



# MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

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## University Examinations 2012/2013

SECOND YEAR, FIRST SEMSTER, EXAMINATIONS FOR DEGREE OF  
BACHELOR OF SCIENCE IN HORTICULTURE

### AHS 2203: WEED SCIENCE

**DATE: AUGUST 2013**

**TIME: 1½ HOURS**

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**INSTRUCTIONS:** Answer questions *one* and any other *two* questions

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#### QUESTION ONE – (30 MARKS)

- a) Define the following terms:
- i. Weed science ( 2 Marks)
  - ii. Allelopathy ( 2 Marks)
  - iii. Selective herbicide ( 2 Marks)
- b) Using graphs explain the differences between critical weed-free requirement and critical timing of weed removal ( 6 Marks)
- c) Weeds reduce the quality of harvested crop. Explain ( 3 Marks)
- d) (i) Differentiate eradication from weed management of methods of weed control ( 4 marks)
- (ii) Explain how use of smoother cops helps in controlling weeds in the farm (3 Marks)
- e) Explain the three ways by which mixing of herbicides before application can affect the herbicide efficiency ( 6 Marks)
- f) Differentiate sympoastic and apoplatic translocation ( 2 Marks)

**QUESTION TWO ( 20 MARKS)**

- a) (i) Using a diagram, explain how an apoplastic herbicide applied on a leaf of a plant affects a weed plant ( 3 Marks)
- (ii) Differentiate tolerance from susceptibility used in weed control ( 4 Marks)
  
- b) Plant morphological factors affects herbicides selectivity. Explain ( 13 Marks)

**QUESTION THREE ( 20 MARKS)**

- a) Explain the behavior of herbicides once applied on the plants. ( 10 Marks)
- b) State and explain the various methods used for classifying weeds ( 10 marks)

**QUESTION FOUR ( 20 MARKS)**

- (a) (i) Biological method of weed control is recommended in the world. Explain the various biological methods of weed control. ( 10 Marks)
- (ii) State any five disadvantages of biological weed control ( 5 Marks)
- b. Write short notes on contact herbicide ( 5 Marks)

**QUESTION FIVE ( 20 MARKS)**

- a) State any five modes of action of herbicides ( 5 Marks)
- b) Physical factors influences the contact between the herbicide and the plant surfaces. Give a detailed description of the above. ( 10 Marks)
- c) Water management can be used as a method of weed control. State any three methods of water management used for weed control. ( 3 Marks)
- d) State any two ways used for classifying weeds according to human values ( 2 Marks)