



MACHAKOS UNIVERSITY COLLEGE

(A Constituent College of Kenyatta University)
University Examinations for 2015/2016 Academic Year

SCHOOL OF AGRICULTURE & NATURAL RESOURCES

DEPARTMENT OF AGRICULTURE

FIRST SEMESTER EXAMINATION FOR DIPLOMA IN AGRICULTURAL
EDUCATION AND EXTENSION

KCU 0111: INTRODUCTION TO AGRICULTURAL ECONOMICS

Date: 8/12/2015

Time: 8:30 – 10:30 AM

INSTRUCTIONS:

Answer question 1 and two other questions.

QUESTION ONE

- a) Define Agricultural economics. (3 Marks)
- b) Explain five factors that influence demand of agricultural products. (5 Marks)
- c) Explain the characteristics of agricultural products that make their marketing unique. (5 Marks)
- d) Identify the types of production functions. (8 Marks)
- e) Explain the following concepts as applied in agricultural economics:
 - i) Marginal rate of technical substitution. (3 Marks)
 - ii) Marginal rate of product transformation. (3 Marks)
 - iii) Law of diminishing marginal returns. (3 marks)

QUESTION TWO

Illustrate and explain the three stages of production function using the relevant curves.

(20 Marks)

QUESTION THREE

- a) Explain three functions of agricultural marketing. (10 Marks)
- b) Highlight the importance of efficient marketing of agricultural products. (10 Marks)

QUESTION FOUR

a) Explain of relationships which may exist between outputs competing for limited resources.

(8 Marks)

b) Mr. Bett wishes you to advise him on how to allocate his 10 hectare farm between maize and cotton enterprises. Algebraically, determine the level to production for the two enterprises given that 1 bag of maize sells at KShs. 2000 and 1 Kilogram of cotton sells at KShs. 1500 in order to maximize his returns.

(12 Marks)

Maize (Bags)	Cotton (Kg.)	MRPT Maize, Cotton
100	60	
110	56	
120	50	
130	41	
140	12	

QUESTION FIVE

Production at Juma’s farm shows the following relationship between the number of workers and the Quantity of output of maize cob per shelled per day (kg). He leases the farm at a cost of KShs 50 per day (this is his only fixed cost). He hires a worker at KShs 80 per day (this is his only variable cost).

Quantity of Variable input (labour)	Quantity of output from farm (Maize-Kg.)	Fixed cost (KShs)	Variable cost (KShs)	Total cost (KShs)	Average total cost (KShs)	Marginal cost
0	0					
1	100					
2	180					
3	240					
4	280					

a) Complete the table.

(15 marks)

b) Given the competitive price of KShs 40 per Kg. of Maize, what is the profit maximizing quantity of output?

(5 Marks)