

Econ 3105 - Managerial Economics

Midterm

Define all underlined terms

Exercise 1 *Many States offer drivers an opportunity to express their individuality with their automobile license plates. For the privilege of having your license plate imprinted with your own custom message - such as SINGLE, PISCES, AGE OF 81, PLIBIT, MY BENZ, B-PHIT-drivers normally pay a small premium to the state.*

In 1965 when vanity license plates were introduced in Texas, they could be acquired for a mere \$10 over the cost of a normal license plate. By 1985 the price had jumped to \$25. At this price 154000 Texans invested in "their own automotive identity". As Texas entered the oil price recession of the mid-eighties, however, legislative leaders frantically scrambled for new sources of revenue. In 1986 the Texas legislature tripled the price to \$75. Sales tumbled to only 56000 custom plates. Faced with this suddenn decline in demand, the legislature cut the price to \$40 for 1987. The Texas legislators learned a quick lesson in the concept of price elasticity.

1. *What assumptions do you believe led the legislature to increase the price in 1986?*
2. *Compute the price elasticity of demand between \$25 and \$75, assuming no other factors affecting the demand for license plate changed between 1985 and 1986. Given this calculation, why do you feel the legislature cut the price to \$40 for 1987?*
3. *What other factor should be considered in future pricing decision by the legislature?*

Exercise 2 1. *Define complementary and substitutes good using the concept of cross price elasticity*

2. *Give an example of two complementary goods and two substitutes good. (explain why you would classify them in such a way)*
3. *Consider the case of two perfect complementary goods. Which utility function would you use to describe this case? Draw indifference curves, and explain how the consumer will make his choice.*
4. *Consider the case of two perfect substitutes goods. Which utility function would you use to describe this case? Draw indifference curves, and explain how the consumer will make his choice. (Hint: Will he buy both goods?)*

Exercise 3 *A firm uses two inputs , a variable input Labor (L) and a fixed one Capital (K), in producing its output. At its current level of output the prices of inputs are $P_L = \$2$, $P_K = \$4$, and the marginal productivity are $MPL = 2$, $MPK = 5$.*

- (a) Suppose the price of the good produced is $p = \$1$. Is the firm operating efficiently in the short run? Why? How much should the MPLT be, if the firm wants to optimize?
- (b) Is the firm operating efficiently in the long run? Why?
- (c) Determine what changes (if any) in the relative proportions of labor and Capital need to be made to operate efficiently (For example, should the firm hire more workers? Should the firm buy more capital?) Why?

Exercise 4 For decades up to November 1996, Southwestern Bell enjoyed a regulated monopoly over the provision of pay phone services in Oklahoma. Since then, pay phone service providers (PSPs) such as Bell and its new competitors have been free to deal with location owners for the placement of pay phones. Knowing that deregulation was coming, Bell is accused of having engaged in a flurry of activity to lock up the good locations and close out the competition. Location owners would pay a high penalty if they terminated the contract with Bell and, competitors claimed, Bell failed to remove phones when requested and damaged pay phone locations. Although Bell's competitors offered better commissions to location operators, two years after deregulation, Bell retained more than 87 percent of the market. Pay phone competitors sued, claiming monopolization in breach of state antitrust law.

1. If you were the lawyer of Bell, what would be your strategy?
2. If you were the lawyer of other competitors, which kind of evidence would you bring to the court?
3. What do you think the court decided?
4. Why do you think the market of pay phone service has been a monopoly for a long while in many countries?