



**KISII UNIVERSITY**  
**UNIVERSITY EXAMINATIONS**

**THIRD YEAR EXAMINATION FOR THE AWARD OF THE DEGREE OF**  
**BACHELOR OF SCIENCE IN AGRICULTURAL ECONOMICS AND BACHELOR**  
**OF SCIENCE IN AGRIBUSINESS MANAGEMENT**

**FIRST SEMESTER 2022/2023**  
**(SEPTEMBER - DECEMBER, 2022)**

**AGEC 343: PRINCIPLES OF FARM MANAGEMENT**

**STREAM: Y3 S1**

**TIME: 2 HOURS**

**DAY: WEDNESDAY, 12:00 P.M – 2:00 P.M**

**DATE: 21/12/2022**

***INSTRUCTIONS:***

- 1. Do not write anything on this question paper.***
- 2. Answer Question ALL questions in section A Compulsory) and any other TWO Questions in section B.***
- 3. You are allowed to use a calculator***

**SECTION A (30 Marks)**

A farm manager has diversified her business by putting up a bakery to supply the local market. The demands vary between the large loaves and the small loaves. The large loaf brings a contribution of Ksh.5 per loaf and the small loaf brings a contribution of ksh.3 per loaf. The demand for the large loaf is not more than 280 loaves and the demand for the small loaf is not more than 400 loaves. The shelf space is limited and the large loaf requires 1% space and the small loaf requires 0.8% space. The total available shelf space is four. Baking time is also limited and the large loaf requires 0.025 minutes and the small loaf requires 0.0125 minutes to bake. The total available baking time is 8 minutes.

**Required:**

Use simplex to solve the above resource allocation problem.

## **SECTION B (40 MARKS)**

### **QUESTION TWO (20 MARKS)**

An investor is trying to evaluate four investments proposed A, B, C and D. he requires 15% rate of return. The expected annual case flows are given as follows

Year	A	B	C	D
1	2000	5800	10000	4000
2	4000	5800	8000	6000
3	6000	5800	6000	10000
4	8000	5800	3000	12000
5	10000	58000	1000	5000

NB all investments require initial investment of Ksh. 20000.

#### **Required**

- i. Use NPV method to evaluate and rank the projects
- ii. Advice the investor

### **QUESTION THREE (20 MARKS)**

A farm management officer decided to purchase undeveloped land and start running his own farm business. He had found a farmer who was ready to sell one acre of land for Ksh.70,000. The farmer offered two alternative ways to pay for the land:

1. Ksh 70,000 immediately upon purchasing the land
2. Ksh 25,000 right away, Ksh 20,000 after one year, and Ksh 12,000 each at the end of the second, third and fourth year.

Which is the better way for the buyer, assuming that his alternative interest rate is 17%

### **QUESTION FOUR (20 MARKS)**

A company negotiates a sh. 30 million loan for ten years from a financial institution. The interest rate is 15% per annum on the outstanding balance of the loan. The principal and interest will be repaid in ten equal years end installments.

#### **Required**

Prepare a loan repayment schedule