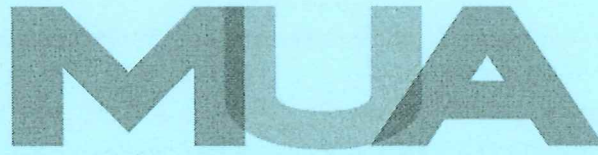


The  
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**UNDERGRADUATE UNIVERSITY EXAMINATIONS**

**SCHOOL OF MANAGEMENT AND LEADERSHIP**

**DEGREE OF BACHELOR OF MANAGEMENT AND  
LEADERSHIP/BACHELOR OF COMMERCE**

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

**DATE:                      6<sup>TH</sup> DECEMBER 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:

**The Dynamics of Demand, Supply, and Market Structures: A Case Study of Kenya's Maize Market**

In Kenya, maize is not only a staple food but also a crucial component of the country's agricultural economy. However, the maize market in Kenya is characterized by complex dynamics of demand, supply, and market structures.

Demand for maize in Kenya is predominantly driven by its role as a staple food, consumed by households across socio-economic strata. Additionally, maize serves as a key input in various industries, including animal feed production and ethanol manufacturing. The demand for maize is relatively inelastic due to its necessity for food security and industrial processes. Due to its nature of being a staple food in Kenya its demand is not highly affected by price changes.

Kenya's maize production is largely dependent on seasonal rainfall patterns and agricultural practices. Smallholder farmers constitute a significant portion of maize producers, employing traditional farming methods and facing challenges such as limited access to inputs and technology. Large-scale commercial farms also contribute to maize production, albeit to a lesser extent.

The market structure of Kenya's maize market is characterized by a mix of factors. While there are a significant number of smallholder farmers operating in a competitive environment, there are also instances of oligopolistic behavior among large agribusinesses involved in maize trading and processing. Additionally, government interventions, such as subsidies and price controls, further influence market dynamics.

**Required:**

- a) From the case study identify and explain the factors influencing the demand for maize in Kenya. (4 Marks)
- b) "The demand for maize is relatively inelastic due to its necessity for food security and industrial processes." Explain this statement. (3 Marks)

- c) "While there are a significant number of smallholder farmers operating in a competitive environment" Explore the nature of the competitive environment mentioned in this statement. **(6 Marks)**
- d) In relation to Economics, analyze and graph the effect of limited access to inputs and technology on the market for maize. **(6 Marks)**
- e) Graphically illustrate and explain the impact of floods on the market equilibrium of maize during the next harvest period. **(6 Marks)**

## QUESTION TWO

- i. Assume the demand for maize increases due to a rise in population, leading to a new demand equation:

$$\text{New Demand: } Q_d = 400 - 20P$$

The supply equation remains the same:

$$\text{Supply: } Q_s = 50 + 30P$$

- a) Determine and graph the equilibrium price and quantity. **(3 Marks)**
- b) Determine the price elasticity of demand at the equilibrium price determined above and interpret your answer. **(3 Marks)**
- c) Determine the price elasticity of supply at the equilibrium price determined (a) above and interpret your answer. **(3 Marks)**
- ii. Differentiate between the income and substitution effect due to a price change on a normal good and on a giffen good. **(6 Marks)**

## QUESTION THREE

- i. Explore the monopolistic competition in the Kenyan retail sector. **(5 Marks)**
- ii. Given the total cost function  $TC = 200 + 8Q - 0.2Q^2$ .
- a) Compute the firm's average variable cost (AVC) and average fixed cost (AFC) when producing 20 units of output. **(3 Marks)**
- b) Calculate the firm's average total cost (ATC) and marginal cost (MC) at an output level of 50 units. **(3 Marks)**

- iii. Critically analyze the effectiveness of price controls on essential goods in Kenya. (4 Marks)

#### QUESTION FOUR

- i. Discuss the challenges and opportunities facing small-scale farmers in Kenya within the context of perfect competition. (3 Marks)
- ii. Suppose a firm has a production function  $Q = 3K^{\frac{1}{3}}L^{\frac{2}{3}}$  and faces the total cost function  $TC = 100K + 64L$ .
- a) Compute and interpret the Marginal Product of Labour and the Marginal Product Capital assuming that  $K = 50$  and  $L = 100$ . (6 Marks)
- b) If the total cost is 24,000 determine the units of labour and the units of capital assuming the firm is operating optimally. (6 Marks)

#### QUESTION FIVE

- i. The Chinese Economy was once a pure command economy but has over the years adopted capitalistic attributes making it a mixed economic system. Explain the attributes of a mixed economic system that differentiate it with a command economic system. (6 Marks)
- ii. Given the utility function  $U(x, y) = 4X^{\frac{1}{4}}Y^{\frac{3}{4}}$ . The budget for a consumer is 240 KES while the prices of good X and good Y are 20 and 30 respectively. Determine the optimal quantities of X and Y that maximize utility. (6 Marks)
- iii. Explain three attributes of an indifference curve. (3 Marks)

**QUESTION SIX**

- i. Assume that the market for blue-band is at equilibrium before the government introduces a tax on bread. Graphically illustrate and explain the impact of the tax on the market equilibrium of blue-band. **(6 Marks)**
- ii. A monopolistic firm has a demand equation for its good as  $Q_D = 280 - 4P$  and the total cost function  $TC = 44Q + 3Q^2$  where  $Q$  represents the quantity produced, calculate the profit-maximizing level of output. **(6 Marks)**
- iii. Discuss three factors affecting the elasticity of demand for healthcare in Kenya. **(3 Marks)**

