

所別：產業經濟研究所碩士班 乙組 科目：個體經濟學

I. Answer the following questions (50%)

1. If the marginal revenue from a product is \$15 and the price elasticity of demand is -2, what is the price of the product? (8%)
2. Assume that the price elasticity of the camera is -2.5, and the camera's cross elasticity with the film is -1.5. Please comment the following statement: falling film's prices will definitely increase revenues received by sellers of both camera and film. (8%)
3. Some proposals for tax reform would eliminate the interest deduction for second homes. Explain the impact this would have on the price of second home in the marketplace. (10%)
4. Textbook publishers have traditionally produced both United States and international editions of most leading textbooks. The United States version typically sells at a higher price than the international edition. Discuss (a) why publishers use this pricing plan and (b) how internet might affect the ability of companies to implement this type of policy. (12%)
5. If the government sets a price floor for rice, would you expect that a need would arise for restrictions on the number of rice field farmers can plant? In the absence of these restrictions, what outcome would you expect? (12%)

II. Problem (50%)

1. According to a report that teen cigarette smoking declined significantly between 1975 and 2000 in the US. The most dramatic decline occurred in the years 1975-1981, at that time there was a slight decrease in the price of cigarettes. Thus the dramatic decline in smoking is not attributable to an increase in cigarette prices. One theory is that the significant increase in gasoline prices over this period motivated many teens not to smoke.

(1) Discuss how a rise in gasoline prices might affect the demand for cigarettes among teens. (13%)

(2) In the late 1990 the price of cigarettes increased from \$2.50 per pack to \$3.50 per pack. In one community during this time period, the number of packs of cigarettes consumed by teenagers fell down from 10,000 to 8,500. Assume that everything except cigarette prices remained the same. Calculate the arc price elasticity. After the price increased, did the total expenditures on cigarettes by the teen increase or fall? (13%)

2. A firm believes it faces the following segmented demand function:

$$P = \begin{cases} 150 - 0.5Q & \text{when } 0 \leq Q \leq 60 \\ 200 - 1.5Q & \text{for } Q > 60 \end{cases}$$

Please calculate the firm's profit-maximizing price-output combination under the following two total cost functions.

$$TC_1 = 250 + 15Q + 0.5Q^2 \quad (12\%)$$

$$TC_2 = 250 + 45Q + Q^2 \quad (12\%)$$