



B.E. International Program

Faculty of Economics, Thammasat University



FINAL EXAMINATION: 1/2019

SUBJECT: EE211: PRINCIPLES OF MICROECONOMICS

DATE: TUESDAY, 17TH DECEMER 2019

TIME: 09:00 – 12:00 (3 HOURS)

Seat Number_____

Student ID_____

Instructions

1. There are 6 main questions with a worth of 100 points. (5 pages including the cover sheet.)
2. Total amount of time to complete the exam is 180 minutes.
3. Write your seat and ID numbers on every page before you start.
4. Read each question *clearly and carefully*.
5. To complete the exam, both pen and pencil are allowed to use. Write all your answers in a booklet.
6. This is a closed book examination. Students are not allowed to bring any books, notes, dictionary into the examination room.
7. Any calculators are permitted.
8. All kinds of communication devices are strictly prohibited.
9. Do your best and good luck!

ATTENTION: Should anyone be caught cheating, he/she shall be automatically given an **F** and be suspended for 2 semesters.

1. (Total 20 Points) Neo loves traveling. Supposed he has two choices of destination, Thailand and Maldives which costs him 3,000 baht and 5,000 baht respectively. His utility received from traveling to Maldives is twice compared to traveling to Thailand. Answer the following questions.

- a. (10 points) If Neo has 10,000 baht of budget, how many times of each destination he will choose to travel and why? Draw his indifference curve and budget line to analyze his decision and indicate details on the graph.
- b. (10 points) If his budget increases to 20,000 baht, draw his income-consumption curve. Also plot his income demand of traveling in Thailand, find its slope and explain.

2. (Total 10 Points) Consider a long-run production in which there are only two inputs labor and capital, and the input prices for labor and capital are wage (w) and interest rate (r), respectively. Suppose that at the equilibrium levels of labor and capital (L^*, K^*), the marginal product of labor (MP_L) and marginal product of capital (MP_K) are 6 and 8, respectively.

- a. (5 points) Calculate the marginal rate of technical substitution (MRTS), and state the cost-minimization conditions of this firm, given that the required output is fixed at Q_0 . If the market wage rate (w) is \$3, what is the interest rate at the equilibrium?
- b. (5 points) Suppose now that the wage rate (w) increases to \$4, *ceteris paribus*. Draw a diagram to illustrate the changes in the cost-minimizing combination of inputs.

3. (Total 25 Points) Consider a perfectly competitive market, in which the current equilibrium price is 150 baht per unit.

- a. (4 points) Suppose that a firm in this market sells 20 units of its output. State the profit-maximizing condition of this firm, and draw a diagram to illustrate how the equilibrium quantity is determined.
- b. (4 points) At this equilibrium quantity of 20 units, suppose that the firm's average total cost is 180 baht and its average fixed cost is 60 baht. Calculate this firm's average variable cost, total revenue, total cost, and profit.
- c. (5 points) From part b., should this firm stay in the market in the short run? Justify your answer.
- d. (12 points) Suppose now that the market demand decreases and the market price decreases to 120 baht per unit. Draw two diagrams to illustrate: (i) the change in the equilibrium price and quantity in the market, (ii) how the change in the market price affects the firm equilibrium quantity and profit. Would your answer from part c. change?

4. (Total 25 Points) House and Land (HL) is the monopolist in a luxury housing market. It is a very efficient firm in which workers can construct houses with constant marginal cost and average cost. The demand and cost functions for HL are given as follows. (P is in million-baht unit).

$$P = 60 - 0.6Q$$

$$MC = AC = 24$$

- a. (5 points) Derive the marginal revenue function. Draw a diagram to illustrate the demand, marginal revenue, marginal cost, and average cost curves.
- b. (10 points) State the profit-maximizing condition for HL, and determine the optimal units of houses. Also, indicate the profit in the diagram, and explain how this profit can be derived.
- c. (10 points) The government tries to encourage more people to have access to luxury houses, so they launch a policy forcing HL to sell their houses at the ideal price. Draw another diagram to indicate the ideal price and determine the corresponding quantity at this price. Illustrate the social welfare before and after the intervention in the diagram and discuss.

5. (Total 10 Points) Consider this payoff matrix for Mook and Mix, they are competitors in an oligopoly sweetened product. Mook's payoff (bold) and Mix's payoff (regular) in this table is in thousand(s) baht unit.

		Mix		
		Boba tea (B)	Ice-cream (C)	Donut (D)
Mook	Boba tea (B)	1 , 2	3 , 5	2 , 1
	Ice-cream (C)	0 , 4	2 , 1	3 , 0
	Donut (D)	-1 , 1	4 , 3	0 , 2

Discuss how you figure out a Nash equilibrium in this game.

6. (Total 10 Points) Consider these statements and indicate which one of the choices fits with each statement and roughly explain why.

Choices:

1. Not a market failure
2. Market power
3. Externalities
4. Public goods
5. Moral hazard
6. Adverse selection

- a. (2 points) People feel that price level is hiking.
- b. (2 points) Morpheus always hears a loud fight coming from a room next to his.
- c. (2 points) Trinity does not receive her full-benefit until her first 3-month of her work position.
- d. (2 points) In Chiang Mai, there is no earthquake alarming system.
- e. (2 points) Starbucks coffee is more expensive than Amazon coffee.