



# MACHAKOS UNIVERSITY

University Examinations for 2020/2021 Academic Year

SCHOOL OF AGRICULTURAL SCIENCES

DEPARTMENT OF AGRICULTURAL EDUCATION AND EXTENSION

FIRST/SECOND YEAR SPECIAL/ SUPPLEMENTARY EXAMINATION FOR  
BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION AND EXTENSION

BACHELOR OF SCIENCE AGRIBUSINESS MANAGEMENT AND TRADE

AGB 103/KBT 209: PRINCIPLES OF AGRICULTURAL MICROECONOMICS

DATE: 22/03/2021

TIME: 8.30-10.30 AM

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## INSTRUCTIONS:

Answer **Question one** and **ANY TWO** other questions.

### QUESTION ONE (30 MARKS)

- a) Differentiate between the following terms as used in economics
- i. Price ceiling and price floor (2 marks)
  - ii. Pareto optimality and Pareto superiority (2 marks)
  - iii. Normal good and inferior good (2 marks)
  - iv. Ordinal utility and cardinal utility (2 marks)
  - v. Positive externality and negative externality (2 marks)
- b) With examples or illustrations, expound on the following economics terms
- i. A classical production function (3 marks)
  - ii. Marginal rate of technical substitution (3 marks)
  - iii. Consumer surplus (3 marks)
  - iv. The law of diminishing marginal utility (3 marks)
- c) Explain two types of collusion in an oligopolistic market (4 marks)
- d) Describe four properties of indifference curves (4 marks)

### QUESTION TWO (20 MARKS)

- a) Expound on four reasons why perfect competition in some agricultural markets rarely exists in practice (8 marks)
- b) The figures in the table below were taken from demand schedules of two goods.

	Quantity1	Price1	Quantity2	Price2
Good 1	50	4	35	5
Good 3	7	5	7	6
Good 4	45	24	30	36

- i. Calculate the price elasticity of demand for each good (6 marks)
- ii. Explain the meaning of elasticity values obtained for each good (3 marks)
- iii. For each of the goods, explain what would happen to the total revenue earned from the good if the price of the good was increased (3 marks)

### QUESTION THREE (20 MARKS)

- a) Explain the role played by agriculture in economic development in Kenya (8 marks)
- b) The Government of Kenya plans to set a maximum price of commercial fertilizers. Using a diagram, explain whether or not this policy change will be beneficial (12 marks)

### QUESTION FOUR (20 MARKS)

- a) Describe three types of returns to scale (6 marks)
- b) Explain two sources of economies of scale (4 marks)
- c) Using an appropriate graph, explain how a purely competitive firm maximizes profit (10 marks)

### QUESTION FIVE (20 MARKS)

- a) Demand for soda in Kenya will remain unchanged in the next thirty years. Discuss. (10 marks)
- b) Suppose there was a sudden severe drought in key dairy production zones of Kenya. Explain, using a diagram, the likely changes in equilibrium price and quantity of milk in the short run (10 marks)