**Theoretical Questions**

1. Define price elasticity of demand. What are the two ways in which price elasticity of demand can be calculated? What do its sign mean?
2. What does it mean to have elastic demand? Draw a diagram to illustrate.
3. What does it mean to have inelastic demand? Draw a diagram to illustrate.
4. What does it mean to have unit elastic demand? Draw a diagram to illustrate.
5. What are the two extreme price elasticity of demand cases? Sketch their respective demand curves and given an example of each.
6. What are the determinants of elasticity?
7. What is cross-elasticity of demand? How is it measured? What do its sign mean?
8. What is income-elasticity of demand? How is it measured? What do its sign mean?
9. What is price elasticity of supply? How is it measured? What do its sign mean?

**Problem Solving**

1. Yesterday, the price of envelopes was $3 a box, and Julie was willing to buy 10 boxes. Today, the price has gone up to $3.75 a box, and Julie is now willing to buy 8 boxes.
2. Use mid-point method to calculate Julie’s price elasticity of demand.
3. Is her demand elastic or inelastic?
4. Which of the following goods are likely to have elastic demand, and which are likely to have inelastic demand?   
     
   Rice

Pepsi   
Chocolate   
Water   
Heart medication   
Luxury cars

1. Katherine advertises to sell cookies for $4 a dozen. She sells 50 dozen, and decides that she can charge more. She raises the price to $6 a dozen and sells 40 dozen. What is the price elasticity of demand?
2. Betty is addicted to chocolate cake. No matter what the price, she will always buy chocolate cake of quantity Q1. What type of price elasticity of demand does Betty have? Sketch her demand function.
3. Consider the list of goods and their respective cross-price elasticities of demand.

|  |  |
| --- | --- |
| **Good** | **Cross-price elasticities of demand** |
| Air-conditioning units and kilowatts of electricity | -0.34 |
| Coke and Pepsi | +0.63 |
| High-fuel-consuming sport-utility vehicles (SUVs) and gasoline | -0.28 |
| McDonald’s burgers and Burger King burgers | +0.82 |
| Butter and margarine | +1.54 |

Explain the sign of each of the cross-price elasticities. What does it imply about the relationship between the two goods in question?

6.  If the cross elasticity of demand between peanut butter and milk is -1.11, then are peanut butter and milk substitutes or complements?  Be able to explain your answer.

7.  A 10 percent increase in income brings about a 15 percent decrease in the demand for a good. What is the income elasticity of demand and is the good a normal good or an inferior good?  Be able to explain your answer.

**Multiple Choice Questions**

1. The quantity of a good demanded rises from 1000 to 1500 units when the price falls from $1.50 to $1.00 per unit. The price elasticity of demand for this product is approximately: (use percentage change method)

A. 1.0

B. .16

C. 2.5

D. 4.0

2. If the elasticity of demand for a commodity is estimated to be 1.5, then a decrease in price from $2.10 to $1.90 would be expected to increase daily sales by:

A. 50%

B. 1.5%

C. 5%

D. 15%

3. Demand is said to be inelastic when:

A. the percentage change in quantity demanded is greater than the percentage change in price of a good

B. the percentage change in price exceeds the percentage change in quantity demanded of a good

C. a relatively small change in price results in a relatively big change in quantity demanded

4. The determinants of the price elasticity of demand of a particular commodity include all of the following except:

A. the availability of substitutes for the commodity

B. the time period involved

C. the ease with which resources can be shifted to and from the production of this commodity to other uses

D. the degree of specificity with which the commodity is defined

5. The fact that the expenditure on food as a percentage of income has declined as income has increased indicates that food:

A. is an inferior good

B. is a luxury good

C. has an income elasticity of demand less than unity

D. is a normal good with an elastic demand

E. there is not enough information to be able to determine what type of good food is

6. The quantity of a good demanded rises from 90 units to 110 units when the price falls from $1.20 to $.80 per unit. The price elasticity of demand for this product approximates:

A. .5

B. 1.0

C. 2.0

D. 4.0

7. An income elasticity of demand equal to 2 for a particular product means that:

A. demand curves for the product slope upward.

B. the product is an inferior good.

C. a 10 percent increase in income will yield a 20 percent increase in the quantity sold.

D. a 20 percent increase in income will result in a 10 percent increase in the quantity sold.

E. (% change in Q) / (% change in P) = 2.

8. In the last 20 years real medical expenditures have more than doubled. Physicians supply medical services at a lower cost than do hospitals. Thus, it has been suggested that total medical expenditures could be decreased by increasing the supply of physicians. Which of the following findings would support this position?

A. it is found that the cross elasticity of demand between physicians and hospitals is positive and relatively large.

B. it is found that the cross elasticity of demand between physicians and hospitals is negative and relatively large in absolute value.

C. it is found that the cross elasticity of demand between physicians and hospitals is relatively large in absolute value.

D. it is found that the demand for physicians is relatively inelastic.

E. there is not enough information given above to determine the effect that an increase in the supply of physicians will have on medical expenditures.

9. You are a supplier of peanuts. Your research department estimates that the price elasticity of demand for peanuts is 2.5. By what percentage will quantity demanded rise if you lower price from $4 to $2?

A. 16.67 percent.

B. 167 percent.

C. 67 percent.

D. 50 percent.

E. none of the above.