



# MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

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## University Examinations 2013/2014

SECOND YEAR, SECOND SEMESTER EXAMINATION FOR DIPLOMA IN AGRICULTURE

### ANS 0232 – ANIMAL BREEDING AND NUTRITION

DATE: DECEMBER 2013

TIME: 1  $\frac{1}{2}$  HOURS

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

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#### QUESTION ONE – 30 MARKS

- (a) Differentiate between the following
- (i) Heterozygote and homozygote (2Marks)
  - (ii) Recessive and dominance (2Marks)
  - (iii) Addictive and non addictive gene effects (2Marks)
  - (iv) Metabolism and absorption (2Marks)
  - (v) Essential and non essential amino acids (2Marks)
- (b) What is the importance of genetics in animal production? (5Marks)
- (c) Explain the causes of mutations. (5Marks)
- (d) Discuss the importance of mutations in animal production. (5Marks)
- (e) Define the term nutrients and list the major nutrients required by animals. (5Marks)

#### QUESTION TWO – 15 MARKS

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

### **QUESTION THREE – 15 MARKS**

- (a) Define the following terms: (5Marks)
- (i) Heritability
  - (ii) Alleles
  - (iii) Breeding value
  - (iv) Ration
  - (v) Feed stuff
- (b) Explain the differences between a ruminant and a non ruminant. (5Marks)
- (c) Discuss the importance of meiosis. (5Marks)

### **QUESTION FOUR – 15 MARKS**

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

### **QUESTION FIVE – 15 MARKS**

- (a) Explain the causes of variation in a population. (4Marks)
- (b) List factors that influence genetic composition of a population. (3Marks)
- (c) Determine any four selection methods used in animal breeding. (8Marks)