

LAIKIPIA



UNIVERSITY

UNIVERSITY EXAMINATIONS

1ST SEMESTER 2023/2024 ACADEMIC YEAR

FIRST YEAR EXAMINATION FOR THE DEGREE OF
BACHELOR OF SCIENCE (AGRICULTURAL
EDUCATION AND EXTENSION)

**AGEC 111: INTRODUCTION TO AGRICULTURAL
ECONOMICS**

STREAM: AGED

TIME: 2 HRS

DAY: MONDAY [8.30-10.30 A.M]

DATE: 18/12/2023

THIS QUESTION PAPER CONSISTS OF FOUR (4) PAGES

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INSTRUCTIONS: ANSWER QUESTION ONE & ANY OTHER TWO QUESTIONS.

QUESTION ONE: 30 MARKS

- a) Discuss FIVE constraints affecting agricultural contribution to economic development. **(5 marks)**
- b) The following is a production function of Y using input X:

Input x	Output y
0	0
1	7
2	20
3	31
4	37
5	40
6	39
7	35

If the price of X (P_x) is KES 50 and the price of output (P_y) is KES 20, calculate;

- i) Total revenue; **(2 marks)**
 - ii) Value of average product; **(2 marks)**
 - iii) Value of Marginal product; **(2 marks)**
 - iv) Total cost; **(2 marks)**
 - v) Net revenue; **(2 marks)**
- c) Explain the different characteristics of an indifference curve. **(5 marks)**
- d) i) The demand for salt is “perfectly inelastic” Explain this statement. **(2 marks)**
 ii) Is this statement true? Give reasons. **(3 marks)**

iii) Using these demand and supply equations:

$$Q_d = (1.9 - P) 3,000$$

$$Q_s = (P - 0.7) 3,000.$$

Determine the equilibrium price and equilibrium quantity.

(5 marks)

QUESTION TWO: 20 MARKS

- a) By giving relevant examples, explain the role of price mechanism in resource allocation. (10 marks)
- b) Using well labelled diagrams, explain the difference between movement along the supply curve and shift in the supply curve. Give examples in each case. (10 marks)

QUESTION THREE: 20 MARKS

- a) With the aid of diagrams, explain the different stages of the law of diminishing returns. (10marks)
- b) Explain the FIVE objectives of agricultural production. (10 marks)

QUESTION FOUR: 20 MARKS

a) Given the following information for Kiboro farm.

Output	Fixed cost	Variable cost
0	5000	0
1000	5000	1200
2000	5000	1400
3000	5000	1600
4000	5000	1800
5000	5000	2000
6000	5000	2200

- i) Compute the following;
 - a) Average variable cost (AVC); (2 marks)
 - b) Average fixed cost (AFC); (2 marks)



- c) Average total cost (ATC); **(2 marks)**
- d) Marginal costs (MC) **(2 marks)**
- ii) a) How much profit would Kiboro farm earn if market price is KES 10 per unit at each production level? **(6 marks)**

- b) Use a diagram, explain the concept of market equilibrium. **(6 marks)**

QUESTION FIVE: 20 MARKS

- a) You have observed, over a period of one year, that Mr. John consumes two goods X and Y that are complements. Ms Mary also consumes two goods Z and W that are substitutes. Using well labelled diagrams,
 - i) Explain the effects of a price decrease in prices of Y and W. **(5 marks)**
 - ii) Explain the introduction of a new cost saving technology in the production of good X and Z. **(5 marks)**
- b) With an aid of a diagram, differentiate with the various types of returns to scale in perfect competitive market structure. **(10 marks)**

