



2ND SEM. 2017/2018

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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

INSTRUCTIONS: ANSWER ANY FOUR (4) QUESTIONS

DO NOT OPEN UNTIL PERMISSION HAS BEEN GRANTED BY THE INVIGILATOR

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QUESTION 1

- a) Outline the branches of seed technology. (9 marks)
- b) Describe the function of the ‘‘Union for the Protection of New Varieties of Plants’’ (UPOV) (5 marks)
- c) Describe the purpose of ‘‘Regional Seed Associations’’? (7 marks)
- d) Define ‘‘plant breeding’’ as it undergirds seed science and technology. (4 marks)

[25 MARKS]

QUESTION 2

- a) Describe the significance of plant breeding in food security. (10 marks)
- b) Provide some definitions of plant biotechnology. (15 marks)

[25 MARKS]

QUESTION 3

- a) Describe the basic principle of the quality declared seed scheme (QDS)? (10 marks)
- b) Provide examples of potential seed sources/suppliers operating in developing countries. (5 marks)
- c) What is the International Seed Testing Association (ISTA)? (10 marks)

[25 MARKS]

QUESTION 4

Describe the quality field standards for okra (*Abelmoschus esculentus* L) seeds following these guidelines:

- a) Isolation. (12 marks)
- b) Varietal purity. (6 marks)
- c) Weeds and diseases. (7 marks)

[25 MARKS]

QUESTION 5

Discuss the management of seed tomato (*Lycopersicon esculentum* L) as follows:

- a) Weed, pest and disease management. (10 marks)
- b) Nutrient and irrigation management. (15 marks)

[25 MARKS]