



The Co-operative University of Kenya
END OF SEMESTER EXAMINATION SEPTEMBER-2022
EXAMINATION FOR THE DEGREE OF AGRIBUSINESS MANAGEMENT
(YR III SEM II)
UNIT CODE: BAFS 4130
UNIT TITLE: FARM MANAGEMENT TECHNOLOGY

DATE: 1ST SEPTEMBER, 2022

TIME: 9:00 AM – 11:00 AM

INSTRUCTIONS:

- Answer question **ONE (compulsory)** and any other **TWO** questions

QUESTION ONE

- (a) The farm manager role is seen as both problem solving and decision making activity. Are these two activities related? Discuss **(5 marks)**
- (b) The table below illustrates the maize yield response to varying amounts of N fertilizer. The price of maize per unit is KES 17. Compute **(10 marks)**
- APP and MPP
 - TR, AR, and MR

Maize yield response to N fertilizer

| Fertilizer (Kg) | Maize yield |
|------------------------|--------------------|
| 0 | 0 |
| 1 | 10 |
| 2 | 23 |
| 3 | 38 |
| 4 | 54 |
| 5 | 70 |
| 6 | 85 |
| 7 | 99 |
| 8 | 110 |
| 9 | 117 |
| 10 | 120 |
| 11 | 118 |

- (c) A farm plan may mean any contemplated change in the method or practice followed in farm operation or it may mean the complete re-organization of the farm. Describe the factors to consider when planning your farm activities **(10 marks)**
- (d) Discuss the Steps involved in farm planning process **(5 marks)**

QUESTION TWO

A farmer has ten acres of land, 4 acres of which is planted to a permanent crop (coffee). Of the remaining 6 acres, at least one half must be resting at any one time. This year, he intends opening 3 acres for sunflower. With previous sunflower crops he has tried casual labour at the rate of 40 man-days per acre at shillings 20 per man-day. He is considering replacing casual labour with a hired tractor doing the work at shillings 1100/-per acre. The farmer anticipates that by working the tractor 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. 0.5 per kg harvesting costs are 100/- per 1000kg of sunflower seeds.

Required:

- (a) Prepare a partial budget and advise the farmer whether the change is worth while or not. **(10 marks)**
- (b) Discuss any **FIVE** assumptions of linear programming **(10 marks)**

QUESTION THREE

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:

- (a) Use this information to advise the farmer on the merits or demerits of veal production **(10 marks)**
- (b) Distinguish between a complete budget and partial budget **(6 marks)**
- (c) Explain the objectives of farm management accounts **(4 marks)**

QUESTION FOUR

- (a) Program planning has an advantage over budgeting in that a near optimal plans reached. Explain the information needed for effective program planning **(10 marks)**
- (b) Discuss the goals of farm management **(5 marks)**
- (c) Explain factors to consider in good farm layout **(5 marks)**

QUESTION FIVE

- (a) Briefly describe sources of risks and uncertainties in farm business and explain how it can be controlled **(6 marks)**
- (b) Explain the application of the following concepts in farm management technology **(4 marks)**
- i. Average physical product
 - ii. Marginal physical product
 - iii. Farm Rotation
 - iv. Farm layout
- (c) Discuss the data needed for an existing farm **(10 marks)**