



2ND SEM. 2014/2015

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UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

**PROGRAMME: BACHELOR OF SCIENCE IN HORTICULTURE YEAR
IV**

COURSE CODE: HORT 406

TITLE OF PAPER: SEED SCIENCE AND TECHNOLOGY

TIME ALLOWED: TWO [2] HOURS

INSTRUCTION: ANSWER ANY FOUR (4) QUESTIONS

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

INSTRUCTION: ANSWER ANY FOUR (4) QUESTIONS**QUESTION 1**

- a) Describe the factors affecting the germination of seed. (10 marks)
- b) With the aid of diagrams, distinguish between the germination of maize (*Zea mays* L) and lettuce (*Lactuca sativa* L.) seed. (15 marks)

[25 marks]**QUESTION 2**

- a) Define seed science and technology (6 marks)
- b) Describe the influence of the following factors in floral reproduction:
- i) Effect of light (3 marks)
 - ii) Effect of temperature (3 marks)
 - iii) Effect of photoperiod (6 marks)
 - iv) Water supply (3 marks)
 - v) Nutritional status (2 marks)
 - vi) Planting date (2 marks)

[25 marks]**QUESTION 3**

Write notes on the following:

- a) Seed marketing (12 marks)
- b) Seed legislation (13 marks)

[25 marks]**QUESTION 4**

Describe the following environmental effects on seed production:

- a) Temperature (8 marks)
- b) Soil moisture (6 marks)
- c) Mineral nutrition (8 marks)
- d) Photoperiod (3 marks)

[25 marks]

QUESTION 5

Discuss the significance of proper agronomic practices in quality seed production following these guidelines:

- a) Soil preparation (8 marks)
- b) Time of planting (6 marks)
- c) Row width and seeding depth (6 marks)
- d) Plant population (5 marks)

[25 marks]