

CHUKA



UNIVERSITY

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**EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF
AGRICULTURAL ECONOMICS AND BACHELOR AGRIBUSINESS
MANAGEMENT**

AGEC 343: FARM MANAGEMENT

STREAMS: AGECE, AGBM

TIME: 2 HOURS

DAY/DATE: MONDAY 14/04/2025

2.30 P.M. – 4.30 P.M.

INSTRUCTIONS

- (i) **Answer all questions in section A and any other three questions in section B.**
- (ii) **Do not write on the question paper**
- (iii) **Write legibly and cite relevant examples where applicable**

SECTION A (25 marks)

Question One

- a) Explain four risk facing farm business and corresponding approaches of dealing risk **(8 marks)**
- b) Discuss the functions managers play in a farm. **(6 Marks)**
- c) A dairy farmer is contemplating whether to engage in veal production i.e. fatten his bull calves and sell at Kshs. 33,280 (160 Kg. live weight @ Kshs. 208) or sell the new born calve at Kshs. 1600 and the milk for Kshs. 15/Kg. To attain the required weight the calve will have consumed 1800 Kg. of milk. Other costs include labour and housing costs which are estimated at Kshs. 3,200.
Required: Use this information to advise the farmer on the merits or demerits of veal production. **(6 marks)**
- d) Discuss the factors considered when planning for a farm layout **(5 Marks)**

SECTION B (45 marks)**Question Two**

Swazuri Dairy Company manufactures two brands of Milk, Fresh Milk and Yoghurt. Fresh Milk has a contribution of Sh.4 per unit and Yoghurt has a contribution of Sh.3 per unit. Fresh Milk requires 30 machine minutes and 30 labor minutes to manufacture a unit. Yoghurt requires 20 machines minutes and 30 labour units to manufacture a unit. Total available machine hours per day are 12hrs whereas total available labour hours per day are 14hrs.

- i. Formulate linear programming model. **(7 Marks)**
- ii. How much of each brand should Swazuri Dairy Company produce if it wishes to maximize its daily contribution assuming that all the brands produced is sold

(8 Marks)**Question Three**

a) A farmer has ten acres of land, 4 acres has been planted with tea. Of the remaining 6 acres, at least one half must be resting at any one time. This year, the farmer intends open 3 acres for sunflower. With previous sunflower crops he had hired casual labour at the rate of 10 man per day per acre at shillings 100 per man-day. He is considering replacing casual labour with a hired tractor doing the work at shillings 2200/-per acre. The farmer anticipates that by working the tractor, there will be an increase in average sunflower yield from 7000 kgs to 8000 kgs per acre due to better cultivation and timely planting. The sunflower would fetch Kshs. 50 per kg, harvesting costs are 100/- per 1000kg of sunflower seeds.

Required: Prepare a partial budget and advise the farmer whether the change is worthwhile or not.

(10 Marks)

- b) Discuss the major sources of farm management data. **(5 Marks)**

Question Four

- a) Describe five steps followed in collection of data in the farm **(10 marks)**
- b) Discuss the Marginal Rate of Substitution and how it applies in the three stages of production **(5 marks)**

Question Five

- a) Discuss the management factors to be considered when analysing the performance of a farm business. **(8 Marks)**

- b) A farmer who produces mutton and wool is contemplating to change to wheat production. The average cost of wheat production is Kshs. 32,800 per ha. The price of wheat is Kshs. 2200 per 90 kg bag. At what yield will the farmer begin making a profit? **(7 Marks)**

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