



2nd SEM 2011/2012

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**UNIVERSITY OF SWAZILAND
FINAL EXAMINATION PAPER**

PROGRAMME: B.Sc. IN AGRICULTURAL ECONOMICS AND
AGRIBUSINESS MANAGEMENT 4, B.Sc. IN LAND AND
WATER MANAGEMNT 4, B.Sc. IN AGRICULTURAL AND
BOISYSTEMS ENGINEERING AND B.Sc. IN
AGRICULTURAL EDUCATION.

COURSE CODE: CP 402

TITLE OF PAPER: FIELD CROPS

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS: ANSWER ANY FOUR (4) QUESTIONS.

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CHIEF INVIGILATOR**

QUESTION 1

Give a brief explanation of the following:

- (a) Relationship between respiration and photosynthesis
- (b) Seed viability
- (c) Pollination
- (d) Vernalisation
- (e) Photoperiodism

(25 marks)

QUESTION 2

- (a) Sorghum plants have an ability to yield even under severe drought conditions. Discuss.
(10 marks)
- (b) Sorghum yield in Swaziland is relatively lower than that of maize despite the fact that it is more drought tolerant than maize. Discuss at-least three aspects of research that needs to be investigated to improve the total yield of sorghum crop.
(10 marks)
- (c) Name at-least three pests that may attack sorghum at a seed and young crop stage.
(5 marks)

QUESTION 3

- (a) Farmers in the Highveld of Swaziland are unable to preserve planting material due to frosty winters. Give a detailed explanation on how these farmers can go about preserving their planting material during the winter season.
(20 marks)
- (b) How is sweet potato propagated and why?
(5 marks)

QUESTION 4

- (a) Name the two types of groundnuts based on their growth habit (describe each type) and choose one type that you would recommend for a smallholder farmer who wish to produce “butter” and explain why you chose that type.

(15 marks)

- (b) Give at-least five (5) reasons why recent studies indicate fluctuations and downward trend in groundnuts production in Africa.

(10 marks)

QUESTION 5

Discuss the five (5) climatic requirements for sugarcane production and explain why the sugar-belt is located on the eastern part of Swaziland.

(25 marks)