



# MACHAKOS UNIVERSITY

University Examinations for 2018/2019 Academic Year

SCHOOL OF AGRICULTURAL SCIENCES

DEPARTMENT OF AGRICULTURAL EDUCATION AND EXTENSION

..... YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR  
BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION AND EXTENSION

**AGR 400: PASTURES AND FODDER CROPS PRODUCTION**

**DATE:**

**TIME:**

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**INSTRUCTIONS:**

Answer question one and two other questions

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

- a) Explain the following terms
- i) Browse (2 marks)
  - ii) Herbage (2 marks)
- b) Differentiate the following terms
- i. Rotational and deferred grazing (2 marks)
  - ii. Under sowing and over sowing (2 marks)
  - iii. Ley pasture and permanent pasture (2 marks)
- c) Describe the concept of legume seed inoculation as used in pasture establishment (4 marks)
- d) Explain the advantages of hay over silage (5 marks)
- e) Describe **FIVE** key characteristics that need to be considered while determining the choice of pasture species (5 marks)
- f) Describe the procedure of the ensiling process (6 marks)

**SECTION B: ANSWER ANY TWO QUESTIONS (40 MARKS)**

**QUESTION TWO**

Citing relevant examples, explain the importance of fodder and pasture crops on

- a) Ecological sustainability (10 marks)
- b) Economic development (10 marks)

**QUESTION THREE**

- a) Discuss the **THREE** major types of grazing management systems (10 marks)
- b) Paddocks are effective tools for use in the decision making process in grazing management systems. Discuss (10 marks)

**QUESTION FOUR**

- a) Describe how climatic factors influence the ecology and distribution of natural grasslands (10 marks)
- b) Discuss **FIVE** socio-economic constraints that influence pasture and fodder crop production in Kenya (10 Marks)

**QUESTION FIVE**

Discuss the production of pasture and fodder crops under the following

- a) Seed rate (4 marks)
- b) Weed control (6 marks)
- c) Ph stabilization (4 marks)
- d) Fertilizer application (6 marks)