



UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

PROGRAMME: BACHELOR OF SCIENCE IN AGRONOMY YEAR IV

COURSE CODE: CP 405

TITLE OF PAPER: CEREALS/GRAIN LEGUME CROP PRODUCTION

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS: ANSWER ALL QUESTIONS IN SECTION A AND ANY THREE QUESTIONS IN SECTION B

DO NOT OPEN THIS PAPER UNTIL PERMISSION HAS BEEN GRANTED BY THE CHIEF INVIGILATOR

SECTION A (COMPULSORY)

QUESTION 1

- (a) Discuss the importance of cereals in Africa including the most important constraint to cultivation of this group of annual crops. (10 marks).
- (b) Discuss the importance of grain legumes in Africa including the most important constraint of cultivating this group of crops. (10 marks)

QUESTION 2

Mr. Bhembe is a well known farmer in the highlands. He always grows maize and a couple of other crops. Last season his pure stand maize plot had a lot of gaps, some of the plants were very short and others tall but all chlorotic and grain yields were eventually abysmally low. Explain all possible scenarios that happened on this farm last year. (20 marks)

SECTION B (ANSWER ANY THREE QUESTIONS FROM THIS SECTION)

QUESTION 3

- (a) Discuss the factors to consider when spacing maize in the field. (10 marks)
- (b) What are the major constraints to maize cultivation in Africa and how can these be reduced? (10 marks)

QUESTION 4

- (a) The maize + beans intercropping system is common in the tropics. Discuss the factors that influence the performance of this mixture. (15 marks)
- (b) Describe the MBILI system in detail. (5 marks)

QUESTION 5

- (a) Groundnuts develop their fruits (pods) underground. What does this unique growth habit mean in terms of management of groundnuts? (10 marks)
- (b) What are the major constraints to cultivation of common beans in Africa? (10 marks)

QUESTION 6

- (a) Give the optimum ecological requirements for maize production. (10 marks)
- (b) Give the optimum ecological requirements for the production of groundnuts. (10 marks)

QUESTION 7

- (a) Give the factors that influence planting depth in cereals and grain legumes. (10 marks)
- (b) Why are narrow rows sometimes advisable in production of soybeans? (5 marks)
- (c) What is the single most important factor that limits yield of cowpea in Africa? (5 marks)