



MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

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UNIVERSITY EXAMINATIONS 2023/2024

FIRST YEAR SECOND SEMESTER EXAMINATION FOR DIPLOMA IN
AGRICULTURAL EXTENSION

AGR/OS/EXT/CR/03/6: PRODUCE AND FORMULATE LIVESTOCK FEEDS

DATE: APRIL 2023

TIME: 3HOURS

INSTRUCTIONS: Answer Question ONE and any other THREE questions.

QUESTION ONE (40 MARKS)

- a) Explain practices to be employed to improve natural pastures (5 marks)
- b) List five advantages of grass-legume mixture (5 marks)
- c) Differentiate between the following a Ration and digestibility (2 marks)
- d) List five functions of carbohydrates (5 marks)
- e) A ratio containing 18% protein is to be made from maize meal and sunflower cake. Given that maize meal contains 7% crude protein and sunflower cake contains 34% crude protein, determine the quantity of each feed required to come with a 100kg ratio. (5 marks)
- f) State two limitations of proximate analysis (2 marks)
- g) Differentiate between pelleting and rolling (3 marks)
- h) Explain three sources of water to livestock (6 marks)
- i) List four feed ingredients (4marks)
- j) State three reasons for proteins to be included in animal diet (3marks)

QUESTION TWO (20MARKS)

- a) Explain five factors determining the quality of silage (10 marks)
- b) Discuss five factors considered in feed formulation (10 marks)



QUESTION THREE (20MARKS)

- a) Discuss the process of hay making (10 marks)
- b) Explain five roles of carbohydrates (5 marks)
- c) State five functions of water to livestock (5 marks)

QUESTION FOUR (20MARKS)

- a) A farmer in Meru was provided with the following feed ingredients;
Hay 5% crude protein
Maize 10% crude protein
Sunflower cake 35 % crude protein and complete mineral mix with 0 % crude protein
daily ratio containing 16 % crude protein. Assuming that mineral mix and hay constitute 3 % and 20 % of the ratio respectively. Determine the amount of each other ingredients (12 marks)
- b) Discuss four factors affecting water requirements in animals (8 marks)

QUESTION FIVE (20MARKS)

- a) Discuss factors affecting digestibility of feeds (10marks)
- b) Discuss five factors affecting the quality of hay (10marks)

