

所別：財務金融學系碩士班 甲組(一般生) 科目：經濟分析 共 2 頁 第 1 頁
 財務金融學系碩士班 乙組(一般生)

本科考試禁用計算器

*請在試卷答案卷(卡)內作答

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- I. 計算問答題 (請依題序作答，未列算式、推理過程或適當說明者，不予計分)
1. Let x_1 be the amount of food consumed by a household and x_2 the amount of clothing. The household faces a price for food $p_1=4$ and clothing $p_2=3$ with income $I=96$. Derive the optimal (utility-maximizing) bundles (x_1^*, x_2^*) using the following utility functions:
 - a. $U(x_1, x_2) = 5x_1 + 3x_2$ (6%)
 - b. $U(x_1, x_2) = x_1^2 + x_2^2$ (6%)
 - c. $U(x_1, x_2) = 5 \ln x_1 + 3 \ln x_2$ (6%)
 2. Consider a firm facing the following demand functions in two separate markets:
 $q_1 = -2p_1 + 6$, $q_2 = -2p_2 + 4$. Let the short-run total cost function for this firm be $STC = 0.5 + (q_1 + q_2)$ and let total output produced by the firm $Q = q_1 + q_2$. What are the profit-maximizing output and price in the *more elastic* market? (8%)
 3. Consider a firm facing the market demand function $Q = 20 - 2P$ and operating two plants with output q_1 for plant 1 and q_2 for plant 2. Let marginal costs for the respective plants be $SMC_1 = 1 + 2q_1$, $SMC_2 = 2 + q_2$. The firm will maximize profit by equating the marginal cost in each plant to the overall marginal revenue. What are the profit-maximizing price and outputs in each plant? (8%)
 4. Suppose that the total market demand for mineral water is given by $Q_D = 80,000 - 2,000P$, where Q_D is the quantity and P is the price. Suppose also that there are 1,000 identical small producers, each with marginal costs given by $MC_F = q + 4$, where q is the output of the typical firm.
 - a. Assuming that each small producer acts as a price taker, calculate the market equilibrium price and quantity. (6%)
 - b. Suppose now there is a dominant firm which sets the price and the small producers act as price followers. The demand curve facing the price leader can be derived by subtracting what the small producers will supply from the total market demand curve. The marginal cost of the leader is constant at $MC_L = 18$. Derive the price leader's marginal revenue curve (MR). (6%)
 - c. Following part b, how should the price leader set the price and how much should it produce to maximize profits? (4%)

注意：背面有試題

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II. 申論題 (請依題序作答，未列算式、推理過程或適當說明者，不予計分)

1. a. 請解釋失業率的定義。(2分)
b. 某政府想降低失業率，規定所有的僱主必須採行終身雇用制，只要聘用員工，就不能隨意解雇。你認為這樣的政策可以讓失業率降低嗎？請解釋你的理由。(8分)
2. 台灣的中央銀行宣告調整利率時，所調降或調升的是什麼利率？請簡要說明。如果臺灣央行調降利率，貨幣供給是否會改變？經由什麼途徑而發生改變？(10分)
3. 全民健保費之增加，對於當期消費 (current consumption) 有何影響？試分別由凱因斯消費理論 (Keynesian consumption theory) 與恆常所得假說 (permanent income hypothesis) 解釋。(8分)
4. 假設生產函數為 $y = AK^\alpha L^{1-\alpha}$ ， $0 < \alpha < 1$ ，其中 y 代表實質產出， A 為技術水準， K 及 L 分別是資本存量與勞動投入。請以新古典學派的投資模型 (neoclassical model of investment) 分析下列事件對於資本實質租金價格 (rental price of capital)、資金成本 (cost of capital)、與投資的影響：
 - a. 國內生育率下降，人口高齡化，退休人口增加 (6分)
 - b. 大地震發生，造成生產設備大量毀壞 (6分)

III. 是非不定題 (注意：僅回答是、非、或不一定，而未解釋理由者，不予計分)

根據 Solow 成長模型，政府預算赤字 (budget deficit) 增加，將導致穩定狀態下的每人平均產出成長率 (steady-state growth rate of output per person) 下降。(10分)

注意：背面有試題