Faculty of Economics and Business Universitas Indonesia (FEBUI)

Undergraduate Regular (S1 Regular) and

International Undergraduate Program (KKI)

Mid Term Exam

Odd Semester 2017/2018

ECEU600101-Microeconomics 1/Intermediate Microeconomics

Maximum Time Allowed: 3 hours

No	Lecturers	Assistants
A	**S1 REGULER**	
1	Maddaremmeng A.P. (*English*) –A	Assyifa Szami Ilman
2	Uswatun Hasanah (*English*)-B	Agung Romy Hasiholan
3	M. Shauqie Azar (*English*)-C	M. Anggada P. Prabowo
4	Widyono Soetjipto –D	Aurora Maria Sarah
5	Willem Makaliwe (*English*)-E	Auliya Devaldi Wiratama
6	Dwini Handayani Arianto / Niniek L. Gyat-F	Restananda N. Yusac
7	Widyanti Soetjipto-G	Ayu Dwi Putri
8	Lydia Napitupulu (*English*)-H	M. Agung Lazuardi
B	**S1 KKI** (*All in English*)	
1	H Achmadi R-A	Ekki Setiyaningtias
2	Isfandiary D/M. Shauqie Azar-B	Muhammad Alvin
3	Farma Mangunsong-C	Ekki Setiyaningtias
4	Maddaremmeng A.P-D	Wisnu Sari Nugroho
5	Surjadi-E	Ruli Endepe

1. Consumer Behaviour & Market Demand (25 Points)

a. The two graphs below represent consumer preferences facing a certain budget constraint.

| (1) | (2) |
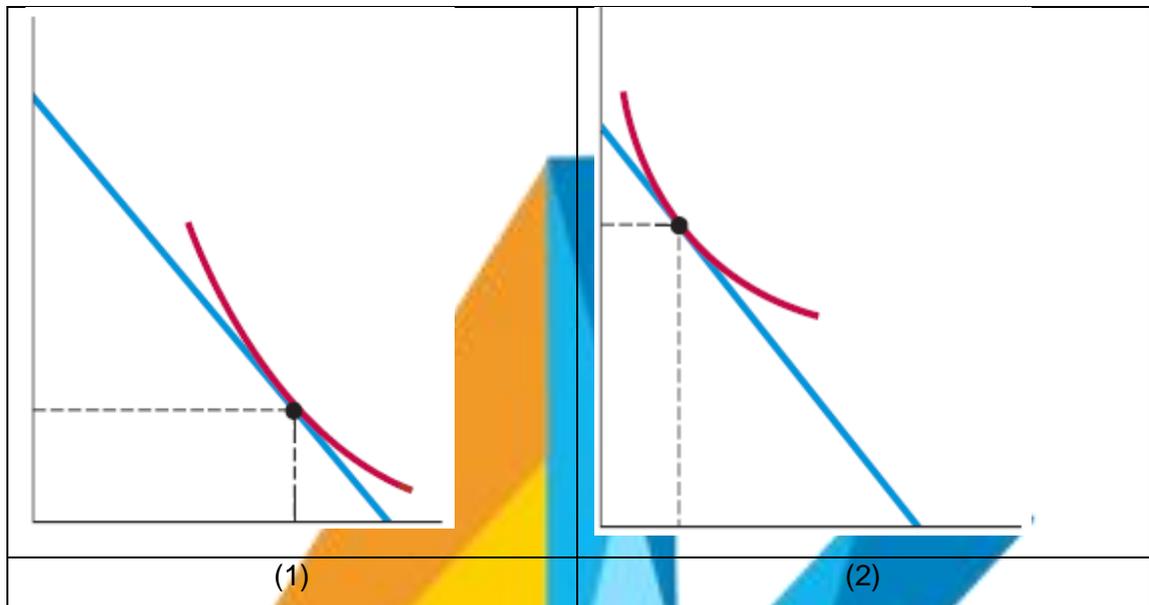
Choose the commodities as you like and complete the attributes of the graphs (title, quantity, etc) . Then explain the differences between graph (1) and graph (2). **5 Points**

b. Based on own price elasticity of demand, Demand of Commodity 1 (D1) is inelastic and Demand of Commodity 2 is elastic. Choose an example for each commodity, draw both of the demand curves, show the points (Price and Quantity) and give example of numerical calculation for own price elasticity of D1 and D2. **5 Points**

c. Suppose the demand curve for a product is given by $Q_d=300 + 2P +4I$, where **I** is the average income measured in thousands of dollars, **Qd** and **Qs** are quantity demanded and quantity supplied, and **P** is own price of the good. The supply Curve is $Q_s= 3P -50$. Find the market clearing price and quantity if I= 25. Calculate also the price and quantity when I=50. **5 Points**

d. Calculate the own price elasticity of demand at the market clearing equilibrium point when I=15. **5 Points**

e. In deciding their consumption of a certain good, consumers always take into account the price of goods and their income. When the price change, consumers with different income will have a different decision on the same good. Explain how the same goods will be perceived as a normal good for those with lower income, but then become inferior good when their income is high. [Hint: use the Engel Curve, Substitution and Income Effects in your explanation]. **5 Points**

2. Production, Cost, Profit Maximization, and Supply in Competitive Market (25 Points)

Given production function **q=200KL**, answer all questions below:

(Note: **q**= Output; **K**= Capital; and **L**= Labor).

a. Is the production function *constant, increasing or decreasing returns to scale*? Explain. **5 Points.**
b. If the rental rate per unit of capital is **r** and wage per labor is **w.** By using Lagrange method, derive the cost-minimizing demands for **K and L** as a function of **q, w** and **r.** **5 Points.**
c. Suppose **r** = IDR 480,000/day, **w** = IDR 120,000/day, derive the equation for the total cost (C) as a function of **q. 5 Points.**
d. If the firm decides to produce 20,000 units per day, calculate: the cost-minimizing level of **K** and **L**; total cost of production; marginal cost; and average cost**. 5 Points.**
e. Calculate the Lagrange Multiplier (λ) and interpret the result. Hint: use part b above to calculate the Lagrange Multiplier **5 Points.**

3. Competitive Market Vs. Monopoly (25 Points)

Jolland Bakery is operating at increasing marginal cost. The marginal cost (**MC**) and the demand functions of the Jolland Bakery are as follows:

MC = 5Q and **P = 3,000 − 10Q**

a. What will be the output, price, and profit if the firm operates in a monopoly market? **5 Points.**
b. What will be the output, price, and profit if the firm operates in a competitive market? **5 Points.**
c. Compare a) and b) above graphically, showing clearly the output and price for each. **5 Points.**
d. Show graphically and calculate the consumer surplus and producer surplus if the firm operates in a competitive market. **5 Points.**
e. Show graphically and calculate the total social costs if the firm operates in a monopoly market. **5 Points.**

4. Pricing Strategy (25 Points)

Intense competition forced a juice company to consider increasing its advertising expenditure. The company's research unit shows estimation results based on historical data as follows:

$$Qx = 33,110 − 1.2\ Px + 0.4\ Py + 0.7\ Ax$$

It is known that **Qx** = Quantity of Juice**; Px** = Price of Juice= 25,000; **Py** *(*price of juice from another related company) = 23,500; and Advertising Spending for Juice company (**Ax)** = 1,700. Answer the following questions:

a. Calculate the advertising elasticity. Is the product elastic or inelastic to the effect of changes in advertising spending? **5 points**

b. Should the company increase advertising spending? **5 points**

c. Calculate the price elasticity of the other juice company's product. **5 points**

d. Is the other juice company's product a substitute or complementary product? **5 points**

e. By using the model above, determine the volume (Qx) which maximizes the revenue of the juice company. **5 points**