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.

Qx	Qy
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 $Px = Py =$ 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 $Qdx = 8 - Px$ *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 Qsx = $^{-}$40 + 20Px *ceteris paribus*, derive the market supply (QSx). (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)