



(Knowledge for Development)

19

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS

2016/2017 ACADEMIC YEAR

SECOND YEAR SECOND SEMESTER

SPECIAL/SUPPLEMENTARY EXAMINATION

FOR THE DEGREE OF B.Sc. IN AGRICULTURAL ECONOMICS AND
RESOURCES MANAGEMENT

COURSE CODE: IAE 289

COURSE TITLE: FARM BUSINESS MANAGEMENT I (PRINCIPLES)

DATE: 25TH SEPT. 2017

TIME: 3 PM – 5 PM

INSTRUCTIONS TO CANDIDATES

Answer ALL questions in section A and any TWO in section B.

TIME: 2 Hours

This paper consists of 4 printed pages. Please turn over. ▶

SECTION A (30 MARKS)

Answer **ALL** the questions from this section.

1. (a) Distinguish between the following terminologies used in Farm Management:
 - (ii) “**Break Even Budget**” and “**Partial Budget**” (2 marks)
 - (iii) “**Net Farm Income**” and “**Gross Margin**” (2 marks)
- (b) List the disadvantages of Linear Programming. (4 marks)
- (c) Suppose you have been hired as a manager for Kibabii Bora Farm Limited. You notice that the milk yields of the farm’s animals are suboptimal. Explain how you would systematically attempt to reverse the situation. (3 marks)
2. (a) Cite any **five** reasons to refute the statement “Farm planning is an exercise in vain”. (5 marks)
- (b) Explain any **four** measures used by farmers to counteract risk and uncertainty with which they are confronted. (4 marks)
3. (a) Describe the managerial function of **Control**. (3 marks)
- (b) List **four** questions whose solutions are sought in Partial Budgeting. (2 marks)
- (c) Discuss the factors that affect the effectiveness and efficiency of agribusiness managers. (5 marks)

SECTION B (40 MARKS)

Answer **ANY TWO** questions from this section.

4. As a dairy section manager, you wish to raise the mean annual milk yield of each cow from 2,460 litres to 3,000 litres. The present feeding system is based on natural grazing with bought concentrate feeds. You believe that by supplementing this with high-quality maize silage, average annual yield will rise to 3,000 litres.

You have been given the following information:

- | | |
|---|---|
| (i) Herd size: | 75 cows |
| (ii) Mean annual yield: | 2,460 per cow |
| (iii) Milk price: | Kes 35 per litre basic (8% SNF) |
| (iv) Quality premium | Kes 0.306 /litre for each percent rise in SNF over 8% |
| (v) Present solids-not-fat: | 8.5% |
| (vi) Expected solids-not-fat with Silage: | 10.5% |

- (vii) Silage needed: 18 kg/cow/day for 301 days each year
- (viii) Silage yield: 16.8 tonnes per ha
- (ix) Silage variable costs: Kes 17,340/ha
- (x) Concentrates fed 5.4 kg/cow/day at Kes 10,506 per tonne
- (xi) Labour needed to feed silage: 2 workers at kes 35,496
- (xii) Dairy Manager's Salary Kes 255,000 p.a
- (xiii) Crop Manager's salary Kes 318,750 p.a

(xiv) New capital equipment needed

Item	Capital Cost (Kes)	Straight line depreciation (Kes) p.a.	Annual repairs and maintenance (Kes)
Forage Chopper	459,000	3,060	43,860
Trailer	204,000	1,530	20,400
Silo	63,750	510	

Based on the above information, determine whether it is financially feasible to introduce maize silage into the daily ration. (20 marks)

5. (a) Given the following information, use the conventional programme planning technique to calculate the theoretical optimum crop combination. (12 marks)

- (i). Objective — to maximize whole farm gross margin
- (ii). Resource availability and constraints:

Annual cropping area 12 ha

Tobacco quota 7,500 kg

Expected tobacco yield 1,500kg/ha

Maximum variable costs (VC) Kes 236,250

(iii). Feasible crops and gross margins—

Enterprise	VC/ha	GM/ha
Tobacco	34,125	34,125
Groundnuts	8,400	4,200
Maize	13,125	5,250

(b) Determine the optimum theoretical crop combination for Question 5 (a) above if the limit of variable costs is raised to Kes 288,750 (8 marks)

6. The information below was obtained from a 5 acre farm with 2 acres under maize, 1.4 acres wheat, 1 acre beans and 0.6 acres dairy.

<i>Enterprise</i>	<i>Gross output Kes/Acre</i>	<i>Variable costs/Acre Kes</i>
Maize	10,000	7,000
Wheat	15,000	7,000
Beans	5000	3,000
Dairy	25,000	12,000

(a) Calculate the gross margin per acre for each enterprise. (12 marks)

(b) Compute the whole farm gross margin. (2 marks)

(c) Explain how farmers can use gross margin analysis to make rational decisions. (6 marks)