



MACHAKOS UNIVERSITY

University Examinations for 2019/2020 Academic Year

SCHOOL OF AGRICULTURAL SCIENCES

DEPARTMENT OF AGRIBUSINESS MANAGEMENT AND TRADE

FIRST YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE IN AGRIBUSINESS MANAGEMENT

AGB 103: PRINCIPLES OF AGRICULTURAL MICRO-ECONOMICS

DATE: 2/12/2019

TIME: 2:00 – 4:00 PM

INSTRUCTIONS

Answer question one and two other questions

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) What is the purpose of theory? (3 marks)
- b) What is likely to happen to the quantity supplied of a particular cut of meat when its price rises? (2 marks)
- c) Express your answer to part (b) as a general hypothesis of the relationship between the price and the quantity supplied of any commodity. (3 marks)
- d) Scarcity results in limited production and the need for choice, and choice results in opportunity costs.
 - i) Explain the Opportunity Cost concept. (2 marks)
 - ii) Describe which diagram economists use to illustrate the concept of Opportunity Cost. Include this diagram in your answer. (4 marks)
- e)
 - i) Describe the law of negatively sloped demand. (3 marks)
 - ii) Describe the law of positively sloped supply. (2 marks)
- f)
 - i) Describe any 2 factors which either increase or decrease the quantity of a good or service that buyers are prepared to demand *at a given price*. (2 marks)
 - ii) Using a diagram, show the changes of the demand line as per your answer in (f) (i) above. (3 marks)
- g) Explain Price elasticity above, below and at the mid-point of a demand schedule or curve. (6 marks)

QUESTION TWO (20 MARKS)

An individual demands a particular commodity because of the satisfaction or utility received from consuming it. The table below gives points on one indifference curve for a consumer.

Q _x	Q _y
3	10
4	7
5	5
6	4.2
7	3.5
8	3.2
9	3
10	2.9

- a) Plot these points in a diagram and join them by a smooth curve. Label this curve, I_1 . (5 marks)
- b) i) Suppose that $P_x = P_y = \text{Ksh. } 100$, that a consumer's money income is Ksh. 1,000 per time period and that it is all spent on X and Y. Draw this budget line in your diagram and label clearly. (2 marks)
- ii) Explain what the Budget line illustrates. (3 marks)
- c) Determine in your diagram the point of consumer equilibrium, point E. Fully describe this Equilibrium point, E, with respect to the indifference curve and the budget line. (4 marks)
- d) Add two more indifference curves, I_2 and I_0 , in your diagram placing I_2 above the first indifference curve, I_1 , and I_0 below I_1 . With reference to this diagram, fully describe the characteristics of Indifference curves. (6 marks)

QUESTION THREE (20 MARKS)

- a) If there are 1000 identical individuals in the market, each with the demand for commodity X given by $Q_{dx} = 8 - P_x$ *ceteris paribus*, derive the market demand schedule and the market demand curve for commodity X. (6 marks)

- b) If there are 100 identical producers in the market, each with a supply of commodity X given by $Q_{sx} = -40 + 20P_x$ *ceteris paribus*, derive the market supply (Q_{Sx}). (6 marks)
- c) From the market demand curve of (a) and the market supply curve of (b), determine the equilibrium price and the equilibrium quantity for commodity X. (4 marks)
- d) Describe the Equilibrium point derived in (c) above. (4 marks)

QUESTION FOUR (20 MARKS)

“Markets” generally operate best, or most efficiently, when they are free or purely competitive.

- a) Describe the main features that characterize or distinguish the different types of markets. (5 marks)
- b) Describe 4 preconditions for a purely competitive market. (6 marks)
- c) Explain the benefits of having strong competition in agricultural markets. (4 marks)
- d) In certain circumstances the market fails to use resources efficiently. This results in market failure.
 - i) Explain the main reason(s) for having government intervention over resource allocation. (3 marks)
 - ii) Briefly discuss one main justification for government intervention in a competitive market system. (2 marks)

QUESTION FIVE (20 MARKS)

- a) A simple agricultural production function can be obtained by using various alternative quantities of labor per unit of time to farm a fixed amount of land, and recording the resulting alternative outputs of the commodity per unit of time.
Using a diagram(s) to illustrate your answer, describe the relationship between Total Product (TP), Average Product of Labour (AP_L) and Marginal Product of Labour (MP_L). (15 marks)
- b) Describe an Isoquant. Include a diagram to illustrate your answer. (5 marks)