國立高雄大學九十八學年度博士班招生考試試題

科目：經濟學
考試時間：100 分鐘

系所：
統計學研究所

是否使用計算機：否

本科原始成績：100 分

1. Carefully evaluate following statements. (30%)
   (a) A small country, which cannot influence world prices, might improve her welfare by imposing the import tariff.
   (b) The law of diminishing marginal product implies the diminishing marginal rate of technical substitution (MRTS).
   (c) Suppose that there are two bundles (x_1, y_1) and (x_2, y_2). If the consumer chooses (x_1, y_1), we can conclude that $(x_1, y_1) \succeq (x_2, y_2)$. In other words, the consumer weakly prefers (x_1, y_1) to (x_2, y_2).

2. The shopping voucher program, giving each citizen NT$3,600, was adopted by the government in the hope of stimulating consumption and give a lift to the slumping business activities in Taiwan. The fund was fully financed by government-issued debt. (20%)
   (a) The Ricardain Equivalence Theorem says that deficit finance is no difference from current taxation because individuals fully take into account the future taxes they will have to pay. Evaluate the effectiveness of the voucher program by the Ricardian Equivalence Theorem.
   (b) In reality, is the Ricardian Equivalence Theorem likely to be hold or failed? Explain.

3. You are estimating the relationship between a firm's sales and advertising expenditure in an industry. It becomes apparent to you that half the firms in the industry are large relative to the other half, and you are concerned about the proper estimation technique in such a situation. Assume that the error variances associated with the large firms are twice the error variances associated with the small firms. (30%)
   (a) If you used ordinary least squares to estimate the regression of sales on advertising, would your estimated parameters be unbiased? Efficient?
   (b) How might you revise the estimation procedure to eliminate or resolve your difficulties?
   (c) Can you test whether the original error-variance assumption is valid? Explain.

4. In a market for luxury cars there are two firms competing in prices. Assume that each firm has two possible strategies, setting a high price given by p_H, or a low price given p_L, where $p_H > p_L > 0$. Here is the payoff matrix (millions): (20%)

		Firm 2	
		p_L	p_H
Firm 1	p_L	1, 1	10, −3
	p_H	−2, 3	13, 4

(a) Find the Nash equilibrium.

(b) Find the maximin strategy equilibrium.

(c) Find the mixed strategy equilibrium.

(d) Suppose that firm 1 acts first and then firm 2 responds. Find the subgame perfect equilibrium.