? Of a computer? What is the opportunity cost of a shirt for a Chinese? Of a computer?

c. (*3 pts*) **PART C:** Which worker has an absolute advantage in producing shirts? In producing computers? Which worker has a comparative advantage in producing shirts? In producing computers?

d. (*3 pts*) **PART D:** Will they both be better off if they decided to trade with each other? If yes, how will that come about? (Note: No numerical computations required).

4. (*20 points*) PROBLEM 4: Using the supply-and-demand diagrams, show the effect of the following events on the market for sweatshirts. Briefly describe what you are doing:

a. (*5 pts*) PART A: A hurricane in South Carolina damages the cotton crop

b. (*5 pts*) PART B: The price of leather jacket falls.

c. (*5 pts*) PART C: All colleges require morning exercise in appropriate attire. (Hint: Assume they are complements).

d. (5 pts) PART D: New knitting machines are invented.

5. (10 points) PROBLEM 5: The market research has revealed the following information about the market for sweatshirts: the demand schedule can be represented by the equation $Q^D = 135 - 10P$, where Q^D is the quantity demanded and P is the price. The supply schedule can be represented by the equation $Q^S = 45 + 5P$. Calculate the equilibrium price and quantity in the market for sweatshirts.

6. (12 points) PROBLEM 5: Suppose that your demand for DVDs is as follows:

Price	Quantity Demanded (Income = \$5,000)	Quantity Demanded (Income = \$8000)
25	15	50
29	11	42
31	9	38
34	6	32
36	4	28

a. (6 pts) PART A: Use the midpoint method to calculate your price elasticity of demand as the price of DVDs increases from \$25 to \$29 if (i) your income is \$5,000 and (ii) your income is \$8000. Which one is more elastic? Why?

b. (6 pts) PART A: Use the midpoint method to calculate your income elasticity of demand from \$5000 to \$8000 if (i) the price is \$31 and (ii) the price is \$34. What kind of goods are DVDs?

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