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**2<sup>ND</sup> SEM. 2004/2005**

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**UNIVERSITY OF SWAZILAND**

**FINAL EXAMINATION PAPER**

**PROGRAMME:** **BACHELOR OF SCIENCE IN CROP SCIENCE  
(AGRICULTURAL EDUCATION, AGRICULTURAL  
ECONOMICS AND MANAGEMENT, CROP  
PRODUCTION AND LAND AND WATER  
MANAGEMENT OPTIONS) YEAR V**

**COURSE CODE:** **CP 507 /**

**TITLE OF PAPER :** **FIELD CROPS**

**TIME ALLOWED :** **TWO [2] HOURS**

**INSTRUCTIONS :** **ANSWER QUESTION ONE (1), WHICH IS A  
COMPULSORY QUESTION AND ANY OTHER  
THREE (3) QUESTIONS**

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

**INSTRUCTIONS : ANSWER QUESTION ONE (1) WHICH IS COMPULSORY, AND ANY OTHER THREE (3) QUESTIONS**

**QUESTION 1**

In some agro-ecological zones of Swaziland, there is a problem of insufficient precipitation (rainfall). Using a specific agro-ecological zone, discuss how this problem might affect the emergence, development and yield of sorghum. In your discussion, refer to the likely effects of the stage of the plant with respect to the water stress problem.

**(40 marks)**

**QUESTION 2**

Choose a legume crop and discuss how its production can be increased in Swaziland or in your country, if other than Swaziland.

**(20 marks)**

**QUESTION 3**

Write brief notes on the following:-

- (a) Plant competition (5 marks)
- (b) Sink-source relationship (5 marks)
- (c) Leaf area (LA) and leaf area index (LAI) (5 marks)
- (d) Rice seedling production (5 marks)

**(20 marks)**

**QUESTION 4**

Cotton is a very important industrial crop in Swaziland. Discuss how its management and production affect the growth, development and yield of the crop.

**(20 marks)**

**QUESTION 5**

What role has plant breeding played in meeting the ever increasing world population food demand?

**(20 marks)**