



2nd SEMESTER 2015/2016

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UNIVERSITY OF SWAZILAND

MAIN EXAMINATION PAPER

PROGRAMME: BACHELOR OF SCIENCE IN AGRONOMY YEAR ONE

COURSE CODE: CPR 102

TITLE OF PAPER: INTRODUCTION TO AGRONOMY

TIME ALLOWED: TWO (2) HOURS

INSTRUCTION: ANSWER QUESTIONS 1 AND 2, WHICH ARE
COMPULSORY AND ANY OTHER TWO QUESTIONS OF
YOUR CHOICE

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BY THE CHIEF INVIGILATOR**

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QUESTION 1
(THIS IS A COMPULSORY QUESTION)

(a) Explain the term "Climate Change" and discuss its effects on humans and livestock.
(14 Marks)

(b) A farmer has been advised to apply 75 kg/a of nitrogen and 37.6 kg/ha of phosphorus to his maize crop. The farmer has applied the recommended amount of phosphorus using a compound fertiliser 2-3-2 (22). How many kg of urea will the farmer apply to obtain the balance of the 75 kg/ha of nitrogen that he was advised to apply? Show your calculations.

(14 Marks)
[28 Marks]

QUESTION 2
(THIS IS ALSO A COMPULSORY QUESTION)

Explain the following statement. Give examples to illustrate your answers, where necessary. Each question carries four marks.

- (a) Ideal characteristics of an agroforestry tree.
- (b) Seed viability tests.
- (c) Ideal characteristics of green manure crops.
- (d) Crop classification.
- (e) Methods of determining leaf area in crop plants.
- (f) Methods of applying fertilisers to crops
- (g) Organic fertilizers.

[28 Marks]

QUESTION 3

Discuss the term "Cropping Systems" Use examples with diagrammes to illustrate your answer

[22 Marks]

QUESTION 4

Distinguish between the following terms. Use examples and/or diagrams to illustrate your answers.

- (a) Top dressing of fertiliser and side dressing of fertiliser (3 Marks)
- (b) Complete and incomplete organic fertilisers (4 Marks)
- (c) Determinate and indeterminate growth habit. (3 Marks)
- (d) Sink and source. (4 Marks)
- (e) Hypocotyl and epicotyl in beans seedlings. (4 Marks)
- (f) Additive and replacement series in cropping systems. (4 Marks)

[22 Marks]

QUESTION 5

Discuss the advantages and the disadvantages of organic manures.

[22 Marks]