MASENO UNIVERSITY

UNIVERSITY EXAMINATIONS 2016/2017

THIRD YEAR SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN AGRONOMY, HORTICULTURE, AGRICULTURAL EDUCATION AND EXTENSION AND BACHELOR OF EDUCATION WITH INFORMATION TECHNOLOGY

MAIN CAMPUS

AAG 305: WEED SCIENCE

Date: 14th June, 2017   Time: 8.30 - 11.30am

INSTRUCTIONS:
- Answer ALL Questions in section A and any THREE in section B.

SECTION A (40 Marks)

1. a. Define a weed. (1 mark).
   b. What are the three (3) major characteristics of weeds? (3 marks).
   c. Outline the three (3) main broad terms under which weeds are generally classified. (3 marks).
   d. Briefly describe the reproductive strategy of perennial weeds. (3 marks).
   e. Differentiate between mode of action and mechanism of action of herbicides (2 marks)

2. a. What are the three (6) features of a good annual weed? (3 marks).
   b. Briefly discuss the relationship between weed density and nitrogen availability as they affect crop-weed competition in cultivated crops (3 marks).
   c. Discuss briefly six (6) factors affecting crop-weed competition. (3 marks).
   d. How does allellopathy positively affect weed-crop mixture? (1 mark).

3. a. Outline five (5) harmful effects of weeds. (3 marks).
   b. Outline six (6) adverse effects of using tillage as a weed control strategy? (3 marks).
   b. Graphically illustrate the relationship between weed density and yield loss in onion production. (2 marks).

4. What are the advantages of systemic compared to contact herbicides? (4 marks).

5. Briefly discuss Substituted Urea Herbicide Family indicating method of application, mode of activity, crop use and the environmental concerns if any? (6 marks).

SECTION B (30 Marks): Answer ANY THREE questions from this section

6. a. Discuss the advantages and disadvantages of chemical weed control in horticultural crops. (10 marks).
   b. Briefly discuss how selectivity is achieved in herbicide activity. (5 marks).
   c. Briefly discuss good practices in the use of herbicides for the control of weeds. (5 marks).

7. Discuss how conservation agriculture can help reduce weed problems and conserve environment in tomato production. (20 marks).

8. Discuss the advantages and disadvantages of using biological control agents to manage aquatic weeds. (20 marks).

9. Discuss the strategies for integrated management of weeds in Soybean and Garlic. (20 marks)