

CHUKA



UNIVERSITY

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**EXAMINATION FOR THE AWARD OF DEGREE OF
BACHELOR OF SCIENCE IN AGRONOMY, BACHELOR OF SCIENCE IN
HORTICULTURE**

AGRI 837: WEED SCIENCE

STREAMS: MSC (AGRO/ HORT/CROP PROT) P/T

TIME: 3 HOURS

DAY/DATE: TUESDAY 14/04/2020

2.30 PM – 5.30 PM

INSTRUCTIONS:

ANSWER ALL QUESTIONS IN SECTION A AND ANY OTHER TWO IN SECTION B

SECTION A 20 MARKS: ANSWER ALL QUESTIONS

1. (a) Explain briefly the need for farmers to understand the basics of herbicide behavior in the soil. [3 marks]
- (b) Describe the fate of herbicides that have been applied to plants. [5 marks]
2. (a) Explain briefly why farmers can be advised to practice “spot herbicide applications in weed management. [2 marks]
- (b) Outline the relevance of herbicide persistence on weed control. [4 marks]
- (c) Herbicide leaching affects the effectiveness of weed control. Explain briefly factors affecting herbicide leaching. [6 marks]

SECTION B (40 MARKS)

3. (a) Herbicide adsorption determines the amount of weed control following application. Discuss the factors affecting herbicide absorption. [12 marks]
- (b) Invasive weeds like water hyacinth are not native to their environment. Describe their effects when they are introduced in an ecosystem. [4 marks]

4. (a) Early preplant herbicides are applied in advance of planting. Discuss their application in weed management. [10 marks]
- (b) Describe how weeds contribute to yield reduction. [6 marks]
- (c) Biological weed control is a viable and readily available alternative to pesticides. Describe the limitations to adoption of biological weed control for intensively management areas. [4 marks]
5. (a) Enhancing crop competition is a weed control tool. Discuss the practices that create conditions favourable for crop competition. [10 marks]
- (b) Explain briefly how weeds affect harvesting efficiency and the quality of harvested crop. [6 marks]
- (c) Explain the strategies that can be adopted by farmers to prevent introduction, establishment, and / or spread of a specified weeds species into an area not currently infested with that species. [4 marks]
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