

國立中央大學 108 學年度碩士班考試入學試題

所別： 產業經濟研究所 碩士班 產經組(一般生)

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科目： 經濟學

問答題及計算題

本科考試可使用計算器，廠牌、功能不拘

計算題需計算過程，無計算過程者不予計分

請按題目順序作答，若無法作答者，請填寫題號後空白!

1. (30%) Consider an individual's utility function: $u(w) = w^{\frac{1}{2}}$ where w is income or wealth. If the individual is to facing the probability of 0.50 for either receiving \$2 or \$0, please to answer the following questions:
- (a) (10%) Calculate the values of "certainty of equivalent".
(b) (10%) Determine the individual's risk attitude.
(c) (10%) Calculate the amount that the individual is willing to avoid the risk.

2. (30%) Consider the profit functions for two firms:

$$\begin{aligned}\pi_1(p_1, p_2) &= 20p_1 - p_1^2 + p_1p_2 && \text{(firm \# 1)} \\ \pi_2(p_1, p_2) &= 20p_2 - p_2^2 + p_1p_2 && \text{(firm \# 2)}\end{aligned}$$

where p_1 and p_2 are the prices determined by firm 1 and 2 separately.

Please to answer the following questions:

- (a) (15%) If the price of firm # 2 is determined by the price of firm # 1, please to calculate the prices and profits for those two firms.
(b) (15%) If the prices of the two firms are simultaneously determined, please to calculate the prices and profits for those two firms.
3. (30%) During the year of 2018, the US launched a series of tariff imposing activities against the China, China also adopted the retaliated activities. Assuming the two countries produced two goods, agricultural products and manufacturing products.
- (a) (15%) Please to use the partial equilibrium analysis to analyzing the economic effects.
(b) (15%) Please to use the general equilibrium analysis to analyzing the economic effects.

參考用

4. (10%) During the year of 2018, the US Federal Reserve Bank has raised the fund rate for four times, please to propose the reasons and to analyze the economic effects.