

國立臺北商業技術學院 99 學年度研究所碩士班考試入學試題

准考證號碼：□□□□□□ (請考生自行填寫)

國際商務系、財金系碩士班

筆試科目：經濟學 共 2 頁，第 1 頁

注意事項	1. 本科目合計 100 分，答錯不倒扣。 2. 請於答案卷上依序作答，並標註清楚題號 (含小題)。 3. 考完請將答案卷及試題一併繳回。
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1. (16%) Suppose that two investments have the same three payoffs, but the probability associated with each payoff differs, as illustrated in the table below:

Payoff	Probability for investment A	Probability for investment B
100	0.55	0.70
400	0.44	0.20
900	0.01	0.10

- 1) Find the expected return and variance of each investment.
 - 2) Dr. A has the utility function $U = 4I$, where I denotes the payoff. Which investment will he choose?
 - 3) Dr. B has the utility function $U = \sqrt{4I}$. Which investment will he choose?
 - 4) Dr. C has the utility function $U = 4I^2$. Which investment will he choose?
2. (10%) NTCB manufacturing company produces toy. The firm's production function is given as:

$$Q = 10KL$$

where Q =quantity of toy, L =labor measured in person hours, K =capital measured in machine hours. NTCB's labor cost, including fringe benefits, is \$10, while the firm uses \$40 per hour as an implicit machine rental charge per hour. NTCB's current budget is \$32,000 per month to pay labor and capital. Given the information above, determine the quantities of labor and capital that will allow the firm to maximize output given their budgeted input expenditure. What is the firm's output?

3. (14%) The demand for on-line consulting services is: $Q^D = 300 - 5P$. There have four firms operating in this market. The consulting firm specific marginal cost functions are: $MC_1(q_1) = q_1$, $MC_2(q_2) = \frac{1}{2}q_2$, $MC_3(q_3) = \frac{1}{3}q_3$, $MC_4(q_4) = \frac{1}{4}q_4$. Calculate the collusive output level and market price. If the consulting firms behaved competitively, what would be the output level and the market price?
4. (10%) Suppose a regulated utility faces the following demand curves:

$$\text{Demand Off-Peak: } P = 50 - Q$$

$$\text{Demand Peak: } P = 110 - Q$$

Marginal costs are: $MC = 20 + \frac{1}{2}Q$. Suppose the regulatory commission sets $P=30$ during both peak and off-peak periods. What is the social cost of such a pricing policy?

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5. 簡單描述「實質景氣循環理論」(8分)，在 2001 年，台灣的經濟成長率為負值，這與生產力的變化有無關聯？能否用實質景氣循環理論加以解釋(10分)。

6. 2004 年 7 月投資台灣股市的國際資金大量匯出，對台灣的總體經濟是否會有影響？請以商品市場與貨幣市場的均衡來分析。(12分)

7. 假設一個經濟體系沒有國際貿易：消費 $C=100+0.8(Y-T)$ ，投資 $I=100-50i$ ，政府支出 $G=100$ ，稅收 $T=100$ ；而且，實質貨幣需求 $L(i, Y)=500+0.4Y-100i$ ，名目貨幣供給量是 600 億元。 i 的單位是%， Y 的單位是億元。請找出 AD 曲線 (8分)並繪其圖形(2分)。

8. 台灣在 1974 年(第一次石油危機)的通貨膨脹率為 47.5%、失業率為 1.5%、經濟成長率為 1.2%。請利用總供需(AS-AD)模型的變化解釋此一現象。(10分)