

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

**EXAMINATION FOR THE AWARD OF DEGREE OF
MASTER OF SCIENCE IN AGRONOMY**

AGRI 850: ANNUAL CROP MANAGEMENT

STREAMS: MSC (AGRO)

TIME: 3 HOURS

DAY/DATE: TUESDAY 14/04/2020

8.30 AM – 11.30 AM

INSTRUCTIONS:

- **Answer ALL questions in section I and any Two questions in Section II**
- **Use of calculators is allowed**
- **Do not write anything on the question paper**

SECTION 1 (20 MARKS): ANSWER ALL THE QUESTIONS

QUESTION ONE (20 MARKS)

- (a) Discuss four factors limiting annual crop production, citing their remedy. [8 marks]
- (b) Design a four phased crop simulation model. [12 marks]

SECTION II (40 MARKS): ANSWER ANY TWO QUESTIONS

QUESTION TWO (20 MARKS)

Discuss how you can increase starch content and yield in a given annual crop. [20 marks]

QUESTION THREE (20 MARKS)

- (a) Explain the importance of simulation models in annual crop management. [8 marks]
- (b) Discuss the effect of growth of annual crops and their possible management strategies. [12 marks]

QUESTION FOUR (20 MARKS)

- (a) With examples, justify how you can improve the yield potential and stability of annual crops. [12 marks]
- (b) Explain the balanced growth hypothesis in relation to beans (*Phaseolus vulgaris*) productivity under different growth conditions. [8 marks]
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