UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

PROGRAMME:　　　BACHELOR OF SCIENCE IN AGRONOMY YEAR 4

COURSE CODE:　　CP 406

TITLE OF PAPER:　WEED MANAGEMENT

TIME ALLOWED:　　TWO (2) HOURS

INSTRUCTIONS:　　ANSWER QUESTION 1 AND ANY OTHER THREE
　　　　　　　　　　QUESTIONS, MAKING A TOTAL OF FOUR [4]
　　　　　　　　　　QUESTIONS. ALL QUESTIONS CARRY EQUAL
　　　　　　　　　　MARKS.

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BY THE INVIGILATOR.**

ANSWER QUESTION 1 AND ANY OTHER THREE QUESTIONS, MAKING A TOTAL OF FOUR [4] QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

ID. #: _____   Programme: _____

QUESTION 1

Luyengo Farmers' Association wishes to purchase a plot measuring 100 m x 100 m, to grow a crop of maize; the advertised price of the plot is E50,000. You have been hired by the Association to assess the weed management problems in the plot and advise.

a. Briefly, explain how you would assess the weed infestation.   (10 marks)

b. You have compiled your information, and have the weed species shown below. Fill in the blank spaces in column 3. (5 marks)

Serial number	Scientific name of weed	Family of weed	Relative abundance of each species (%)
Spot 1	*Richardia brasiliensis*		7.0
	Cyperus esculentus		12.0
	Cynodon dactylon		10.0
	Commelina benghalensis		6.0
	Bidens pilosa		60.0
	Commelina benghalensis		5.0
Spot 2	*Bidens pilosa*		25.0
	Cyperus esculentus		65.0
	Euphorbia heterophylla		10.0
Spot 3	*Sida acuta*		15.0
	Richardia brasiliensis		4.0
	Paspalum jamaicense		30.0
	Panicum maxium		45.0
	Amaranthus hybridus L.	6.0	

(c). In the answer booklet, list the final relative abundance of the weed species and recommend to the Association what to do, regarding the potential weed problems and the price of the land. (10 marks)

PULL OUT AND SUBMIT THIS PAGE WITH YOUR ANSWER BOOKLET.

[Total = 25 marks]

ANSWER QUESTION 1 AND ANY OTHER THREE QUESTIONS, MAKING A TOTAL OF FOUR [4] QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

QUESTION 2

(a). Discuss five methods of weed management.   (20 marks)

(b). For each method discussed above, name one advantage and one disadvantage of using it.   (5 marks)

[Total = 25 marks]

QUESTION 3

(a). What is allelopathy?   (3 marks)

(b). Give two examples of allelopathy?   (2 marks)

(c). Discuss the application of allelopathy in weed management.   (15 marks)

(d). Why has so little research been done on allelopathy?   (5 marks)

[Total = 25 marks]

QUESTION 4

(a). What do you understand by an "invasive weed species"?   (5 marks)

(b). Give the common English name and the scientific name of five weeds that are regarded as invasive weed species in Swaziland.   (5 marks)

(c). Describe the most common and the most devastating invasive weed species in Swaziland   (5 marks)

(d). Explain the harm caused by the weed species described in Question 4 (c) above does.   (5 marks)

(e). Make a brief critique of the attempts made in Swaziland to control the weed species described in Question 4 (c) above.   (5 marks)

[Total = 25 marks]

ANSWER QUESTION 1 AND ANY OTHER THREE QUESTIONS, MAKING A TOTAL OF FOUR [4] QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

QUESTION 5

Answer the questions below sequentially, as arranged below. There will be a penalty for non-sequential arrangement of answers.

Explain the meaning, and give one example of each of the following:

a. Parasitic weed   (4 marks + 1 mark = 5 marks)

b. Aquatic weed   (4 marks + 1 mark = 5 marks)

c. Perennial weed   (4 marks + 1 mark = 5 marks)

d. Annual weed   (4 marks + 1 mark = 5 marks)

e. Environmental weed   (4 marks + 1 mark = 5 marks)

[Total = 25 marks]