



# MACHAKOS UNIVERSITY

University Examinations 2018/2019

SCHOOL OF AGRICULTURAL SCIENCES

DEPARTMENT OF AGRIBUSINESS MANAGEMENT AND TRADE

FIRST YEAR SECOND SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE (AGRICULTURAL EDUCATION AND EXTENSION)

BACHELOR OF SCIENCE (AGRIBUSINESS MANAGEMENT AND TRADE)

BACHELOR OF EDUCATION (SCIENCE)

**AGB 103: PRINCIPLES OF AGRICULTURAL MICROECONOMICS**

**DATE: 29/4/2019**

**TIME: 2:00 – 4:00 PM**

---

**INSTRUCTIONS:** Answer **Question ONE** and **ANY TWO** other questions.

**QUESTION ONE (COMPULSORY) (30 MARKS)**

- a) Define the following agricultural economics concepts
- i) Marginal revenue (1mark)
  - ii) Opportunity cost (1 mark)
  - iii) The law of diminishing marginal utility (1 mark)
  - iv) Elasticity of supply (1 mark)
  - v) Pareto optimality (1 mark)
- b) Differentiate between the following terms as used in agricultural economics
- i) Normal good and inferior good (2 marks)
  - ii) Overt collusion and tacit collusion (2 marks)
  - iii) Monopoly and monopolistic competition (2 marks)
  - iv) Positive externality and negative externality (2 marks)
  - v) Economies of scale and returns to scale (2 marks)
- c) Explain four factors that favor the existence of a monopoly (4 marks)
- d) Describe five axioms of rational choice (5 marks)

e) The figures in the table below were taken from demand schedules of two goods.

	Quantity1	Price1	Quantity2	Price2
Good 1	150	4	100	6
Good 2	25	5	15	5

- i) Calculate the price elasticity of demand for each good (4 marks)
- ii) Explain the meaning of elasticity values obtained for each good (2 marks)

**QUESTION TWO (20 MARKS)**

- a) With relevant examples, describe four types of demand for agricultural products (8 marks)
- b) You have two inputs – labor and capital, and a fixed production budget. Explain how you would choose the optimal combination of these inputs to maximize output assuming competitive markets (12 marks)

**QUESTION THREE (20 MARKS)**

- a) Using an appropriate diagram, explain how a monopolist maximizes profit (10 marks)
- b) Supply of beef in Kenya is likely to remain unchanged over the next ten years. Discuss the validity of this viewpoint (10 marks)

**QUESTION FOUR (20 MARKS)**

- a) Suppose the government of Kenya tripled taxes on dairy feeds and vaccines. Explain, using a diagram, what may happen to market price and quantity and price of milk (10 marks)
- b) Draw the classical production function and describe
  - i) the three stages of the production function (8 marks)
  - ii) the rational stage of production (2 marks)

**QUESTION FIVE (20 MARKS)**

- a) Giving appropriate examples, explain three determinants of elasticity of demand for agricultural/food commodities (9 marks)
- b) With the aid of a diagram, explain the income consumption curve (11 marks)