(*Knowledge for Development*)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS
2021/2022 ACADEMIC YEAR

SECOND YEAR 2ND SEMESTER
SPECIAL/SUPPLEMENTARY EXAMINATION

FOR THE DEGREE OF BACHELOR OF SCIENCE AGRICULTURE ECONOMICS AND RESOURCE MANAGEMENT

COURSE CODE: **AEC 228/IAE 289**
COURSE TITLE: FARM BUSINESS MANAGEMENT 1(PRINCIPLES)

DATE: 29TH JULY 2022 **TIME: 2 – 4 PM**

INSTRUCTIONS TO CANDIDATES

Answer Question ONE and any other TWO Questions.

TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over

1. a) Distinguish between the following terminologies used in farm management:
   i) Break-even budget and cash flow budget (2 marks)
   ii) Net farm income and gross margin (2 marks)
   iii) Marginal rate of technical substitution (MRTS) and marginal rate of product substitution (2 marks)
   iv) Compounding and discounting (2 marks)

   b) What are the shortcomings of using simplex method as a planning tool?

   (4 marks)

   (c)Describe the managerial function of planning (4 marks)
   (d) Outline the procedure followed in preparing complete budget for the farm.
   (6 marks)
   (e) Outline the main sources of risks in farm business. (4 marks)

   (f) Cite five reasons to refute the statement " Farm planning is an exercise in vain" (4 marks)

2. (a) Explain the standard assumptions of linear programming models (5 marks)
   (b) Discuss the factors that affect farmers' managerial abilities (15 marks)

3. 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.

Enterprise	**Gross output Kes/Acre**	**Variable costs/Acre Kes**
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)

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:	18kg/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	5.4kg/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)