



MUEO

MOI UNIVERSITY

**OFFICE OF THE DEPUTY VICE CHANCELLOR, ACADEMIC
AFFAIRS, RESEARCH & EXTENSION**

**UNIVERSITY EXAMINATIONS
2016/2017 ACADEMIC YEAR**

END OF SEMESTER EXAMINATIONS

**FOR THE DEGREE
IN BACHELOR OF BUSINESS AND ECONOMICS**

EXAM CODE:- ECO 210

COURSE TITLE:- INTERMEDIATE MICROECONOMICS

DATE:-5TH JUNE, 2017

TIME:- 2.00P.M. – 5.00P.M.

INSTRUCTION TO CANDIDATES

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INSTRUCTIONS: ANSWER QUESTION ONE AND ANY OTHER THREE QUESTIONS

Question 1

- a) Explain the term consumer behavior (2 Marks)
- b) Clearly identify the main variables that affect the revenue and cost of the firm operating under perfect competitive environment (4 Marks)
- Explain the following terms in Cobb-Douglas production function
- Capital Elasticity
 - Labour Elasticity (4 Marks)
- c) Given that $Q_0 = 10K^{0.7}L^{0.2}$ and assume that K, L are increased by 50% compute returns to scale and interpret your observation (5 marks)
- d) Suppose you are a member of the management of board of sugar industry in Kenya, recommend the possible policy solutions that the industry should adopt and abide by in order to ensure its production, sales and growth stability (10 Marks)

Question 2

- a) Given consumer utility function $U = f(q_1, q_2, q_3, \dots, q_n)$, income level $Y = f(p_1, p_2, p_3, \dots, p_n)$. Derive consumer's equilibrium level condition (3 Marks)
- b) Consider the following utility function for Susan $U = 10x_1x_2$

Required:

- If Susan's objective is to maximize utility of x_1, x_2 what budget restriction must she respect (2 Marks)
- Derive her Marshallian demand and utility functions for commodities x_1, x_2 (7 Marks)
- Suppose the price of $x_1 = \text{Kes. } 100$, and price of $x_2 = \text{Kes. } 50$, while her income, $Y = \text{Kes. } 10,000$ calculate her maximum utility (3 Marks)

Question 3

- a) Explain the term market structures and state the types of market structures in modern economies (2 Marks)
- b) State and explain conditions that monopolists must fulfill in order to practice a successful price discrimination (3 Marks)
- c) Given the following total demand $x = 50 - 0.5p$ and demand function for segmented market one given as $x_1 = 32 - 0.4p_1$, and $x_2 = 18 - 0.1p_2$. The cost function is given as $C = 50 + 40x$, note $X = x_1 + x_2$

Required

Compute the quantity at which monopolist will produce and sell so as to maximize profit given he has one plant and two markets. (10 Marks)

Question 4

- a) Describe Slutsky's substitution effect. Distinguish it from Hicksian's substitution effect (3 Marks)
- b) With the help of a diagram, construct and explain Slutsky's compensation variation (5 Marks)

- .) Clearly explain and derive the Marginal Rate of Technical Substitution ($MRTS_{L,K}$) of a firm with input factors as labour and capital. Illustrate your answer using a diagram
- . Given that $Q=10K^{0.9}L^{0.4}$, compute $MRTS_{L,K}$ (7 Marks)

Question 5

- a) Distinguish the following
- Isoquant and isocost curves
 - Fixed proportion and Variable proportions in factor inputs
 - Returns to scale and returns to variable factor (6 Marks)
- b) Explain producer's equilibrium condition with the help of isoquant curve approach. How will change in producer's income affect his equilibrium (9 Marks)

Question 6

- a) State and explain the following
- The law of diminishing marginal utility
 - Distinguish between cardinal and ordinal utility analysis. Which one is more realistic, explain (6 Marks)
- b) Explain consumer's equilibrium condition with the help of indifference curve approach. How will change in consumer's income affect his equilibrium (9 Marks)