LAIKIPIA UNIVERSITY

UNIVERSITY EXAMINATIONS

1ST SEMESTER 2025/2026 ACADEMIC YEAR

FOURTH YEAR EXAMINATIONS FOR BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION AND EXTENSION

AGED 412: PASTURE AND FODDER CROPS

STREAM: (AGED & EXT.) ***TIME:2 HRS***

DAY: TUESDAY (8.30-10.30) ***DATE: 03/02/2026***

THIS QUESTION PAPER CONSISTS OF THREE (3 PAGES)

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INSTRUCTIONS:
QUESTION ONE IS COMPULSORY, SELECT ANY OTHER TWO QUESTIONS

QUESTION ONE

1a) Define the following terms as used in pasture and fodder production:

i. Pasture **(1 mark)**

ii. Fodder crop **(1 mark)**

iii. Forage **(1 mark)**

iv. Topping **(1 mark)**

v. Gapping **(1 mark)**

vi. Rogueing **(1 mark)**

b) State four characteristics of a good pasture species. **(4 marks)**

c) Under three aspects, distinguish between natural and planted pastures. **(6 marks)**

d) Outline four pasture management practices that improve productivity and persistence. **(4 marks)**

e) Describe three methods of fodder conservation giving one advantage of each. **(6 marks)**

f) Discuss two advantages and two disadvantages of growing leguminous fodder crops in livestock production. **(4 marks)**

QUESTION TWO

2.a) Explain five ways in which pasture and fodder crops contribute to livestock production. **(5 marks)**

b) Discuss five soil factors that influence the growth and yield of pasture and fodder crops. **(5 marks)**

c) Explain five roles of nitrogen-fixing plants in pasture improvement and soil fertility management. **(5 marks)**

d) Discuss nappier grass under the following

i. Resistant varieties **(2 marks)**

ii. Selection and preparation of planting materials **(3 marks)**

QUESTION THREE

3a) Describe three methods of establishing a pasture. **(6 marks)**

b) Discuss the rotational grazing systems under the following aspects:

i. Management practices **(2 marks)**

ii. Two advantages **(2 marks)**

iii. Suitability to different production systems **(2 marks)**

c) i. Identify three indicators of pasture deterioration. **(3 marks)**

ii. Discuss the process of ensiling. **(5 marks)**

QUESTION FOUR

4 a) i Explain five economic benefits of conserving fodder in livestock production systems. **(5 marks)**

ii. Name two control measures of fungal diseases. **(2 marks)**

b) Outline the six key steps involved in the establishment of a fodder bank. **(6 marks)**

c) i. Discuss four negative effects of overgrazing on pasture productivity. **(4 marks)**

ii. State three disadvantages of late defoliation. **(3 marks)**

QUESTION FIVE

5a) i. Develop a six-step pasture improvement plan for a smallholder dairy farm. **(6 marks)**

ii. State two legume pastures. **(2 marks)**

b) Propose a research study to investigate the effect of different fertilizer types on fodder yield and quality. Your proposal should include:

i. Title **(1 mark)**

ii. Objective **(1 mark)**

iii. Methodology **(1 mark)**

iv. Data to be collected **(1 mark)**

v. Expected outcomes **(1 mark)**

vi. Practical significance **(1 mark)**

c) i. Identify three innovative technologies or practices that promote sustainable pasture and fodder production. **(3 marks)**

ii. Outline qualities of good silage **(3 marks)**