



2nd SEMESTER 2017/2018

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UNIVERSITY OF SWAZILAND

SUPPLEMENTARY EXAMINATION PAPER

PROGRAMME: BACHELOR OF SCIENCE IN AGRONOMY YEAR 4

COURSE CODE: CP 405

TITLE OF PAPER: CEREALS/GRAIN LEGUME CROPS PRODUCTION

TIME ALLOWED: TWO (2) HOURS

INSTRUCTION: ANSWER ALL QUESTIONS

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QUESTION 1

(a) Figure 1 shows the results of the effects of trellis height on dry mass yield of dry beans. Discuss and explain the yield trend of DM in Figure 1.

(20 Marks)

(b) At what trellis height would you expect the highest and the poorest seed quality and seedling vigour and why?

(5 Marks)

[25 marks]



(6 Marks)

QUESTION 2

(a) What is starter nitrogen fertiliser?

(3 Marks)

(b) Why do farmers generally not apply nitrogen to their groundnut crops?

(2 Marks)

(c) With the aid of a large and a well-labeled diagram, describe the nodulation process in soybeans.

(20 Marks)

[25 Marks]

QUESTION 3

Distinguish between the following pairs of words/terms. Use examples and/or diagrams to illustrate your answers where possible.

(a) Nodules and nematodes

(5 marks)

(b) Flint and dent maize varieties.

(5 marks).

(c) Effective and non-effective tillers in rice.

(5 marks)

(d) Dry beans and French beans.

(5 marks)

(e) Hybrid maize and open pollinated maize

(5 Marks)

[25 Marks]

QUESTION 4

(a) Explain why intercropping maize with groundnuts, using the additive model, is not recommended. (15 Marks)

(b) What intercropping system would you recommend to a smallholder farmer with a land holding of 0.25 ha who wishes to meet his/her maize and groundnut requirements?

(3 Marks)

(c) Give reasons for your answer.

(7 Marks)

[25 Marks]