



139

UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

PROGRAMME: BACHELOR OF SCIENCE IN AGRONOMY YEAR FOUR

COURSE CODE: CP 408

TITLE OF PAPER: WEED MANAGEMENT

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS: THE PAPER HAS TWO PARTS. ANSWER ONE QUESTION IN PART ONE AND THREE QUESTIONS IN PART 2

DO NOT OPEN THIS PAPER UNTIL PERMISSION HAS BEEN GRANTED BY THE CHIEF INVIGILATOR

140

PART 1: ANSWER ONE QUESTION ONLY

## QUESTION 1

Consider a bean field where beans are growing alongside several weed species. The beans are quite competitive with the weeds. The farmer that is growing these beans has noticed some nitrogen deficiency symptoms on the bean crop. The farmer decides to broadcast apply some nitrogen fertilizer to the field. How might this fertilizer application affect the interaction between the bean crop and the weeds?

(25 Marks)

## QUESTION 2

Assume a landowner has asked you for help to deal with a leafy spurge infestation on approximately 6,000 hectares of land. Leafy spurge is a perennial species with creeping rhizomes that also reproduces by seed. What control options might you investigate to determine their suitability for management of this weed infestation?

(25 Marks)

PART 2: ANSWER THREE QUESTIONS ONLY

## QUESTION 3

Crop-weed associations arise from a number of factors. Discuss.

(25 Marks)

## QUESTION 4

Accurate weed identification is essential to selecting the appropriate control technique. Identify and discuss various ways weeds are identified.

(25 Marks)

## QUESTION 5

- a) What is the difference between herbicide-resistant crops and herbicide-resistant weeds. (5 Marks)
- b) Describe each of five (5) merits and demerits of herbicide resistant crops. (10 Marks)
- c) Describe five (5) useful management strategies for herbicide-resistant weeds (10 Marks)

(Total, 25 Marks)



140

QUESTION 6

Improved knowledge and improved management of herbicides is considered critical for uptake of chemical weed control. Clearly identify and discuss those aspects of (a) knowledge and (b) management pertinent for increased use of herbicides.

(25 Marks)