

國立中央大學94學年度碩士班考試入學試題卷 共 2 頁 第 1 頁  
所別：經濟學系碩士班 科目：個體經濟學

一、是非題 (每題 8 分，共 56 分)：下列命題可能為真，可能為偽。繪圖說明你的答案。不寫理由或不繪圖者，以零分計。

1. 自今年 7 月 1 日起，資方必須提撥 6% 的退休金至選擇新制的勞工其個人退休金帳戶。就一家於今年 7 月 1 日才會成立的廠商而言，此 6% 的退休金，資方的負擔大於勞方。
2. If the demand curve of person  $A$  for good  $X$  is a vertical line, then  $X$  is an inferior good for  $A$ .
3. The larger the price elasticity of market demand and supply, the larger the deadweight loss of a tax.
4. Suppose that a consumer lives for two periods (current and future) and he works only in the current period. Then, other things being equal, he saves more if his rate of time preference becomes larger.
5. Under free entry and exit, the economic profit of the representative monopolistically-competitive firm is zero in the long-run equilibrium.
6. The quantity sold by a monopoly under average-cost pricing is larger than that under marginal-cost pricing.
7. If a person wins 100 dollars with probability of 40% and loses 100 dollars with probability of 60% in a gamble, then, from the viewpoint of expected value of utility, it's an unfair gamble.

二、計算題 (共 44 分)：不寫計算過程以零分計。

1. (14 分) Suppose that the cost function of the two profit-maximizing firms in the Stackelberg model is  $c_1 = 1 + q_1$  and  $c_2 = 2q_2$ , respectively. Also, the market demand function is  $p = 5 - q_1 - q_2$ . What is the profit of firm 1 in equilibrium if firm 1 is a follower and firm 2 is a leader?

注意：背面有試題

2. (14 分) Suppose that all firms in some competitive market are identical and the number of firms is normalized as unity. Also, the amount of pollutant emitted by the representative firm before pollution control is 10 and the cost function of pollution reduction is  $TC_D = \frac{100}{10-D} - 10$ ,  $D$  represents the amount of pollutant reduced.

(a). If the unit pollution tax is 4, what is the optimal amount of  $D$ ? (7 分)

(b). If the government issues 6 units of pollution permit for this industry and all firms are required to buy one unit of permit to emit one unit of pollutant, what is the equilibrium price of the permit? (7 分)

3. (16 分) Assume that the home country is a small country and imports good  $Y$ . The international price of good  $Y$  is 50. Also, there is only one firm  $X$  which can produce  $Y$ . Firm  $X$  maximizes profit and its cost function is  $TC = 10 + 20Q + \frac{1}{2}Q^2$ . Suppose that the domestic market demand function for  $Y$  is  $Q = 75 - 0.5P$ .

(a). What is the amount of  $Y$  imported by the home country under free trade and no transportation cost? (6 分)

(b). If the government imposes an import quota of  $Y$  and the amount is 25, then what is the domestic market equilibrium price of  $Y$ ? (10 分)