MACHAKOS UNIVERSITY

University Examinations for 2024/2025 Academic Year

SCHOOL OF AGRICULTURE, ENVIRONMENT AND HEALTH SCIENCES

DEPARTMENT OF AGRICULTURAL SCIENCES

THIRD YEAR FIRST SEMESTER EXAMINATION FOR
BACHELOR OF SCIENCE IN AGRIBUSINESS MANAGEMENT AND TRADE
FOURTH YEAR FIRST SEMESTER EXAMINATION
BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION AND EXTENSION

AGB 310: FARM BUSINESS MANAGEMENT

DATE: **TIME:**

INSTRUCTIONS: Answer question ONE and any other TWO questions.

QUESTION ONE (30 MARKS)

a) Explain two approaches a farm manager uses to make decisions with incomplete information (4 marks)
b) Outline four reasons of applying partial budgeting (4 marks)
c) Explain three benefits of conducting capital budgeting on a farm (6 marks)
d) Describe four functions of management and how they are applied in farm management (8 marks)
e) Apply the decision-making process to evaluate how a farm manager can tackle a sudden decline in farm productivity (8 marks)

QUESTION TWO (20 MARKS)

a) Describe five main tools that are useful in strategic planning of a farm (10 marks)

b) Suppose a farm manager seeks advice on two viable enterprises for investment, projects A & B, with the following cash flows:

Year (t)	Expected net cash flows (CF_t)	
	Project A	**Project B**
0 (investment)	(KES 100,000)	(KES 100,000)
1	50,000	10,000
2	40,000	30,000
3	30,000	40,000
4	10,000	60,000

i) Assuming a 10% cost of capital, calculate the NPV and advise the farm manager on which project to undertake and why (8 marks)

ii) Explain two limitations of NPV technique of investment appraisal (2 marks)

QUESTION THREE (20 MARKS)

a) Using a hypothetical scenario, prepare a simple enterprise budget for a specific crop (10 marks)

b) Assume that an agricultural extension office is promoting the commercialization of improved dairy goats in Machakos County. Describe five types of farm records should the extension officer recommend that farmers maintain for effective dairy goat farming (10 marks)

QUESTION FOUR (20 MARKS)

a) Describe five principles of management and how they can be applied in effective management of a farm (10 marks)

b) A farmer is considering transitioning from rain-fed tomato production to irrigated tomato farming. To make this switch, the farmer will need to invest in irrigation equipment costing KES 130,000, hire skilled labor at KES 40,000, pay for annual insurance at KES 15,000, buy fertilizer at KES 20,000 and agrochemicals costing KES 20,000. Currently, the rain-fed tomato production yields 3 tonnes per acre, while the expected yield for irrigated tomato is 5 tonnes per acre. For rain-fed tomatoes, the costs for inputs include KES 8,000 for fertilizer, KES 30,000 for labor and KES 25,000 for agrochemicals. The selling price of tomatoes is KES 50 per kilogram and farmers has a total of 2 acres of land.

i. Evaluate the current option of rain-fed tomato production, against irrigated tomato cultivation (4 marks)
ii. Calculate the benefit-cost ratio (2 marks)
iii. Advice the farmer accordingly (2 marks)
iv. Explain two limitations of partial budgeting (2 marks)

QUESTION FIVE (20 MARKS)

a) Identify key risks affecting the performance of a farm, highlighting strategies on how to mitigate them (10 marks)

a) The data below is for the Karagi Farm business for the year ending in December 2023.

Livestock	4,000,000
Grain pool	1,000,000
Bank Loans	4,500,000
Milk sales on credit	450,000
Machinery	500,000
Cash in bank	2,000,000
Egg sales on credit	400,000
Overdraft	200,000
Wages	115,000
Building	4,000,000
Taxes Payable	65,000
Livestock Feeds	250,000
Stock Mortgage	2,500,000
Machinery repair	150,000
Loan Interests	55,000
Land	4,000,000
Vehicle	3,000,000

Use the data provided above to:

i. Prepare the balance sheet (5 marks)
ii. Calculate the net worth of the farm (2 marks)
iii. Evaluate the equity of the farm and advise the farm (3 marks)