

# 國立暨南國際大學九十三年度碩士班研究生入學考試試題

第 2 節 個體經濟學 適用：(經濟所 322)

(本試題共 1 頁，第 1 頁)

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，並限以藍黑色筆作答。  
3. 試題隨卷繳回。(餘請詳閱試場規則)

1. There is a tropical island in which King Kanuta rules his people. The demand function for coconuts by the people on the island is  $D(p) = 1200 - 100p$  and the supply function is  $S(p) = 100p$ . The law used to be that any one who consumed a coconut had to pay another coconut to the king. King Kanuta then ate all the coconuts. But now the king, apparently fed up with coconuts, decided to sell the coconuts that he collects in the local market at the going selling price,  $p_s$ . In equilibrium, what will be the number of coconuts that will be produced? 15%
2. There has been a convenient store Seven-11 in the corner of Bourbon Street. Since the Seven-11 has the profit beyond normalcy, the company, Family, decides to set up another convenient store 200 meters away from the Seven-11. Does the establishment of the convenient store by the Family involves an externality, which impacts on the Seven-11? 15%
3. A fundamental principle in public finance is that taxes distort less when applied to a broad base rather than to a narrow base. Please use the food tax and vegetables tax to explain the principle. 10%
4. A monopolist sells in two markets. The demand curve for her product is given  $p_1 = 165 - 3x_1$  in the first market and  $p_2 = 233 - 4x_2$  in the second market, where  $x_i$  is the quantity sold in market  $i$  and  $p_i$  is the price charged in market  $i$ . She has a constant marginal cost of production function,  $c = 9$ , and no fixed costs. She can charge different prices in the two markets. What is the profit-maximizing combination of quantities for this monopolist? 10%
5. Suppose that the inverse demand is given by  $P = 45 - Q$ , where  $P$  is the price and  $Q$  is the total industry output. Suppose that the industry has two firms, a Stackleberg leader and follower. Assume each firm has a constant marginal cost of \$5 per unit of output. 30%
  - (a.) In equilibrium, how much should the firms produce in order to maximize profits? How much would each of the firms earn?
  - (b.) People might make decisions on the basis of their misperceptions. Assume the follower believes (falsely) that the demand is given by  $P = 65 - Q$ . The leader knows what the follower believes and knows the "true" demand is  $P = 45 - Q$ . How much should the firms produce? How much would each of the firms earn?
  - (c.) In problem (b), how much should the leader pay (or be paid) to share his knowledge about the demand with the follower?
6. Explain why the optimal strategy for a bidder in a private-values Second-Price, Sealed-Bid auction is to bid his true valuation. 10%
7. Two players are engaged in a game of "chicken". There are two possible strategies, Swerve and Drive Straight. A player who chooses to Swerve is called "chicken" and gets a payoff of zero, regardless of what the other player does. A player who chooses to Drive Straight gets a payoff of 48 if the other player Swerves and a payoff of -48 if the other player also chooses to Drive Straight. Please show that this game has two pure strategy equilibria and one mixed strategy equilibrium. 10%