

**MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**P.O. Box 972-60200 – Meru-Kenya.**

**Tel: 020-2069349, 061-2309217. 064-30320 Cell phone: +254 712524293, +254 789151411**

**Fax: 064-30321**

**Website:** [**www.must.ac.ke**](http://www.must.ac.ke) **Email:** **info@must.ac.ke**

**University Examinations 2014/2015**

SECOND YEAR, SECOND SEMESTER EXAMINATION FOR DIPLOMA IN AGRICULTURE

**ANS 0232: ANIMAL BREEDING AND NUTRITION**

**DATE: APRIL 2015 TIME:** $1½$**HOURS**

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

**QUESTION ONE – (30 MARKS)**

1. Define the following terms; (5 Marks)
2. Recessive gene
3. Animal nutrition
4. Heredity
5. Animal Genetics
6. Mutation
7. What is the importance of studying genetics in animal production? (5 Marks)
8. Outline factors influence the genetic composition in a population? (5 Marks)
9. Name five products of rumen digestion. (5 Marks)
10. Differentiate between the following;
11. Heterozygote and homozygote. (2 Marks)
12. Recessive and dominant genes (2 Marks)
13. Additive and non additive gene effect. (2 Marks)
14. Metabolism and absorption (2 Marks)
15. Essential and non essential amino acids (2 Marks)

**QUESTION TWO (15 MARKS)**

1. Discuss the importance of nutrition in animal production. (6 Marks)
2. Explain what is meant by the term selection. (3 Marks)
3. Explain any three factors which determine the rate at which selection can improve a population. (6 Marks)

**QUESTION THREE (15 MARKS)**

1. Name 2 nutrient deficiencies which are likely causes of retarded growth. (2 Marks)
2. Name four main sources of animal feedstuffs. (4 Marks)
3. Explain what you understand by ‘embryo transfer’ in dairy farming. (5Marks)
4. Explain the differences between fats and oils. (4 Marks)

**QUESTION FOUR (15 MARKS)**

1. Define the term genetic engineering. (1 Mark)
2. Outline any four ways in which genetic engineering has been used (4 Marks)
3. Explain factors that influence an animal’s water requirements. (6 Marks)
4. Give the differences between the following terms; (4 Marks)
5. Avitaminosis and hypervitaminosis
6. Anabolism and catabolism