ECON 100103 **Homework 3** Due on 2011/11/29

小組成員	學號 _____ 姓名_____ 學號 _____ 姓名_____ 學號 _____ 姓名_____ 學號 _____ 姓名_____ 學號 _____ 姓名_____

Section I. Multiple Choice Questions

1. If there is pollution in producing a product, then the market equilibrium price

A) is too high and equilibrium quantity is too low.

B) and equilibrium quantity are too low.

C) and equilibrium quantity are too high.

D) is too low and equilibrium quantity is too high.

Figure 1

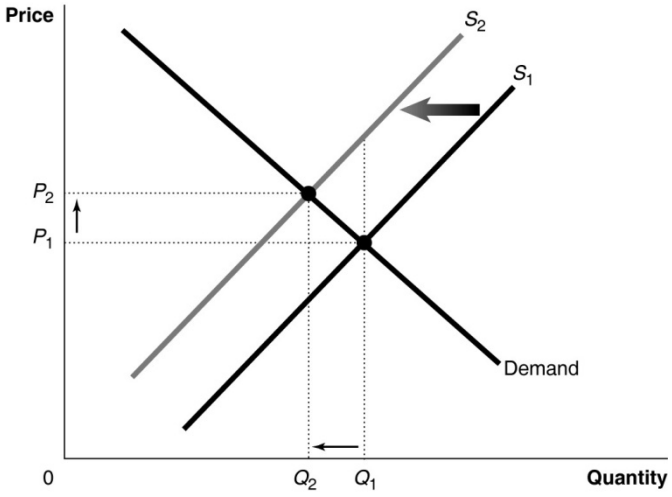


Figure 1 shows a market with an externality. The current market equilibrium output of Q_1 is not the economically efficient output. The economically efficient output is Q_2.

2. ***Refer to Figure 1.*** Suppose the current market equilibrium output of Q_1 is not the economically efficient output because of an externality. The economically efficient output is Q_2. In that case, the diagram shows

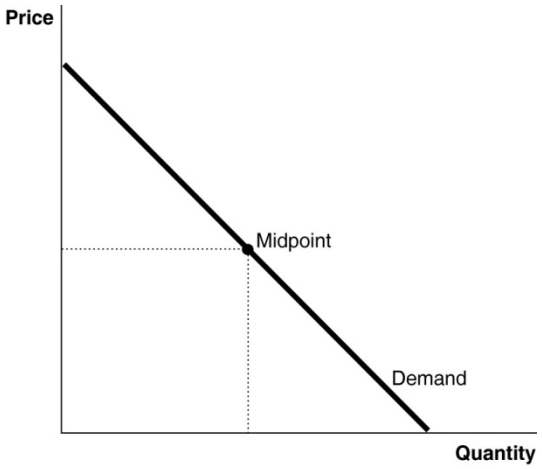
A) the effect of a positive externality in the production of a good.

B) the effect of a negative externality in the production of a good.

C) the effect of an external cost imposed on a producer.

D) the effect of an external benefit such as a subsidy granted to consumers of a good.

Figure 2



3. ***Refer to Figure 2.*** Which of the following statements is true about the price elasticity of demand?

A) The elasticity coefficient is constant along the demand curve.

B) The elastic portion of a straight-line downward sloping demand curve corresponds to the segment above the midpoint.

C) The inelastic portion of the demand curve corresponds to the segment above the midpoint.

D) At the midpoint of the demand curve, the elasticity coefficient is zero.

4. ***Refer to Figure 2.*** At the midpoint of the demand curve, in absolute value,

A) the price elasticity coefficient is at a maximum.

B) the price elasticity coefficient is at a minimum.

C) the price elasticity coefficient is zero.

D) the price elasticity coefficient is one.

5. Consider the following characteristics:

a. low transaction costs

b. small levels of pollution

c. high levels of pollution

d. clear assignment of property rights.

Which of the above are assumptions behind the Coase Theorem?

A) a, b, and d

B) a, c, and d

C) a and d

D) a only

6. Sefronia and Bella share an apartment and they are deciding whether or not to purchase a weekly housecleaning service. The value of the service to each of them is $50 and it costs $80 to hire a housecleaner. Should they hire a housecleaner?
A) Yes, if each contributes $50, then each stands to gain a consumer surplus.
B) No, because each will wait for the other to hire the housecleaner.
C) Yes, but only if a housecleaner will accept $50 so that each can take turns to pay the housecleaner.
D) No, because it will be difficult for them to agree on which housecleaning service to use.

7. Seth is a competitive body builder. He says he has to have his 12-oz package of protein powder to "feed his muscles" every day. On the basis of this information, what can you conclude about his price elasticity of demand for protein powder?
A) It is elastic.
B) It is perfectly elastic.
C) It is perfectly inelastic.
D) The price elasticity coefficient is 0.

8. Jonah lives in a small town where there is only one Mexican restaurant. Which of the following is likely to be true about the price elasticity of demand for meals at the Mexican restaurant?
A) Demand is likely to be perfectly inelastic.
B) Demand is likely to be perfectly elastic.
C) Demand is likely to be relatively elastic.
D) Demand is likely to be relatively inelastic.

9. Suppose a hurricane decreased the supply of oranges so that the price of oranges rose from $120 a ton to $180 a ton and quantity sold decreased from 800 tons to 240 tons. What is the absolute value of the price elasticity of demand?
A) 0.11
B) 0.37
C) 2.69
D) 9.33

The publisher of a magazine gives his staff the following information:

Current price	$2.00 per issue
Current sales	150,000 copies per month
Current revenue	$300,000 per month
Current total costs	$450,000 per month

He tells the staff, "Our costs are currently $150,000 more than our revenues each month. I propose to eliminate this problem by raising the price of the magazine to $3.00 per issue. This will result in our revenue being exactly equal to our cost."

10. ***Refer to Table above***. Which of the following statements is correct?

A) The publisher's analysis is correct only if the demand is perfectly elastic.

B) The publisher's analysis is correct only if the demand is elastic.

C) The publisher's analysis is correct only if the demand is perfectly inelastic.

D) The publisher's analysis is correct only if the demand is unit-elastic.

11. Facing stiff competition, Hendrix College, a small liberal arts institution in Conway, Ark., decided two years ago to bolster its academic offerings, promising students at least three hands-on experiences outside the classroom, including research, internships and service projects. Although it raised tuition and fees by 29 percent, enrollment in the freshman class rose by 37 percent.

Source: Jonathan D. Glater and Alan Finder, "In New Twist on Tuition Game, Popularity Rises With the Price," New York Times, December 12, 2006

Based on the information above, the demand for Hendrix College education is

A) unit-elastic.

B) perfectly elastic.

C) relatively inelastic.

D) More information is needed to answer the question.

12. Consider a demand curve that has a constant elasticity value of 0. What happens to quantity demanded and total revenue when price increases?

A) The quantity demanded and total revenue remain the same.

B) The quantity demanded does not change but total revenue increases.

C) The quantity demanded and total revenue fall to zero.

D) The quantity demanded does not change but total revenue decreases.

13. Suppose the California Nurses Union successfully secured a 12 percent increase in the wages of registered nurses. If a hospital responds by reducing the quantity of registered nurses hired and increasing the quantity of physician's assistants hired, what conclusion can you draw?
A) Physician's assistants are more valuable in terms of their productivity.
B) The price elasticity of demand for registered nurses is negative while the price elasticity of demand for physician's assistants is positive.
C) The cross-price elasticity of demand between registered nurses and physician's assistants is positive.
D) The cross-price elasticity of demand between registered nurses and physician's assistants is negative.

14. Last year, Sefton purchased 60 pounds of potatoes to feed his family of five when his household income was $30,000. This year, his household income fell to $20,000 and Sefton purchased 80 pounds of potatoes. All else constant, Sefton's income elasticity of demand for potatoes is
A) negative, so Sefton considers potatoes to be an inferior good.
B) positive, so Sefton considers potatoes to be an inferior good.
C) positive, so Sefton considers potatoes to be a normal good and a necessity.
D) negative, so Sefton considers potatoes to be a normal good.

15. An advantage of imposing a tax on the producer that generates pollution is that
A) it forces the polluting producer to internalize the external cost of the pollution.
B) the government can keep tabs on exactly what is produced in an industry.
C) it will eliminate pollution.
D) a producer can pass the cost of the pollution to consumers.

Section II. Essay Questions

(1) Are the cross-price elasticities of demand between the following pairs of products likely to be positive or negative? Briefly explain.

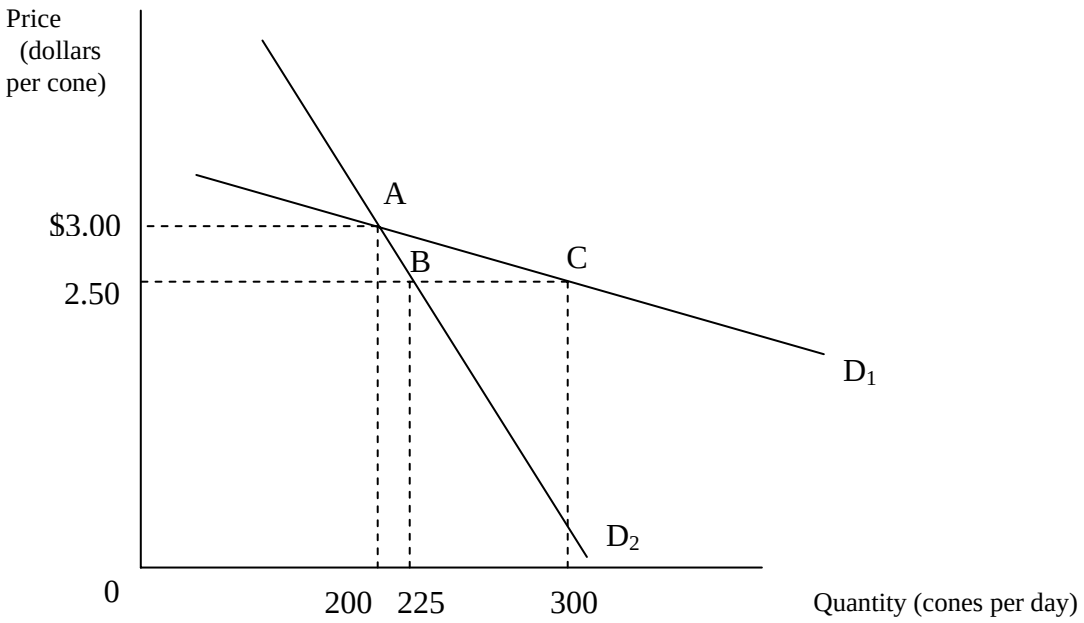
a. Pepsi and Coca-Cola.

b. French fries and ketchup.

c. Steak and chicken.

d. Blue-ray players and Blue-ray discs.

(2) Use the following graph for Yolanda's Frozen Yogurt Stand to answer the questions that follow.



a. Use the midpoint formula to calculate the price elasticity of demand for D_1 between point A and point C and the price elasticity of demand for D_2 between point A and point B. Which demand curve is more elastic, D_1 or D_2? Briefly explain.

b. Suppose Yolanda is initially selling 200 cones per day at price of $3.00 per cone. If she cuts her price to 2.50 per cone and her demand curve is D_1, what will be the change in her revenue? What will be the change in her revenue if her demand curve is D_2?

(3)

Number of Acres	Deidre's Willingness to Pay (dollars)	Eugene's Willingness to Pay (dollars)	Farhad's Willingness to Pay (dollars)
1	$180	$140	$150
2	160	130	130
3	140	120	110
4	120	110	90
5	100	100	70
6	80	90	50
7	60	80	30
8	40	70	20

Table 1

Number of Acres	Price per Acre (dollars)
1	$260
2	280
3	300
4	320
5	340
6	360
7	380
8	400

Table 2

In an effort to maintain privacy and enhance property values, three homeowners, Deidre, Eugene and Farhad, are considering leasing a portion of adjoining vacant land for a private park. Table 1 shows each person's willingness to pay for each quantity of the land. And suppose the landowner is willing to lease a portion of her land according to the following supply schedule given in Table 2.

a. Graph the marginal social benefit curve and the supply curve on the same diagram.

b. What is the optimal quantity of land that homeowners should lease? Explain your answer.

c. Briefly explain why a park of 5 acres is not optimal.