

科目：個體經濟學 適用：經濟所

編號：333

考生注意：

1. 依次序作答，只要標明題號，不必抄題。
2. 答案必須寫在答案卷上，否則不予計分。
3. 限用藍、黑色筆作答；試題須隨卷繳回。

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- 1.(15%) Why will the optimum monopoly prices always lie in the elastic portion of the monopolist's demand curve unless the monopolist has zero marginal costs (what is the elasticity of demand at the price that such a monopolist will set?) or practices price discrimination? Please answer this question in words referring to the meaning of elasticity.
- 2.(10%) What is the sufficient condition for the law of demand? Explain your answer.
- 3.(15%) Hyndai's Auction House in Taipei, Taiwan, holds sealed-bid auctions every Saturday. Each car is sold to highest bidder at the second highest bidder's bid. On average, two-thirds of the cars that are auctioned are lemons and one-third are good used cars. A good car is worth \$1500 to any buyer. A lemon is worthy only \$150 to a buyer. Most buyers can do no better than random at picking good car from the lot. There is only one exception, Ming Lee, an auction freak. Ming can sometimes but not always detect lemons by mean of a subtle test. A good car will never fail Ming's test, but half of the lemon fails his test. Ming attends every auction, tests every car and always bids his expected value. Normal bidders bid less than the expected value for a randomly selected car but more than the value of a lemon and they always get the lemon cars. Why? Explain your answer.
- 4.(10%) Why does marginal utility itself have no behavioral content? However, the marginal rate of substitution is the ratio of marginal utilities, and it does have behavioral content. Why? Explain your answer.
5. Imagine a price war between two newspapers (L-daily and C-daily). They choose the prices simultaneously. Suppose each issue costs \$2 to produce, and there are just two possible pricing choices: \$3 (implying a profit margin of \$1 per copy) and \$4 (implying a profit margin of \$2 per copy). Suppose that customers could be divided into three types:  
Type C customers: they will only buy C-daily. The total readership is 4 million if the price is \$4, and rises to 5 million if the price is only \$3.  
Type L customers: they will only buy L-daily. The total readership is 4 million if the price is \$4, and rises to 5 million if the price is only \$3.  
Type A customers: they will only buy the lower-priced one (C-daily or L-daily), and if the prices are equal, they will split equally between the two. The total readership is 4 million if the price is \$4, and rises to 8 million if the

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price is only \$3.

- (a.) (10%) What prices are the firms going to choose? (You should consider the aggregated demand.)
- (b.) (10%) Suppose that total readership of Type A customers is now 2 million if the price is \$4, and rises to 4 million if the price is only \$3 (imagine that part of Type A customers are attracted by a new firm, A-daily). We also assume that A-daily won't affect the customers in the Group C and Group L. Are L-daily and C-daily going to earn less?
- 6.
- (a.) (7%) Please define "Pareto efficiency" and "Pareto improvement" carefully.
- (b.) (7%) If you show your answers to your neighbors in the final exam of Microeconomics, could you claim that it is "Pareto improvement"?
7. A two-product firm faces the demand and cost function below:
- $$Q_1 = 40 - 2P_1 - P_2 \quad Q_2 = 35 - P_1 - P_2 \quad C = Q_1^2 + 2Q_2^2 + 10$$
- (a.) (8%) Find the output levels that satisfy the first-order condition for maximum profit.
- (b.) (8%) Check the second-order sufficient condition. Can you conclude that this problem possesses a unique absolute maximum?

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