



# MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

P.O. Box 972-60200 – Meru-Kenya.

Tel: 020-2069349, 061-2309217. 064-30320 Cell phone: +254 712524293, +254 789151411

Fax: 064-30321

Website: www.must.ac.ke Email: info@must.ac.ke

---

## University Examinations 2012/2013

FIRST YEAR, FIRST SEMESTER, EXAMINATION FOR CERTIFICATE/DIPLOMA IN  
AGRICULTURE

### AGR 0122: ANNUAL CROPS

DATE: AUGUST 2013

TIME: 1 ½ HOURS

---

INSTRUCTIONS: Answer question *ONE* and any other *TWO* questions

---

#### QUESTION ONE (30 MARKS)

- a) What are the importances of crops classification? (4 Marks)
- b) Explain the difference between annuals, biennials and perennial crops. (6 Marks)
- c) Describe the economic importance of weeds in crop production. (5 Marks)
- d) What do you understand by:
  - i. Tillering
  - ii. Rationing
  - iii. Silking
  - iv. Biocidal crops
  - v. Variety (5 Marks)
- e) Explain the characteristic behaviour and control measures of witchweed (*striga* spp). (5 Marks)
- f) Highlight five pests of economic important in maize production. (5 Marks)

#### QUESTION TWO (15 MARKS)

- a) Explain the ecological requirements of the following crops;
  - i. Wheat (*Triticum aestivum*)
  - ii. Bulrush millet (*pennisetum gluacum*)
  - iii. Dry beans (*Phaseoulus vulgaris*) (12 Marks)
- b) Highlight three (3) common diseases of tobacco (*Nicotiana tabacum*). (3 Marks)

**QUESTION THREE (15 MARKS)**

- a) Explain four types of culture that are used in Rice (*Oryza sativa* L.) production. (8 Marks)
- b) Explain why water moisture is critical in annual crops during the flowering and earing. (7 Marks)

**QUESTION FOUR (15 MARKS)**

- a) Given the planting spacing of a crop, the seed rate and the germination percentage, explain how you would calculate the crop population or plant density. (10 Marks)
- b) Describe the control measures of head and ear smuts (*Ustilago* spp). (5 Marks)

**QUESTION FIVE (15 MARKS)**

- a) Despite the high yielding hybrid seeds in cereals, farmers don't realise the full potentials of these crops. Why? (10 Marks)
- b) What is the relationship of early planting to nitrogen flush? (5 Marks)