



**MERU UNIVERSITY COLLEGE  
OF SCIENCE & TECHNOLOGY**

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University Examinations 2011/2012

SECOND YEAR, SECOND SEMESTER EXAMINATION FOR DIPLOMA IN  
AGRICULTURE

**ANS 0232: ANIMAL BREEDING AND NUTRITION**

**DATE: DECEMBER 2011**

**TIME: 1½ HOURS**

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**INSTRUCTIONS:** Answer question *one* and any other *two* questions

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**QUESTION ONE – (30 MARKS)**

- (a) (i) Define the following terms: (5 Marks)
- Recessive gene
  - Variation
  - Heredity
  - Animal genetics
  - Mutation
- (ii) What is the importance of studying genetics in animal production? (5 Marks)
- (iii) Which factors influence the genetic composition in a population? (5 Marks)
- (b) (i) Define the following terms; (5 Marks)
- Dry matter
  - Feed stuff
  - Feed
  - Nutrient
  - Ration
- (ii) List five compositions of feed. (5 Marks)
- (iii) What are the effects of water deprivation to an animal? (5 Marks)

**QUESTION TWO – (15 MARKS)**

- (a) List the constituents of DNA (5 Marks)
- (b) What is the importance of base-pairing in transcription and protein synthesis? (10 Marks)

**QUESTION THREE – (15 MARKS)**

- (a) Discuss types of chromosomal aberrations (5 Marks)
- (b) What are the causes of mutations? (5 Marks)
- (c) What are the significance of mutations in livestock breeding and productivity? (5 Marks)

**QUESTION FOUR – (15 MARKS)**

- (a) Discuss mating systems used in livestock breeding and their importance. (7 Marks)
- (b) What are the advantages of artificial insemination? (8 Marks)

**QUESTION FIVE – (15 MARKS)**

- (a) Discuss the importance of nutrition in animal production. (8 Marks)
- (b) (i) What are the functions of calcium mineral in the animal body? (4 Marks)
- (ii) List conditions that may arise due to calcium deficiency. (3 Marks)