



# 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.mucst.ac.ke](http://www.mucst.ac.ke) Email: [info@mucst.ac.ke](mailto:info@mucst.ac.ke)

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## University Examinations 2012/2013

SECOND YEAR, SECOND SEMESTER EXAMINATIONS FOR DIPLOMA IN AGRICULTURE

### ANS 0232: ANIMAL BREEDING AND NUTRITION

DATE: APRIL 2013

TIME: 1½ HOURS

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

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#### QUESTION ONE – (30 MARKS)

- a. Define the following terms: (8 Marks)
- Nutrition
  - Mitosis
  - Gene
  - Absorption
- b. Name the parts of a digestive tract of a ruminant. (6 Marks)
- c. Explain the difference between essential and non essential amino acids. Give an example of each and its possible source. (7 Marks)
- d. Give any two differences between fats and oils. (4 Marks)
- e. List five effects of protein deficiency in animals. (5 Marks)

#### QUESTION TWO – 15 MARKS

Explain the difference between:

- Additive and non-additive gene effects (5 Marks)
- Dominant and recessive genes. (5 Marks)
- Homozygous and heterozygous gene pairs. (5 Marks)

#### QUESTION THREE – 15 MARKS

- Explain what is meant by the term selection. (5 Marks)
- Outline any four factors which determine the rate at which selection can improve a population. (5 Marks)
- Name four major selection methods. (5 Marks)

#### QUESTION FOUR – 15 MARKS

- Outline eight factors that explain the importance of livestock farming in Kenya. (6 Marks)
- Several factors influence feed intake levels by animals. Name any four such factors. (4 Marks)
- Define the term inbreeding and outline its disadvantages. (5 Marks)

**QUESTION FIVE – 15 MARKS**

- a. Describe each of the following terms: (6 Marks)
- i. Incomplete dominance
  - ii. Over dominance
  - iii. Co-dominance
  - iv. Pedigree
- b. List any five observable effects of mineral deficiency in farm animals. (5 Marks)
- c. Explain the meaning of the expression “hybrid vigour”. (4 Marks)