



# MACHAKOS UNIVERSITY

University Examinations for 2019/2020 Academic Year

SCHOOL OF AGRICULTURAL SCIENCES

DEPARTMENT OF AGRICULTURAL EDUCATION AND EXTENSION

FOURTH YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION AND EXTENSION

**AGR 400: PASTURE AND FODDER PRODUCTION AND MANAGEMENT**

DATE: 5/12/2019

TIME: 8.30-10.30 AM

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## **INSTRUCTIONS:**

Answer *ALL* questions from Section A and any other *TWO* from Section B

### **SECTION A: COMPULSORY: (30 MARKS)**

#### **QUESTION ONE (30 MARKS)**

- a) Distinguish between the following terms
  - i) Fodder and pasture (2 marks)
  - ii) Paddocking and fencing (2 marks)
  - iii) Strip sowing and spot sowing (2 marks)
- b) Explain three measures a farmer can undertake in conserving soil and water in pasture production  
(3 marks)
- c) Explain four methods a farmer can use to treat seeds as a means of enhancing plant establishment and vigour  
(2 marks)
- d) Explain three practices of managing stem rust in oats (3 marks)
- e) Explain four limitations of planting ryegrass as a livestock feed (2 marks)
- f) Farmer are advocated to include fodder and pasture in their farms but this has not been successful as farmers prefer cash crops. Explain four reasons why this has been the case (4 marks)
- g) Describe three methods you would recommend a farmer to adopt in establishing Napier grass (3 marks)

- h) Describe two difference between silverleaf and greenleaf Desmodium (4 marks)
- i) With one example each of a pasture, name three toxicities affecting quality of these pastures (3 marks)

**SECTION B: Answer any TWO Questions (40 Marks)**

**QUESTION TWO (20 MARKS)**

- a) A farmer in Mumbuni is planning to establish a pasture /legume in his farm. He came to you for advise on how best to manage his crop for high productivity. Explain five suggestions to the farmer on what he needs to do to ensure proper fodder management (15 marks)
- b) Explain five advantages of cut-and-carry systems in Kenya white clover (5 marks)

**QUESTION THREE (20 MARKS)**

- a) Describe the establishment and management of the Bufallo grass under the following headings
- i. Planting
  - ii. Weeding
  - iii. Fertility
  - iv. Strengths (12 marks)
- b) Discuss the establishment and management of the Desmodium under the following headings
- i. Ecological conditions
  - ii. Compatibility with pasture/fodder
  - iii. Harvesting
  - iv. Limitations (8 marks)

**QUESTION FOUR (20 MARKS)**

- a) Describe the establishment and management of Rhodes grass under the following headings
- i. Planting
  - ii. Weeding
  - iii. Fertilization
  - iv. Harvesting (12 marks)
- b) Explain four management practices a farmer can use in managing pests in fodder cereals, give one example in each method (8 marks)

**QUESTION FIVE (20 MARKS)**

- a) Describe the procedures for preparing silage using grass as an example (14 marks)
- b) Explain three limitations of using lablab as a livestock feed (6 marks)