

I. Briefly, but clearly answer the following questions. The grade will depend heavily on the explanations you provide.

(1) Do the following utility functions represent the same preference? (7)

(a)  $U(x, y) = \frac{xy}{(x+y)}$ .

(b)  $V(x, y) = \left[ \frac{xy}{(x+y)} \right] - 60$ .

(c)  $W(x, y) = -\frac{1}{x} - \frac{1}{y}$ .

(2) Suppose that a consumer has money income  $M$  and faces prices  $p_x$  and  $p_y$  for the good  $x$  and  $y$ , respectively. Her preferences could be represented by the following utility function:

$$U(x, y) = \frac{(x-1)}{(y-2)^2}, \quad x > 1, \quad 0 < y < 2.$$

(i) Is  $x$  a "normal" or an "inferior" good? Is  $y$  a "normal" or an "inferior" good?

(6)

(ii) Could  $x$  be a "Giffen good"? Could  $y$  be a "Giffen" good? (6)

(iii) Draw the indifference curve  $U(x, y) = 1$ . (6).

(3) In a two-factor, two-good general equilibrium model, let the two factors be capital ( $K$ ) and labor ( $L$ ) and the two goods be  $x$  and  $y$ . Suppose that  $x$  and  $y$  are produced by the following constant returns to scale production functions, respectively:

$$x = F(K_x, L_x),$$

$$y = G(K_y, L_y),$$

where  $K_i$  and  $L_i$  denote the amount of capital and labor used in the

production of good  $i$  ( $i=x, y$ ), and  $\frac{K_x}{L_x} \neq \frac{K_y}{L_y}$ . Suppose further that the

economy's factor endowments are  $\bar{K}$  and  $\bar{L}$ .

(i) Explain how competitive factor and good markets lead to Pareto optimum. (7)

(ii) Explain why the production possibility frontier is concave with respect to the origin (or, bowed outward from the origin). (6)

(iii) If  $x$  is produced by a monopolist, explain how this leads to market failure. (6)

(iv) If  $x$  is a public good, explain how this leads to market failure. (6)

國立清華大學 命題紙

八十八學年度 經濟學 系(所) 組碩士班研究生招生考試

目 個體經濟學 科號 5601 共 2 頁第 2 頁 \*請在試卷【答案卷】內作答

- II. 1. 何謂邊際報酬遞減法則 (the law of diminishing marginal return)? 它與成本間的關係為何? 除了文字敘述外請以圖形說明生產(包含總、邊際、平均產量)與成本(包含總、邊際、平均成本)間的關係。(10分)
2. 何謂規模報酬 (returns to scale)? 何謂規模經濟 (economies of scale)、規模不經濟 (diseconomies of scale)? 此兩個概念的關係為何?(5分)
3. 何謂自然獨佔 (natural monopoly), 造成自然獨佔的原因為何? 如果政府要規範自然獨佔的產量以達社會福利最大時, 廠商將面臨何種問題? 該如何解決?(10分)
4. 完全競爭的市場結構中不可能有何種規模報酬? 為甚麼?(5分)
- III. 1. 在何種情況下會產生向後彎的 (backward bending) 勞動供給曲線?(10分)
2. 最近政府考慮實施失業保險制度, 由每一個人的工資裡抽取某一個特定比例的失業保險費。當一個人失業時, 政府每月會提供某一固定額度的失業救濟金。請討論此一制度實施後對勞動供給的影響。(10分)