

國立臺灣科技大學
九十學年度碩士班招生考試試題

系所組別：企業管理系乙組
科目：經濟學

1. 請問 2000 年諾貝爾經濟學獎得主為誰？並簡述其在經濟學的重要貢獻與獲獎原因。(10 分)
2. 如果消費者將其全部所得支用在某一單項商品上，請問該項商品的所得彈性為何？又價格彈性為何？(10 分)
3. 假設咖啡與牛乳為一組互補商品；而咖啡與茶則為另一組替代商品，請問上述那一組的商品較有可能是屬劣等財貨 (inferior good)。(10 分)
4. 假設在一雙邊寡佔的市場結構下，兩家 (#1 與 #2) 廠商的反應曲線函數 (reaction function) 分別如下：

$$R_1(\#1) : P_1 = 6 + P_2/3 ;$$

$$R_2(\#2) : P_2 = 6 + P_1/3 .$$
 - (1) 請計算兩家廠商的市場均衡價格。(5 分)
若現在 #1 家廠商承諾 (commitment) 將藉適當策略改變其反應曲線函數如右： $R_1(\#1) : P_1 = 7 + P_2/3 .$
 - (2) 請問上述承諾的存在，將會導致 #1 家廠商成為較強悍的 (tougher) 或是較軟弱的 (softer) 競爭者？(5 分)
 - (3) 在上述承諾下，請問兩家廠商的市場均衡新價格應為何？(5 分)
 - (4) 請提出適當理由以說明為何 #1 家廠商願意履行上述承諾。(5 分)



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5. According to recent market figures, Taiwan's economy experiences unprecedented high unemployment rate and low economic growth rate. Some companies of non high-tech industries in Taiwan are moving abroad, especially to mainland China, and the so-called "business moving west" trend has caused some Taiwan's companies to lay off their workers to cut costs. In turn, the unemployed workers protest against the companies. The government of Taiwan and the companies are trying to figure out an unemployment compensation plan to make workers indifferent between working and not working. As we know, firms maximize their profits by choosing a wage and layoff policy subject to the constraint determined by the market level of expected utility that workers can receive by taking jobs with other firms. It is assumed that there are two states of the world, $\theta = 1, 2$, the probabilities of states 1 and 2 are $\pi(1)$ and $\pi(2)$, the prices of the firm's products are $p(1)$ and $p(2)$ where $p(1) > p(2)$, the firm's output is given by $f(n(\theta))$ where $f'(n(\theta)) > 0$, $f''(n(\theta)) < 0$, and $n(\theta) \geq 0$ is the firm's employment, and workers receive wages and enjoy leisure which can be attached with a pecuniary value r by any worker. So r is defined as $g(0, L_1) = g(r, L_0) = U(r)$. Worker's utility function is given by $U = g(w(\theta), L)$, where $g_1 > 0$, $g_{11} < 0$, $g_2 \geq 0$, and $g_{22} \leq 0$. Please use the "implicit contract" model and/or any related models to answer the following three questions.

- (1) Please explain why the wages of Taiwanese workers remain unchanged, i.e., the wage rate is independent of the states, even if the firms in Taiwan face severe competition from abroad. (Hint: A firm's objective function is

$$V = \sum_{\theta=1}^2 \pi(\theta) \cdot (p(\theta)) \cdot f(n(\theta)) - w(\theta) \cdot n(\theta)) \text{ and a worker's utility function is}$$

$$v = \pi(1) \cdot U(w(1)) + \pi(2) \cdot \frac{n(2)}{n(1)} \cdot U(w(2)) + \pi(2) \cdot \left(1 - \frac{n(2)}{n(1)}\right) \cdot U(r))$$

(15 points)

- (2) Following the explanation of state-independent wages, can you derive a possible condition under which some workers will be unemployed in state 2? (Hint: Since workers are risk averse, they prefer a certain wage of, say, w' , to the uncertain expected wage of w with probability of being hired and 0 with probability of being unemployed)

(15 points)

6. Define Neutrality and Dichotomy. Can you give an example of a system in which "money is a veil" but neutrality fails?

(20 points)

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