



MACHAKOS UNIVERSITY

University Examinations for 2016/2017

SCHOOL OF AGRICULTURE AND NATURAL RESOURCES MANAGEMENT

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: 31/7/2017

TIME: 2:00 – 4:00 PM

INSTRUCTION TO CANDIDATES:

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

SECTION A: COMPULSORY: (30 MARKS)

- a) Distinguish between fodder and pasture (2 marks)
- b) Explain four reasons why farmers are advised to plant pastures and legumes for livestock (2 marks)
- c)
 - i) Fodder crops are an important source of feed supplements to livestock. Explain two ways in which a farmer can establish fodder in his/her compound. (4 marks)
 - ii) Explain three reasons why farmers always get discouraged from planting fodder crops in their farms unlike food or cash crops (3 marks)
- d) Explain four limitations and advantages of lucerne (medicago sativa) as a forage crop. (2 marks)
(2 marks)
- e)
 - i) A farmer visited you to seek advice on how to treat his/her pasture/legumes before planting. Explain three methods you will advise the farmer to use (3 marks)

- ii) Describe the steps you will give to the farmer in order to obtain uniform inoculated lablab seeds for planting (4 marks)
- f) Explain five consequences of overgrazing. (5 marks)
- g) Explain the five advantages of Kikuyu grass as a pasture species for the upper highland zones of Kenya. (5 marks)

SECTION B: ANSWER ANY TWO QUESTIONS (40 MARKS)

QUESTION TWO (20 MARKS)

- a) Describe the procedures for preparing silage using grass as an example (14 marks)
- b) Describe three the methods of oversowing legumes in Nandi setaria (6 marks)

QUESTION THREE (20 MARKS)

- a) Discuss the establishment and management of the Elephant grass under the following headings (12 marks)
 - i) planting
 - ii) weeding
 - iii) fertility
 - iv) strengths and limitations
- b) Discuss the establishment and management of the alfalfa under the following headings (8 marks)
 - i) Planting
 - ii) Weeding
 - iii) Harvesting

QUESTION FOUR (20 MARKS)

- a) With specific examples, discuss three methods of harvesting fodder trees and shrubs (9 marks)
- b) With specific examples, explain how a farmer can manage pests and diseases in fodder cereals (11 marks)

QUESTION FIVE (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 Discuss how you would go about it (15 marks)
- b) Explain five advantages of cut-and-carry systems in desmodium and Kenya white clover (5 marks)