

國立台灣大學社會科學院國家發展研究所

110 學年度碩士在職專班入學考試試題

科目：經濟學

問答題共五題，英文題目可用中文回答。

一、

An individual consumes products X and Y and spends \$25 per time period. The prices of the two goods are \$3 per unit for X and \$2 per unit for Y. The consumer in this case has a utility function expressed as:

$$U(X,Y) = .5XY \quad MU_X = .5Y \quad MU_Y = .5X.$$

- Express the budget equation mathematically.
- Determine the values of X and Y that will maximize utility in the consumption of X and Y.
- Determine the total utility that will be generated per unit of time for this individual.

(每小題 5 分，共 15 分)

二、

A competitive firm sells its product at a price of \$0.10 per unit. Its total and marginal cost functions are:

$$TC = 10 - 0.05Q + 0.001Q^2$$

$$MC = -0.05 + 0.002Q,$$

where TC is total cost (\$) and Q is output rate (units per time period).

- Determine the output rate that maximizes profit or minimizes losses in the short term.
- Will the firm make a profit or suffer a loss at the output rate determined at part a?
- Will you suggest the firm stay in or exit from the market?

(每小題 5 分，共 15 分)

三、

Mitchell Electronics produces a home video game that has become very popular with children. Mitchell's managers have reason to believe that Wright Televideo Company is considering entering the market with a competing product. Mitchell must decide whether to set a high price to accommodate entry or a low, entry-detering price. The payoff matrix below shows the profit outcome for each company under the alternative price and entry strategies. Mitchell's profit is entered before the comma, and Wright's is after the comma.

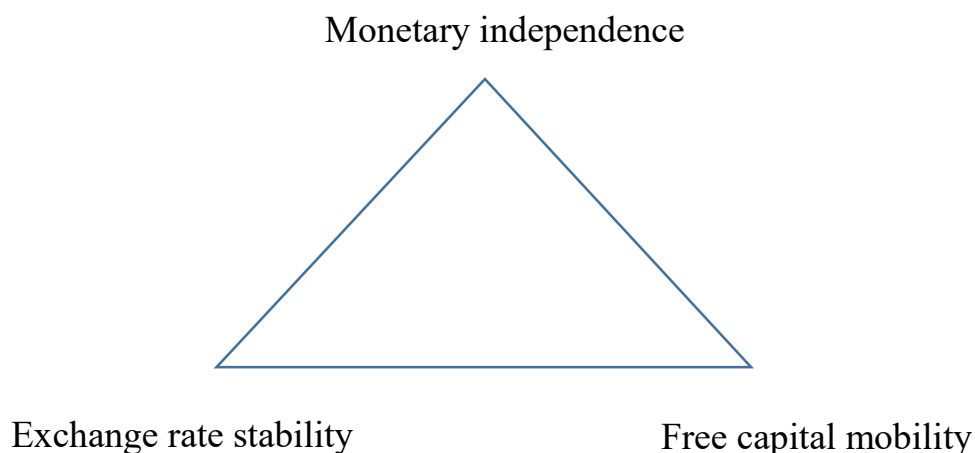
		Wright Televideo	
		Enter	Don't Enter
Mitchell Electronics	High Price	60, 25	85, 0
	Low Price	30, -20	60, 0

- Does Mitchell have a dominant strategy? Explain.
- Does Wright have a dominant strategy? Explain.
- Mitchell's managers have vaguely suggested a willingness to lower price in order to deter entry. Is this threat credible in light of the payoff matrix above?
- If the threat is not credible, what changes in the payoff matrix would be necessary to make the threat credible? What business strategies could Mitchell use to alter the payoff matrix so that the threat is credible?

(每小題 5 分，共 20 分)

四、

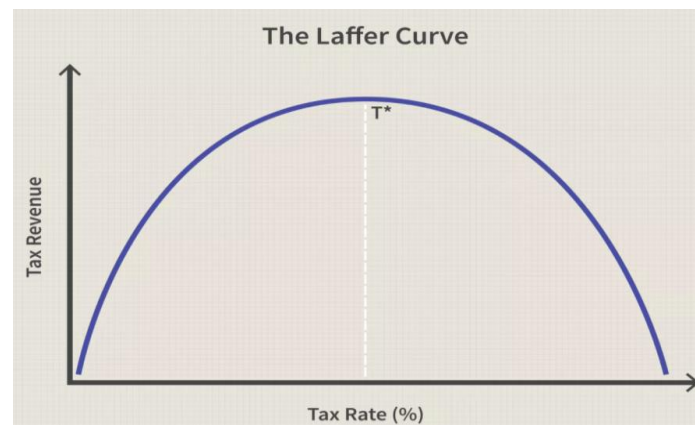
The so-called “tri-lemma” is as follows.



- a. Explain what “tri-lemma” means (10 分)
- b. Explain the policy choices by (1) China; (2) EMU members; (3) Japan (15 分)

五、

The so-called “Laffer curve” is as follows.



- a. Explain the theory and policy implications of the curve (15 分)
- b. What is the optimal tax rate? Why did the U.S. suffer from fiscal deficits after tax cuts? (10 分)