AREC 315
Fall 2007

Quiz #2
(75 Points Possible)

Please respond to the following questions in a clear and precise manner. Use equations, graphs, and numbers, where appropriate or when asked for, to support you answer. Show your calculations on problems to receive full credit for your answers. Use complete sentences in your responses. **Please manage your time wisely.**

(15 Points) 1. Suppose that a car rental business faces a demand represented by the equation

$$D = 30 - p + 0.4Y$$

where D is the quantity demanded in rentals a month, p is the price in dollars per rental, and Y is the average consumer's income in thousands of dollars a year. Use the arc elasticity approach to make the following calculations.

a. Suppose that income Y = \$100 and the car rental business raises the price from p = \$30 to p = \$35. Calculate the own-price elasticity of demand. What does your answer mean? Is demand elastic or inelastic? Why?

b. Suppose that the price p = \$30 and that income rises from Y = \$100 to Y = \$110. Calculate the income elasticity of demand. What does your answer mean? Is this service a normal or inferior service? Why?

(10 Points) 2. If movies were free, Joy would attend 20 movies a month. If movie prices were $20/movie, Joy would not go to any movies. At $12/movie she would attend eight movies and at $10 she would attend 10 movies.

a. Using the above information, draw Joy's demand curve for movies using the data provided (Hint: This is a linear demand curve).

b. Calculate the buyer surplus for Joy if movie prices are at $10.

c. What does this number mean?

(10 Points) 3. Suppose there is a burger war surrounding the UA campus. The manager of McDonalds knows that if she lowers the price of her Big Mac from $1.50 to $1.35 her decision will reduce the number of Burger King Whoppers purchased in a day from 400 to 350. What is the cross-price elasticity of demand in this burger war? In words explain what your answer means. Are these products substitutes or complements? Why? Why are cross-price elasticities important information in formulating competitive strategy?

(10 Points) 4. Sam and Allen are having a heated discussion about the price of a new electronic device (e.g. iPhone) that is very popular but requires the construction of new production plants (will take two years) in order to keep up with rising demand. Sam believes the price will rise more in the short-run than the long-run while Allen believes there will be no difference. Who is correct? Use a market diagram to illustrate your answer.

(10 Points) 5. Suppose a firm is faced with the following production and cost information.

Total Output	Total Fixed Cost	Total Variable Cost	Total Cost	Average Total Cost	Marginal Cost
1,000	$10,000	$10,000			
1,500		11,000			
1,800		13,000			
2,100		16,000			
2,300		20,000			
2,400		25,000			

a. Please complete the blanks in the table.

b. If the price of the output is $21/unit, use the appropriate decision rule to determine the profit-maximizing level of output. Please give an intuitive explanation for why your answer is correct.

(10 Points) 6. The economics of speed (e.g. learning and experience curves) represents a key strategic concept in determining the competitiveness of a particular company.

a. Illustrate with a single diagram learning curves for two firms (A and B) where for a period of time firm B has a cost advantage over firm A but this advantage is lost after a certain level of cumulative production is reached because firm A is "a quick learner."

b. What is the key difference between a learning curve and an experience curve?

c. Briefly discuss two characteristics of a learning organization. Give a practical business example of each characteristic.

(10 Points) 7. Mary and Sally are discussing the impact demand elasticity has on price when there are shocks to supply (decrease in supply). Sally's position is that these supply shocks will have less of an impact on price if demand is elastic while Mary believes the impact will be the same. Who is correct and why? Illustrate your answer with the appropriate market model.