

KISII UNIVERSITY

STREAM ANIMAL SCIENCE YEAR TWO SEMESTER TWO

ANSC 231: ANIMAL NUTRITION : PERIOD: JANUARY-APRIL, 2024

INSTRUCTIONS:

Answer Question One (COMPULSORY) and any two other questions in ANY TWO questions.

Do not operate a mobile phone during Examination time.

1. a) Define the following terms as used in Animal Nutrition (4mks)
 - i. Feedstuff
 - ii. Nutrient
 - iii. Digestion
 - iv. Total mixed Ration (TMR)
 - b) Differentiate between Ruminant and non-ruminant digestion (4mks)
 - c) Highlight the functions of saliva in the process of digestion (4mks)
 - d) Calcium is controlled by two hormones. Explain the functions of the two hormones in calcium metabolism (4mks)
 - e) List 3 Volatile fatty acids and 3 gases released during microbial digestion in ruminants (3mks)
 - f) Explain the importance of water in the body of an animal (5mks)
 - g) State five nutrients in animal nutrition (5mks)
 - h) Explain the main reasons for providing nutrients to animals (5mks)
 - i) With examples outline the functions of the digestive secretions produced in the small intestine (6mks)
2. a)Define Digestibility in animals (1mk)
 - b) Explain the factors that affect digestibility (14mks)
3. a) Explain Four critical factors that should be considered in feed formulation (8mks)
 - b) Prepare a 100kg feed mixture containing 15% CP to be used for feeding dairy cows, using Maize gluten (9% CP) and soybean (54% CP). What quantities of each ingredient will be used to formulate the ration? (Show your work) (7mks)
4. Discuss Digestion under the following headings (15mks)
 - i. Rumination
 - ii. Omasum
 - iii. Abomasum
 - iv. Small intestine
 - v. Large intestine

