

CHUKA



UNIVERSITY

**UNIVERSITY EXAMINATIONS**

**EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF  
AGRICULTURAL ECONOMICS**

**AGEC 416: AGRICULTURAL ECONOMICS II**

**STREAMS: AGEC**

**TIME: 2 HOURS**

**DAY/DATE: MONDAY 16/12/2024**

**8.30 A.M – 10.30 A.M.**

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**INSTRUCTIONS**

- Answer ALL questions in SECTION A and any THREE in SECTION B.
- Do not write on the question paper.

**SECTION A: ALL QUESTIONS ARE COMPULSORY (25 MARKS)**

- a) Discuss the following;
- Complementary and Supplementary. (2 Marks)
  - Capital budgeting and farm budgeting (2 Marks)
  - Capitalization and time value of money (2 Marks)
- b) A farmer sprays his cotton with pesticide but does not use fertilizer. He discovers that fertilizer use will properly increase his yield by 400kg/ha. However, the fertilizer would cost Ksh. 2000/ha. To get the required response, he would add soluble boron to his pesticide spray mixture at a cost of Ksh. 300/ha. In addition, the higher yield will raise the cost of harvesting by Ksh. 400/ha. The cotton price is given as Ksh. 20/kg, would you advise the farmer to apply fertilizer? (10 Marks)
- c) List four assumptions of production function (4 Marks)

- d) List four needs for farm planning (4 Marks)
- e) Define a production function (1 Mark)

**SECTION B: ANSWER ANY THREE QUESTIONS (45 MARKS)**

**QUESTION TWO (15 MARKS)**

- a) Identify and explain five sources of data for a researcher conducting out research on a farm. (10 Marks)
- b) Discuss four remedies to risk and uncertainty (5 Marks)

**QUESTION THREE (15 MARKS)**

- a) Explain four types of product-product relationships (8 Marks)
- b) A farmer expects to receive Kshs 250,000 annuities from investment for 4 years, each receipt occurring at the end of the year. What is the present value of the stream of benefits if the discount rate is 11.5%? (5 Marks)
- c) Discuss three ways that the production function can be expressed (2 Marks)

**QUESTION FOUR (15 MARKS)**

- a) Discuss five factors to consider when planning your farm (10 Marks)
- b) Farm data can be categorized into various groups. Provide a brief discussion. (5 Marks)

**QUESTION FIVE (15 MARKS)**

- a) Mr. Wanjohi a farmer in Molo produces wheat and pyrethrum. He is contemplating changing from the two crops to maize production. The price of maize is Kshs. 2,400 per bag and the variable costs amountto Kshs. 29,000 per ha. He estimates his fixed cost to be approximately Kshs. 26,500 per ha. At what yield must he produce to begin making a profit? Explain your answer. (8 Marks)
- b) Discuss five types of production functions. (7 Marks)

