



MACHAKOS UNIVERSITY COLLEGE

(A Constituent College of Kenyatta University)

University Examinations 2015/2016

SCHOOL OF AGRICULTURE AND NATURAL RESOURCES MANAGEMENT

DEPARTMENT OF AGRIBUSINESS

FIRST SEMESTER EXAMINATION FOR DEGREE IN BACHELOR OF SCIENCE
AGRICULTURAL EDUCATION AND EXTENSION

KBT 213: FARM BUSINESS MANAGEMENT

Date: 22/04/2016

Time: 2.00-4.00 PM

INSTRUCTIONS

This paper consists of FIVE questions

Answer question one and other two questions in this paper

QUESTION ONE

- a) Discuss the goals of farm management (3 marks)
- b) Explain the importance of keeping farm records (4 marks)
- c) Define the following terms:
 - i. Risk (2 marks)
 - ii. Uncertainty (2 marks)
- d) Using examples briefly explain the following terms/concepts as used in farm management
 - (i) Marginal physical product (MPP) (2 marks)
 - (ii) Opportunity cost (2 marks)
 - (iii) Linear programming (2 marks)
 - (iv) Principle of equi-marginal returns (2 marks)
- e) Briefly explain the use of a partial budget in a farm (4 marks)
- f) Discuss factors considered in planning a farm layout (4 marks)
- g) Describe the steps involved in farm planning process (3 marks)

QUESTION TWO

The following information relates the quantity of maize output (Y) to quantity of fertilizer, a variable input (X):

Required:

- a) Complete the table below (6 marks)

Quantity of fertilizer (X)	Quantity of maize (Y)	Marginal Physical Product (MPP)	Average Physical product (APP)
2	20		
4	46		
6	76		
8	108		
10	140		
12	170		
14	198		
16	220		
18	234		
20	240		
22	236		

- b) Sketch (NOT TO SCALE) a graph relating the output (Y), inputs (X), MPP and APP (8 marks)
- c) Mark and explain the regions representing stages of production explaining the most profitable region of production (6 marks)

QUESTION THREE

A farmer would like to change from growing “Kales” to “Onions”. One (1) hectare of onion yields 50 bags of 90 Kg each. The price of Onions is Kshs. 3500 per 90 Kg bag. The total variable costs of producing 1 hectare of onions is Kshs. 65,000

One hectare of Kales yields 35 bags of 90 Kg each. The price of kale is Kshs. 1600 per bag. The total variable cost of producing kale is Kshs. 36,000 per hectare.

Required:

Using Partial Budget Planning technique, indicate the effects of the change and advise the farmers whether it is profitable to effect the changes. Illustrate all necessary steps and assumptions. (20 marks)

QUESTION FOUR

- a) John, a farm manager in Kitui is confronted with a situation which requires keen decision making. He has approached you, as the Divisional farm management expert for advice. Clearly describe the steps that John must follow in the decision making process (5 marks)
- b) A farmer has approached you to assist him in conducting program planning in his farm. List the information that you would need for the exercise. (5 marks)
- c) The following information relates to Hola farm for the year ended December 2015.

Item	Value (Kshs)
Maize sales	50,000
Wheat sales	45,000
Potatoes sales	27,500
Fertilizer costs	17,500
Seed costs	7,500
Machine hire	10,000
Machinery depreciation	2,030
Labour costs	8,000
Livestock feed cost	13,000
Interest on debt	1,500
Insurance	1,350

Required

- (i) Compute the Gross margin for Hola farm for the year 2015 (5 marks)
- (ii) Compute the Net farm income for Hola farm for the year 2015 (5 marks)

QUESTION FIVE:

- a) Differentiate between the following terms as used in decision making:
- i. Maximax theory and Minimax theory (4 marks)
 - ii. Optimism index and Minimum Variance (4 marks)
- b) Given the information in the table below. Calculate the expected values under the each state of nature and make a decision on the best enterprise the La place Game theory. (12 marks)

	0.33	0.33	0.33
Enterprise			
A	10	20	25
B	8	15	45