



1ST SEMESTER 2008/2009

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UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

PROGRAMME: BACHELOR OF SCIENCE IN AGRONOMY YEAR 4

COURSE CODE: CP 401

TITLE OF PAPER: CEREAL CROP PRODUCTION

TIME ALLOWED: TWO (2) HOURS

**INSTRUCTION: ANSWER A TOTAL OF FOUR [4] QUESTIONS. ALL
QUESTIONS CARRY EQUAL MARKS.**

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

INSTRUCTIONS: ANSWER ANY FOUR [4] QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

QUESTION 1

- a. Explain what the term, 'cereal crop', means. (3 marks)
- b. Using specific examples, write an essay on the group of plants called 'grasses', and explain why cereal crops are grasses. (15 marks)
- c. Relative to other crop plants, of what importance are cereals in the world's economy? (7 marks)

[25 marks]

QUESTION 2

- a. What is a glume? (3 marks)
- b. Draw a large diagram of the spikelet of a rice plant and label the parts. (7 marks)
- c. Explain in detail the mechanism of opening of a rice spikelet. (15 marks)

[25 marks]

QUESTION 3

You have just been hired as an agronomist for the Lowveld Paddy Rice Company.

- a. Explain in detail two types of nursery that you would make for paddy rice, pointing out details of when you would start the nursery and when you would plant out the paddy rice in the field. (10 marks)
- b. Explain when and how you would prepare the field for planting following the nursery establishment. (10 marks)
- c. Describe how the following are carried out:
 - i. Parboiling (2.5 marks)
 - ii. Milling (2.5 marks)

[25 marks]

INSTRUCTIONS: ANSWER ANY FOUR [4] QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

QUESTION 4

- a. Explain why maize is not a recommended crop for the Lowveld of Swaziland. (5 marks)
 - b. Which cereal crop would you recommend for planting in the typical Lowveld of Swaziland? Explain the agronomic practices involved in the production of this crop. (15 marks)
 - c. Name two diseases of this crop. (2 marks).
 - d. How is each of the diseases controlled? (2 marks).
 - e. Name one industrial use of this crop. (1 mark)
- [25 marks]**

QUESTION 5

- a. Discuss the ecological requirements of the most important cereal crop in Swaziland (5 marks)
 - b. Discuss the major agronomic practices used in the production of the crop discussed in 5(a) above. (10 marks)
 - c. Discuss two major production challenges of the small-scale farmer who produces the cereal crop discussed in Question 5(a) and 5(b) above. (5 marks)
 - d. Name two pests of this crop. (2 marks).
 - e. How is each of the pests controlled? (2 marks).
 - f. Name one industrial use of this crop. (1 mark)
- [25 marks]**