UNIVERSITY EXAMINATIONS

1ST SEMESTER 2023/2024 ACADEMIC YEAR

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

AGED 316: ANIMAL NUTRITION AND LIVESTOCK FEEDING

STREAM: R   *TIME: 2 HRS*

DAY: THURSDAY (11.30-13.30PM)   DATE: 14/12/23

THIS QUESTION PAPER CONSISTS OF THREE (3 PAGES)

PLEASE DO NOT OPEN UNTIL THE INVIGILATOR SAYS SO.

Vision: *A University for Valued Transformation of Society*   *Page 1 of 3*
Mission: *To serve students and society through research, education, scholarship, training, innovation, outreach and consultancy*

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INSTRUCTIONS: Answer question **ONE** and any other **TWO** questions.

QUESTION ONE (30 MARKS)

a. Explain two importance of animal nutrition in converting livestock production to an enterprise (4 mks)

b. List **two** essential amino acids and two non-essential amino acids (4 mks)

c. Explain two anti-nutritive factors in sorghum grains when feeding chicken (4 mks)

d. Using two points, distinguish between microbial digestion of roughages and concentrates (4 mks)

e. Highlight **FOUR** roles of saliva in sheep nutrition (4 mks)

f. Explain three effects of feeding high amounts of fibre to a pig (3 mks)

g. Highlight three functions of vitamin D (3 mks)

h. Explain four importance of by-pass carbohydrates in ruminant nutrition (4 mks)

QUESTION TWO (20 MARKS)

a) Discuss how animals regulate their feed intake (10 mks)

b) Explain the fate of protein digestion in the reticulorumen (10 mks)

QUESTION THREE (20 MARKS)

a) Discuss how environmental factors affect digestibility in livestock (10 mks)

b) Highlight FOUR reasons why determination of dry matter of a feed is important in animal nutrition and livestock feeding (10 mks)

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QUESTION FOUR (20 MARKS)

a) Discuss five functions of lipids in animal body   (10 mks)

b) Using equation method, determine the amounts of maize (12%CP) and SBM (36% CP)

required in formulating a diet with 13% crude protein   (10 mks)

QUESTION FIVE (20 MARKS)

a) Discuss five feed factors that affect the feed intake in animals   (10 mks)

b) Explain the energy partition of feeds in animal's body   (10 mks)

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