

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN ANIMAL SCIENCE

ANSC 231: ANIMAL NUTRITION

STREAMS: BSC ANSC

TIME: 2 HOURS

DAY/DATE: MONDAY 08/04/2024

11.30 A.M – 1.30 P.M.

INSTRUCTIONS:

- **Answer ALL questions in SECTION A and in SECTION B.**

SECTION A (30 MARKS)

QUESTION 1

- (a) Explain why livestock should be offered a balanced diet. (5 marks)
- (b) Highlight the importance of providing quality water to animals. (5 marks)

QUESTION 2

- (a) A cultivar of nappier grass was found to contain 20% DM. If it contains 5% crude proteins (CP), determine
- (i) Its moisture content (2 marks)
- (ii) The amount of CP it supplies to an animal (3 marks)
- (b) Outline five energy deficiency symptoms in livestock. (5 marks)

QUESTION 3

- (a) Enumerate three mechanisms by which nutrients are absorbed within the gastro intestinal tract of animals. (6 marks)

- (b) Protein is important in feeding farm animals and human beings, because it is the nutrient found in highest concentration in organic and muscle tissues. Discuss the advantages of animal origin proteins over plant based proteins. (4 marks)

SECTION B (40 MARKS)

QUESTION 4

- (a) A day old meat type rainbow rooster chick weighs 50g. It is grown for six weeks by which time it will be having a market weight of 1.45 kgs. Feed intake (FI) is as shown in the table below:

Weeks	FI/Bird/Day (g)
1	15
2	25
3	50
4	75
5	100
6	125

Calculate

- (a) FI (2 marks)
 (b) Gain (2 marks)
 (c) GR/ADG (3 marks)
 (d) FCR (3 marks)
- (b) Discuss the factors that affect the efficiency with which consumed animal feeds are converted into products. (10 marks)

QUESTION 5

- (a) Explain the reasons as to why underfeeding livestock is uneconomical to farmers. (10 marks)
- (b) A dorper sheep was offered 600g of elephant grass with a dry matter percentage (DM%) of 22. After consumption, 95g was left over. The faecal output was 336g with a DM% of 18. Calculate the digestibility of the feed. (10 marks)
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