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MAIN EXAMINATION

JANUARY – APRIL 2017 TRIMESTER

FACULTY OF COMMERCE

DEPARTMENT OF ACCOUNTING AND FINANCE

ODEL PROGRAMME

CEC 211: INTERMEDIATE MICROECONOMICS

Date: April 2017	**Duration: 2 Hours**
INSTRUCTIONS: Answer Question ONE and any other TWO Questions	

Q1. a) Explain briefly the following terms:

1. Market environment **(1 marks)**
2. Social costs **(1 marks)**
3. Iso profit line **(1 marks)**
4. A composite good **(1 marks)**
5. Diminishing marginal product **(1 marks)**
6. Equilibrium of the consumer **(2 marks)**
7. Returns to scale **(3 marks)**
8. Numeraire price **(1 marks)**

b) Using suitable illustrations, explain the following terms

1. Inefficiency of monopoly **(3 marks)**
2. Elasticity of a linear demand curve **(3 marks)**
3. Budget set **(3 marks)**
4. Technology types and their isoquants **(3 marks)**
5. Consider John's consumption bundle (x_1 , x_2) for good 1 and good 2 at set prices (5 , 10) in Kenya Shillings, respectively; and income of Kshs3,000.

Required to:

i) Assuming good 1 on horizontal axis, compute the vertical and horizontal intercepts **(1/2 marks)**
ii) Write the budget constraint facing the consumer **(1/2 marks)**
iii) Write the budget line **(1/2 marks)**

iv) Compute the marginal rate of substitution for good 1 and good 2. **(1/2 marks)**

v) Compute the amount of good 1 bought when spending all money income on good 1 **(1/2 marks)**

vi) Compute the amount of good 2 bought when spending al money income on good 2. **(1/2 marks)**

vii) Given John's consumption bundle as (400 , 100)

1. Find the share of the budget, s_1, spent on good 1**(1/2 marks)**
2. Find the share of the budget, s_2, spent on good 2. **(1/2 marks)**

Q2. a) Consider a consumer's demand bundle (x_1 , x_2) for good 1 and good 2 and set prices (20 , 40) and income of Kshs20,000.

Required to:

1. Write the consumer demand functions for each good **(2marks)**
2. For n consumers in the market, the aggregate demand for good 1 is X_1 and X_2 for good 2. Write the market demand function for each good. **(2marks)**

b) Consider the following consumer demand function for Unga

$X_u = 10 + \frac{M}{10P}$

where

M = Kshs1,500, consumer income
P = Kshs30, price of Unga per kilo

Required to:

1. Find consumer's demand for Unga. **(1 marks)**
2. Find consumer's demand for new price of Unga @ Kshs20 per kilo**(1 marks)**
3. Compute total change in demand due to the change in price from Kshs30 to Kshs20. **(1 marks)**
4. Calculate the change in income necessary to make the orginal consumption of Unga just affordable when the price of Unga is Kshs20 per kilo**(1 marks)**
5. Find the level of income necessary to keep the purchasing power of the consumer constant. **(1 marks)**
6. Find consumer demand for Unga at new price of Kshs20 per kilo and new income in (5) above. **(1 marks)**
7. Find the substitution effect of the price change **(1 marks)**
8. Find the income effect of the price change. **(1 marks)**

c) Consider a consumer faced with the budget constraint and utility as follows

$M = p_1x_2 + p_2 x_2$, budget constraint
$U = x_1x_2$, utility function

Required to:

i) Formulate the utility maximization problem facing the consumer **(1marks)**

ii) Derive the First Order Conditions (FOCs) for utility maximization. **(3 marks)**

iii) Derive the optimal choice of the consumer **(4 marks)**

Q3. a) Explain briefly the following terms

1. Production function **(2 marks)**
2. Production set **(2 marks)**
3. Isoquant **(1 marks)**

b) Given the following information for a firm **(1 marks)**

$y = f(x_1 , x_2)$, production function
p = output price
x_1 , x_2 = amounts of inputs
w_1 , w_2 = input prices

Required to formulate the profit maximization problem facing the firm in:

1. The short run **(1 ½ marks)**
2. The long run **(1 ½ marks)**

c) Explain briefly the statement, 'in general, the firm faces two constraints on its actions' **(5 marks)**

d) Using suitable illustrations, explain briefly the profit-maximizing behaviour of:

1. A competitive firm **(3 marks)**
2. A monopoly firm **(3 marks)**

Q4. a) Using suitable examples and illustrations, explain briefly the statement that 'economic policy often uses tools that affect a consumer's budget constraint '**(6 marks)**

b) Consider a consumer consuming some bundle of good 1 and good 2 such that the respective marginal utilities are 40 and 80, while the respective prices are 8 and 16.

Required to:

1. Show the equilibrium situation of the consumer **(1 marks)**
2. Find the slope of the budget line **(1 marks)**
3. Find the slope of the indifference curve **(1 marks)**

a. Explain briefly the term '' cost function' **(1 marks)**

b. Consider a firm such that

$y = f(x_1 , x_2)$, production function
p = output price
w_1 , w_2 = factor prices

Required to:

1. Write the cost minimization problem facing the firm **(1 marks)**
2. Write the solution to the cost minimization problem **(1 marks)**
3. State conditions describing the optimal choices facing the firm **(2 marks)**

c) Using suitable illustrations, explain briefly the optimal choice of the consumer involving:

1. Interior optimum **(2 marks)**
2. Boundary optimum **(2 marks)**
3. Kinky tastes **(2 marks)**

END