

AEC 305 (Fall 2009)
Exam II (20%)

Name _____

1. Indicate whether the following variables (holding all other factors constant) will :

- a. affect the primary supply or the primary demand for apples,
- b. be represented by a shift or a movement along the supply or demand curves for apples. AND if a shift in which direction (i.e., right or left),
- c. increase or decrease apple prices,
- d. increase or decrease apple quantities

An example is provided for you to follow. (1 point each)

Variable	Does it Impact Primary Supply or Primary Demand?	Movement or Shift to the Right or Left?	Price Increase or Decrease?	Quantity Increase or Decrease?
Higher Income (normal good)	<i>Primary Demand</i>	<i>Shift to the Right</i>	<i>Increase</i>	<i>Increase</i>
Biotechnology Adoption Which Increases Producer Yields				
Health Study Indicating Benefits of Consuming Apples				
Higher Chemical Costs to Produce Apples				
Consumer Price Subsidy for Apples				

2. As the purchasing manager for Kroger, you are attempting to estimate the anticipated consumer demand for turkeys for the upcoming holiday season. Identify three demand factors you would include in your demand analysis. (2 points each)

i. _____

ii. _____

iii. _____

3. Match the statement on the right with the appropriate economic measurement the statement reflects on the left. (2 points each)

_____ Price Flexibility Coefficient

A. A 10 percent increase in the price of eggs induces a 2 percent decline in the quantity of bacon demanded, holding all other factors constant.

_____ Own Price Elasticity of Demand

B. A 10 percent increase in the quantity of soybeans induces a 15 percent decline in the price of soybeans, holding all other factors constant.

_____ Cross Price Elasticity of Demand

C. A 10 percent increase in the price of beef induces a 3 percent decline in the quantity of beef demanded, holding all other factors constant.

4. Fill in the blank (2 points each)

- a. If the income elasticity for carrots is less than one but greater than zero then carrots would be classified as a(n) _____ (normal or inferior) good.
- b. Policymakers wishing to increase tax revenues will increase taxes on products that have an _____ (elastic or inelastic) own price elasticity of demand.
- c. The price flexibility coefficient for tobacco products which have few substitutes would likely be _____ (greater or smaller) than one in absolute value.
- d. Complementary goods have _____ (negative or positive) cross price elasticities.
- e. Since agricultural supply, especially in the short-run, tends to be more _____ (elastic or inelastic) than demand, one can expect _____ (more or less) price volatility at the farm level compared to the price volatility of food at the consumer or retail level.

5. UK's College of Ag Extension specialists work with farmers to utilize technologies and production practices to increase yields and to reduce costs of production. Using a traditional supply/demand diagram illustrate the impact this will have on farm prices. What does this imply about the value of UK Extension Specialists to Kentucky farmers? (5 points)

6. Define the elasticity of supply. Would you anticipate the elasticity of crop and livestock supply in eastern Kentucky or in major urban areas such as Louisville (Jefferson County) or Lexington (Fayette County) to be relatively large or small. WHY? (5 points)

7. As a food marketing specialist, you have been asked by WLEX-18 to provide some economic reasons for the decline in food and farm prices for 2009. Identify at three demand or supply factors that you would share with the reporter for this recent trend. (2 points each)

i. _____

ii. _____

iii. _____

MULTIPLE CHOICE: CIRCLE THE CORRECT ANSWER. (3 points each)

8. Which one of the following statements is CORRECT related to consumer demand for steak?

- a. The elasticity of demand for steak is relatively small (compared to most food items) since steak is considered a “necessity” by most consumers.
- b. The elasticity of demand for steak in the long-run would generally be less elastic than in the short-run.
- c. The elasticity of demand for steak is relatively small (compared to most food items) since steak expenditures represent a relatively significant large percentage of a typical meat consumer.
- d. The elasticity of demand for steak is relatively large (compared to most food items) given the large number of substitutes for steak among various other beef cuts and other meat/food alternatives

9. Given the follow demand equation for chicken, which of the following statements is INCORRECT?

$$Q = 160 - 25P_1 + 10 P_2 + 0.001 \text{ INC} + .00002 \text{ POP}$$

where: Q = annual pounds of chicken

P_1 = price/lb of chicken

P_2 = price/lb of beef

INC = annual income

POP = population (millions)

- a. The demand curve is downward sloping as represented by the negative coefficient on the price of chicken.
- b. Chicken is a normal good as reflected by the positive coefficient on the income variable.
- c. Beef is a compliment as represented by the positive sign on the price of beef coefficient.
- d. Population increases will have a positive impact on the quantity of chicken demanded.

10. Farm prices are determined by the intersection of

- a. derived demand and primary supply
- b. primary demand and primary supply
- c. derived supply and derived demand
- d. derived supply and primary demand

11. Assuming competitive marketing conditions within the food marketing system, an increase in marketing costs (such as processing, packaging, and transportation costs) will

- a. shift the derived demand for farm commodities to the left
- b. shift the derived supply of food items available to consumers to the left
- c. increase the marketing margin
- d. all the above

12. Fill in the blank (2 points each)

The _____ (primary or derived) supply curve represents how the quantity supplied by farmers responds to _____ changes (price or income) at the _____ (retail or farm) level, holding all other factors constant.

The _____ (primary or derived) supply curve represents how the quantity supplied to consumers at the _____ (farm or retail) level responds to _____ (price or income) changes, holding all other factors constant.

The vertical distance between the primary and derived supply curves represents the total _____ of moving the product from the farm level to the consumer level.

13. a. Define the elasticity of demand. (2 points)

- b. Calculate the (own) price elasticity of demand from the given data below as price increases from an initial value of \$7 to \$8. (3 points)**

Price	Quantity Demanded	Quantity Supplied
\$7	200	50
\$8	180	90
\$9	150	150
\$10	110	210
\$11	60	250

- c. Is demand elastic or inelastic? Interpret the elasticity estimate. (3 points)**

14. Circle if the statement is True or False. IF FALSE, CORRECT THE STATEMENT TO MAKE IT TRUE. (2 points each)

- a. **True or False:** If you notice that for every 10 percent increase in quantity results in the price falling by 5 percent the price flexibility coefficient would be -2 .
- b. **True or False:** An increase in the price of pork, holding all other factors constant will result in a shift in the demand curve for pork to the left.
- c. **True or False:** When the primary demand curve for watermelons shifts, the derived demand curve for watermelons will always shift in the same direction (assuming we have competitive market conditions).
- d. **True or False:** An increase in the price of substitute good x (e.g. gasoline) will shift the demand curve of good y (e.g. ethanol) to the right.
- e. **True or False:** Supply curves have a positive slope reflecting that producers will supply more with higher prices, (holding all other factors constant), while demand curves have a negative slope indicating that consumers will purchase less with higher prices (holding all other factors constant).