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2ND SEM. 2004/2005

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UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

PROGRAMME: BACHELOR OF SCIENCE IN AGRICULTURE
YEAR 5 (CROP PRODUCTION AND
HORTICULTURE OPTIONS)

COURSE CODE: CP 505 ✓

TITLE OF PAPER: SOIL MANAGEMENT

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS: ANSWER QUESTION ONE (1), WHICH IS A
COMPULSORY QUESTION, AND ANY OTHER
~~TWO~~ (2) QUESTIONS OF YOUR CHOICE

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BY THE CHIEF INVIGILATOR**

QUESTION 1: (COMPULSORY)

- (a) "Pineapple plants destroy the soil". Highlight the basis for this contention [5]
 - (b) Discuss the major causes of poor yields when crops are grown in soils previously under pineapple production. [20]
 - (c) Highlight any management strategies you would recommend to improve crop yields in such soils [15]
- [40]**

QUESTION 2

- (a) Distinguish between "Upland Rice" and "Lowland Rice" Production systems. [5]
 - (b) Comment on the reasons for the popularity of the Lowland Rice Production system even though it is known to be labour intensive. [10]
 - (c) Discuss the chemical and physical changes in soil properties which normally occur during land preparation for lowland rice production. [15]
- [30]**

QUESTION 3

- (a) What is the essential difference between a "saline soil" and a "sodic soil" [5]
- (b) Describe the causes of soil salinity in agricultural lands. [10]

(c) Discuss the management of saline soils for increased crop yields [15]

[30]

QUESTION 4

a) Identify and write short notes on the two major types of ecosystems of the Tropics [10]

b) Discuss how the effects of fire on soil and vegetation are influenced by the following parameters:

i) The kind of fire [15]

ii) The frequency of fire [5]

[30]