The Management University of Africa

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UNDERGRADUATE UNIVERSITY EXAMINATIONS

SCHOOL OF MANAGEMENT AND LEADERSHIP

DEGREE OF BACHELOR OF MANAGEMENT AND LEADERSHIP/ BACHELOR OF COMMERCE/ DEGREE OF BACHELOR OF ARTS IN DEVELOPMENT STUDIES

BML 200/ BCM 215 : **MICRO ECONOMICS/ INTERMEDIATE MICRO ECONOMICS**

DATE: **2ND APRIL 2024**

DURATION: 2 HOURS

MAXIMUM MARKS: 70

INSTRUCTIONS:

1. Write your registration number on the answer booklet.
2. **DO NOT** write on this question paper.
3. This paper contains **SIX (6)** questions.
4. Question **ONE** is compulsory.
5. Answer any other **THREE** questions.
6. Question **ONE** carries **25 MARKS** and the rest carry **15 MARKS** each.
7. **Write all your answers in the Examination answer booklet provided.**

QUESTION ONE

Read the Case Study below carefully and answer the questions that follow:

EMPOWERING KENYAN ENTERPRISES: NAVIGATING MICROECONOMIC CHALLENGES

In the bustling streets of Nairobi, Kenyan entrepreneurs find themselves at the intersection of economic theory and market reality. One such company, Kenyan Dynamics Ltd., embarks on a journey shaped by the principles of microeconomics. As they introduce innovative products and services to the local market, they grapple with intricate theories and market dynamics, striving for sustainable growth amidst a sea of economic complexities.

The Dance of Supply and Demand

Kenyan Dynamics Ltd., a tech-savvy startup, discovers the delicate balance of supply and demand. As they unveil their cutting-edge gadgets, they witness firsthand how consumer preferences and market forces interplay. Through meticulous research and pricing strategies, the company navigates the market equilibrium, ensuring their products meet demand while optimizing profits.

The Cost of Progress

In the heart of production, Kenyan Dynamics dives into the theory of production. With their skilled workforce and state-of-the-art facilities, they explore production functions, understanding the relationships between inputs and outputs. Total, marginal, and average product analyses guide their resource allocation, while cost curves dictate their financial decisions, illuminating the path toward cost minimization and profit maximization.

Market Structures and Strategic Decisions

Kenyan Dynamics encounters a diverse market landscape, from the perfect competition of budget-friendly products to the oligopoly of high-tech innovations. Navigating these market structures, they grapple with the influence of cost curves on pricing decisions. Embracing game theory, they strategically cooperate with local suppliers, enhancing their supply chain efficiency and ensuring a competitive edge.

Tackling Income Inequality and Consumer Choices

As their products reach various income brackets, Kenyan Dynamics confronts the reality of income inequality. Exploring the political philosophy of redistributing income, they contemplate ways to bridge the gap, ensuring their products remain accessible to a wider audience. Simultaneously, they delve into the theory of consumer choice, optimizing their offerings based on income and substitution effects, understanding the pulse of their diverse customer base.

Emerging Frontiers and Behavioral Biases

In their quest for innovation, Kenyan Dynamics explores the frontiers of microeconomics. They engage with emerging topics, like behavioral economics, unraveling the complexities of consumer behavior. Understanding behavioral biases and decision-making processes, they tailor their marketing strategies, creating personalized experiences that resonate with their clientele, thus building lasting relationships and brand loyalty.

Required:

i. Assess how Kenyan Dynamics Ltd. strategize their pricing policies in different market structures, considering the influence of supply, demand, and cost curves. **(5 Marks)**

ii. Identify the ways in which Kenyan Dynamics navigated income inequality, ensuring their products remained accessible across various income brackets. **(5 Marks)**

iii. Assess the influence of game theory by Kenyan Dynamics' cooperation strategies with local suppliers. **(5 Marks)**

iv. Formulate the challenges and benefits of these strategic collaborations Identified in iii above. **(4 Marks)**

v. From the case study identify and differentiate two market structures. **(6 Marks)**

QUESTION TWO

i. In a Cournot duopoly, two firms, A and B, produce identical goods with constant marginal cost (MC) of $10 per unit. The market demand is given by $P(Q) = 200 - 0.5Q$, where Q is the total quantity produced by both firms.

   a) Calculate each firm's reaction function. **(5 Marks)**

b) Determine the profit maximizing price and quantity in the market.

(5 Marks)

ii. Given the following demand function $Q = 100 - 2P^2$ Compute the price elasticity of demand when price is Ksh. 2 and interpret the answer. **(5 Marks)**

QUESTION THREE

i. Discuss the effects of a price floor set above the equilibrium price in the market for agricultural products. **(5 Marks)**

ii. A firm produces output Q using labor (L) and capital (K). The prices of labor and capital are $10 per unit and $20 per unit, respectively. The firm's production function is $Q = 100L^{0.5}K^{0.5}$. Determine the optimal combination of labor and capital that minimizes the cost of producing 100 units of output. **(5 Marks)**

iii. Firm A operates in a perfectly competitive market. Its short-run total cost function is given as: $TC = 50 + 0.2Q^2$. A's product is sold at a market price of $20 a unit. What is Firm A's profit-maximizing output decision for the short-run. **(5 Marks)**

QUESTION FOUR

i. Explain how the income and substitution effects influence a consumer's response to a price change. **(4 Marks)**

ii. A monopolist faces a linear demand curve given by $P = 100 - 2Q$, where P is price and Q is quantity. The monopolist's total cost function is $TC(Q) = 20Q + 10$. Calculate the monopolist's profit-maximizing quantity and price. **(5 Marks)**

iii. A car wash company hires workers and rents equipment to provide its services. The company wants to wash 240 cars an hour. Currently, it pays its workers $12 an hour and has a rental cost of $3 an hour. The production function is given as:

$Q = 15KL$. Find the optimal input combination that minimizes the firm's total cost.

(6 Marks)

QUESTION FIVE

i. Propose four determinants of Elasticity of Demand. **(4 Marks)**

ii. Illustrate, using diagrams, the effect of an increase in consumer income on the equilibrium price and quantity in the market for luxury cars. **(7 Marks)**

iii. Define positive economics and normative economics, and provide examples of each **(4 Marks)**

QUESTION SIX

i. Differentiate between a market economy and a command economy, highlighting their key characteristics. **(4 Marks)**

ii. A manufacturing company produces bicycles. The company's total cost (TC) function is given by TC(Q) = 500Q + 0.5Q^2 + 200, where Q represents the quantity of bicycles produced.

a) Calculate the total cost when the firm produces 100 bicycles. **(1 Mark)**

b) Calculate the average cost (AC) and marginal cost (MC) when the firm produces 200 bicycles. **(3 Marks)**

iii. Assess the effect of elasticity of demand and supply on the effectiveness and impact of price controls. **(4 Marks)**

iv. In a hypothetical market for smartphones, the demand function is given as Qd = 500 - 5P, and the supply function is given as Qs = 100P. Calculate the equilibrium price and quantity. **(3 Marks)**