

Economics 3550  
Intermediate Microeconomics  
Professor Rous  
Mid-Term Exam 1  
October 2, 2002

Name \_\_\_\_\_

Clearly label all graphs for full credit and please write legibly; I cannot grade what I cannot read.

1. (6) “One of the most problematic aspects of the science of economics is the strong belief that everyone is rational. I don’t know about you, but I know plenty of people who do irrational things, and therefore, economics is based on a false premise.”

Do you agree or not with the above quote, please comment.

*Economists do not believe people are rational, they assume they are rational. Whether people are always acting rational or not, their behavior is consistent with rationality enough of the time that, for the purposes of predicting and explaining human behavior, the assumption is a good one.*

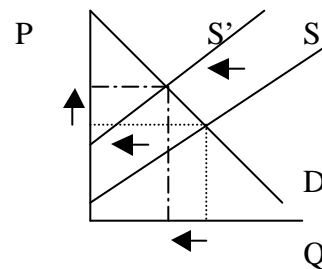
2. (6) Which of the following reasons does Landsburg believe accounts for the phenomenon of celebrity endorsements?

*See page 657 in Landsburg*

- a. Firms think that consumers believe celebrities would only endorse high quality products.
- b. Firms believe that consumers want to own the same goods that celebrities do.
- C.** Firms that intend to be around for a long time want to signal their intention by spending a lot of money on a celebrity.
- d. Firms assume that consumers will be more likely to pay attention to a commercial if a celebrity appears in it.

3. (7) When Supply decreases, ceteris paribus:

- a. price increases, demand decreases.
- b.** price increases, quantity demanded decreases.
- c. price decreases, demand decreases.
- d. price decreases, quantity demanded decreases.



4. Assume the supply and demand for microwaves follows the following equations:

$$\text{Demand: } P = 220 - .5Q_d$$

$$\text{Supply: } P = 40 + .3 Q_s$$

- (8) What is the equilibrium Price and Quantity in the microwave market?

$$\text{Set } 220 - .5Q = 40 + .3Q$$

$$\text{Then } 180 = .8Q$$

$$\text{So } Q = 225 \text{ and therefore } P = 107.50$$

- (6) Now suppose a \$10 excise tax is placed on producers of microwaves. What will be the new equilibrium price and quantity, the price that consumers will pay (price to demanders), and the price to suppliers?

$$\text{Tax affects supply: } P = 40 + .3Q + 10$$

$$\text{Set } 220 - .5Q = 40 + .3Q + 10$$

$$\text{Then } 170 = .8Q$$

$$\text{So } Q = 212.5 \text{ and therefore } P = 113.75, \text{ and } \$113.75 \text{ is the price to consumers.}$$

*Producers will have to pay \$10 per microwave to the government and therefore the price to suppliers will be \$103.75.*

5. (8) Workers in France can produce 3 DVD players or 6 radios in one day. Workers in Italy can produce 6 DVD players or 9 radios in one day. Which country has a comparative advantage in producing DVD players? How do you know?

*To produce 1 DVD player, France must give up production of 2 radios.*

*To produce 1 DVD player, Italy must give up production of 1.5 radios.*

*Since Italy has a lower opportunity cost of producing DVD players than France, Italy has the comparative advantage in producing DVD players.*

6. (7) A budget constraint shows us:

*See the bottom of page 59 in Landsburg.*

- a. how income can be used to buy one bundle of goods at different prices
- b.** an individual's consumption possibilities.
- c. how increases in the price of a good affect an individual's income.
- d. which bundle of goods maximizes utility.

7. (6) That indifference curves bow toward the origin follows from which preference assumption?

*See the bottom of page 55 in Landsburg.*

- a. the transitivity assumption of consumer preferences.
- b. the nonsatiation assumption of consumer preferences.
- c. the completeness assumption of consumer preferences.
- d.** the convexity assumption of consumer preferences.

8. (5) A Giffen Good is one...

*See page 91 in Landsburg.*

- a.** for which an increase in price causes an increase in the quantity demanded.
- b. for which the Engel curve is negatively sloped.
- c. for which there are perfect substitutes.
- d. for which the income elasticity is exactly 0.0.

9. (5) The Substitution Effect...

**See page 94-97 in Landsburg.**

- a. is the part of a change in the quantity demanded caused by an increase in the price of a substitute.
- b. is the part of a change in purchasing power caused by a change in price.
- c.** is the part of a change in the quantity demanded caused by a change in the price ratio while purchasing power is held constant.
- d. is the part of a shift in demand caused by a change in price.

10. (8) The price of going to a movie is \$5 per person (\$10 for a couple). The price of going to the ballet is \$30 per person (\$60 for a couple). Say a babysitter costs \$20.

Assuming people with or without children have similar incomes and preferences, where would you expect to find a larger percentage of childless couples, at the movie or ballet? Please explain.

*For a childless couple, the price of seeing a movie is \$10, and the price of seeing the ballet is \$60. Therefore the couple must give up 6 movies to see the ballet and .1667 ballets to see a movie (in other words, the price of the ballet is 6 movies and the price of a movie is .1667 ballets).*

*For a couple with children, the price of seeing a movie is \$30, and the price of seeing the ballet is \$80. Therefore the couple must give up 2.667 movies to see the ballet and .375 ballets to see a movie (in other words, the price of the ballet is 2.667 movies and the price of a movie is .375 ballets).*

*Couples with children are less likely to go out at all because having to hire a babysitter makes going out relatively more expensive than other goods they could buy. However, the lower*

*relative price of the ballet for those with children means couples with children will go to the ballet more often when they do go out. Similarly, childless couples face a higher relative cost of going to the ballet and will therefore go to the movies more often.*

*As a result, a higher percentage of the couples who go to the movies will be childless compared to the percentage of childless couples at the ballet.*

*For example:*

*Assume 100 childless couples and 100 couples with children.*

*On any given Saturday night, 70 of the childless couples go out and 25 of the couples with children go out.*

*60 of the childless couples go to the movies and 10 go to the ballet.*

*15 of the childless couples go to the movies and 10 go to the ballet.*

*Of the 75 that go to the movies, 80% are childless.*

*Of the 20 that go to the ballet, 50% are childless.*

And we can see a higher percentage of childless couples at the movies.

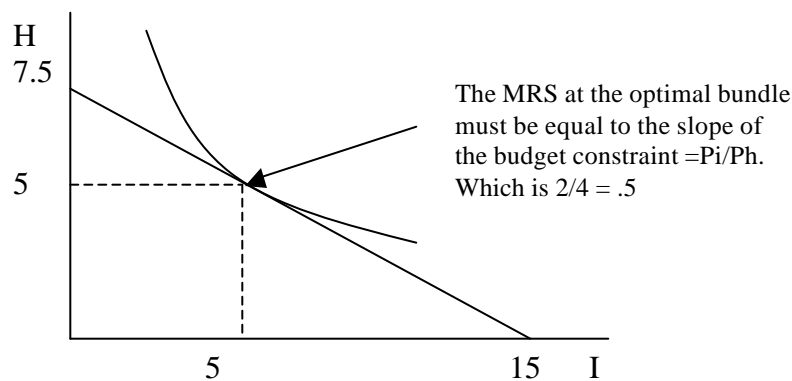
*This question was similar to the good/bad oranges example in the book and homework*

*You would not have needed anywhere near this much detail to get full credit.*

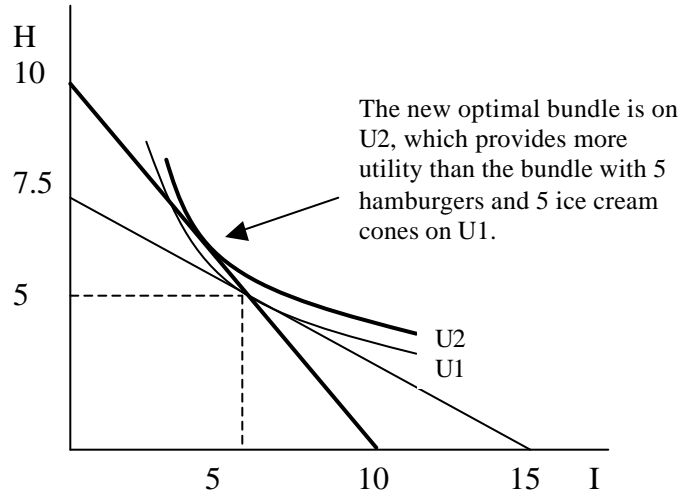
11. Jena divides her income between hamburgers and ice cream cones and she currently purchases 5 hamburgers per week at a price of \$4 each and 5 ice cream cones at a price of \$2 each.

a.(6) Placing Ice Cream Cones on the horizontal axis and hamburgers on the vertical axis, draw Jena's budget constraint and an indifference curve that illustrates her optimal bundle. Make sure you label both intercepts for the budget constraint.

b.(4) What is her marginal rate of substitution at that bundle?



c. (8) Redraw the above budget constraint and indifference curve. Suppose the price of hamburgers drops to \$3 and the price of ice cream cones increases to \$3. Is Jena better or worse off because of the price change? Use the graph to prove it.



*She is better off because the new budget constraint intersects the old budget constraint at her old optimal bundle. Because of that, it is possible to move to a new optimal bundle on the new budget constraint that provides more utility than at the old bundle.*

Answer **ONE** of the following two questions. **Do NOT answer both.**

12. (10) After September 11, 2001, some said that while they hated to say there was a silver lining in such a tragedy, the rebuilding was sure to stimulate the economy and make us better off.

One reason the Spring 2002 GDP growth figures looked so good was because the new Federal Agency that is responsible for airport security hired lots of new security guards and bought lots of new x-ray and bomb detecting machines, illustrating the point that new safety measures will increase employment and be good for the American standard of living.

Based on your reading of Hazlitt, please comment on the above statements.

*See the Hazlitt chapters on “The Broken Window,” “The Blessings of Destruction,” and “Public Works Mean Taxes.”*

13 (10) According to DeLong, there are several reasons that private property is important. Among the reasons is efficiency. Describe two different market failures that result from insufficient or absent property rights. Cite examples of each.

*See Chapter 4 in DeLong.*