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# THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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MAIN EXAMINATION

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**Duration: 2 Hours** 

JANUARY – APRIL 2022

# **FACULTY OF ARTS AND SOCIAL SCIENCES**

## **DEPARTMENT OF ECONOMICS**

#### **REGULAR PROGRAMME**

**ECN 420: MANAGERIAL ECONOMICS** 

**INSTRUCTIONS: Answer Question ONE and any TWO Questions** Q1. a. Discuss the concept of common sense in business (3 marks). b. Distinguish between the following concepts. i. 'Accounting profit' and 'economic profit' (2 marks). 'Short run primary goal of the firm' and 'long run primary goal of the firm' ii. (3 marks). 'Level of risk' and 'attitude toward risk' iii. (2 marks). 'Break-even analysis' and 'profit contribution' (3 marks). İ۷. 'Public good' and 'private good' (3 marks). ٧. c. Using suitable illustration, distinguish between the following concepts:-'Income effect of a price change' and 'substitution effect of a price change' i. (3 marks). 'Engle curve for normal goods' and 'Engle curve for inferior goods' ii. (3 marks). 'Negative externalities' and 'positive externalities' (3 marks). iii. d. Discuss the following:i. Three applications of the elasticity concept (1 ½ marks). ii. The features of time series data. Illustrate (3  $\frac{1}{2}$  marks). Q2 a. Discuss reasons why profits vary among firms (5 marks).

- b. Explain briefly the role of profits in a market economy (3 marks).
- c. Outline the importance of the expected value maximization model of the firm (4 marks).
- d. Explain the basic assumptions governing the theory of consumer behaviour (3 marks).
- e. Musa is a consumer faced with budget (B) and prices  $(p_R, p_U)$  in the consumption of Rice (R) and Unga (U) such that:-
  - B = \$1,000;  $p_R$  = \$100;  $p_U$  = \$250
  - Plot R on the horizontal axis.

## Required to:-

i. Compute the two intercepts

- (2 marks).
- ii. Draw the budget constraint showing the two market baskets (3 marks).

Q3

a. Discuss the qualitative approach to forecasting

(3 marks).

- b. Explain the following terms.
  - i. Marginal concept

(2 marks).

ii. Incremental concept

(3 marks).

iii. Value of the firm

- (2 marks).
- c. Tumaini Watch Manfacturers Limited have the following revenue and price relations for their products.

Quantity sold	Price	Total revenue
('000s) per month	(Kshs)	(Kshs)
0	2040.00	0.00
1	1912.00	1912.50
2	1785.00	3570.00
3	1657.50	4972.50
4	1530.00	6120.00
5	1402.00	7012.50
6	1275.00	7650.00
7	1147.50	8032.50
8	1020.00	8160.00
9	892.50	8032.50
10	765.00	7650.00

The linear demand curve for firm's products is given as:

$$P = A + BQ$$

Where P and Q are price and quantity, respectively, and A and B are constants.

Required to

- i. Estimate the linear demand curve for the firm's products (3 marks).
- ii. Present graphically the relations among price, total revenue, marginal revenue, and output (3 marks).
- iii. Calculate the revenue-maximizing output level for the firm (2 marks).
- iv. Calculate the maximized revenue (2 marks).

Q4

- a. Using suitable illustration, explain the concept of the movement of price elasticity along a linear demand curve (5 marks).
- b. Explain three trend analysis model types (3 marks).
- c. Discuss game theory types (3 marks).
- d. The competitors, Coco-Cola and Pepsi, are faced with the following payoff matrix.

		Pepsi (P)	
	Pricing strategy	Discount price	Regular price
	Discount price	CC earns \$4billion	CC earns
Coco-Cola (CC)		P earns \$2billion	\$8billion
		' \ \ \	P earns \$1billion
	Regular price	CC earns \$2billion	CC earns
		P earns \$5billion	\$6billion
			P earns \$4billion

Required to find/explain:-

- i. The dominant strategy for both firms (2 marks).
- ii. The secure strategy for each firm (2 marks).
- e. John faces two investment choices involving a portfolio of \$8 million as follows:-
  - 1. To invest Kshs8 million such that the returns from the project are:-
    - Kshs80 million if project is successful. The probability of success is 50 percent.
    - Nothing if project fails
  - 2. Not to invest, so keep the Kshs8 million.

#### Required to:-

i.	Find the certainty equivalent sum	(1 mark).
ii.	Calculate the expected risky sum	(1 ½ marks).
iii.	Calculate the certainty equivalent adjustment factor, $\alpha$	(1 ½ marks).

iv. Interpret the results in (iii) appropriately (1 mark).

Q5

a. In a given market, the quantity demanded of the product, Y, depends on the independent variable, X.

Required to provide simple interpretations of the following point elasticities:

i.	$\varepsilon_{x} = 5$	(1 mark).
ii.	$\varepsilon_{x} > 5$	(1 mark).
iii.	$\varepsilon_{x} < 5$	(1 mark).

- b. Distinguish clearly between the 'Certainty Equivalent Method 'and 'Risk-adjusted Discount Rate Approach' of dealing with the effects of uncertainty in managerial decision making (6 marks).
- c. The following data show the production status of Jambo Shoe Enterprises:-
  - Price per pair of shoes sold = Kshs240
  - Average cost for labour and material = Kshs144
  - Break-even quantity level = 50,000 pairs of shoes.

Pairs of shoes ('000s)	Sales Kshs ('000s)	Costs Kshs ('000s)	Profit Kshs ('000s)
20			
40			
60			
80		$\langle \cdot \rangle$	
100			
120		12	

# Required to:-

i.	Compute profit contribution	(2 marks).
ii.	Calculate total fixed cost	(2 marks).
iii.	Complete the Table above	(3 marks).
iv.	Draw the cost-volume-profit chart	(2 marks).
٧.	Compute the degree of operating leverage	(2 marks).

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