



# MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

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## University Examinations 2024/2025

### FIRST YEAR FIRST SEMESTER EXAMINATION FOR CERTIFICATE IN ANIMAL HEALTH AND PRODUCTION

#### AAP 1102: ANIMAL NUTRITION I

**DATE: JANUARY 2025**

**TIME: 1½ HOURS**

#### INSTRUCTIONS:

*Answer question **ONE** and any other **TWO** questions*

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#### QUESTION ONE (30 MARKS)

(a) Define the following terms

- |                      |           |
|----------------------|-----------|
| (i) Feed additive    | (2 Marks) |
| (ii) Balanced ration | (2 Marks) |
| (iii) Feedstuff      | (2 Marks) |

(b) Explain the digestion process in a non-ruminant (6 Marks)

(c) List two classes of fatty acids (2 Marks)

(d) Explain the difference between a roughage and a concentrate (4 Marks)

(e) State three methods used in feed evaluation (3 Marks)

(f) State the two groups of protein and give the examples in each group (5 Marks)

(g) State four importance of livestock feeding (4 Marks)

## **QUESTION TWO (15 MARKS)**

- (a) State the importance of nutrition in animal health and production (5 Marks)
- (b) Discuss factors affecting voluntary feed intake in animals (10 Marks)

## **QUESTION THREE (15 MARKS)**

- (a) Discuss calcium under the following:
- (i) Sources (3 Marks)
  - (ii) Functions (4 Marks)
  - (iii) Deficiency (2 Marks)
- (b) List six uses of feed additives (6 marks)

## **QUESTION FOUR (15 MARKS)**

- (a) Define in- vivo digestibility (2 Marks)
- (b) A cow consumed 10 kgs of hay, which has 90% DM and excreted 30 % of DM in the faeces, calculate the digestibility of hay in DM (3 Marks)
- (c) Discuss factors affecting digestibility (10 Marks)