MAASAI MARA UNIVERSITY

REGULAR UNIVERSITY EXAMINATIONS
2018/2019 ACADEMIC YEAR
THIRD YEAR SECOND SEMESTER

SCHOOL OF TOURISM AND NATURAL RESOURCE MANAGEMENT
BACHELOR OF SCIENCE IN ANIMAL HEALTH AND PRODUCTION

COURSE CODE: AHP 2104
COURSE TITLE: ANIMAL GENETICS AND BREEDING

DATE: 26TH APRIL, 2019 **TIME: 1430 - 1630 HRS**

INSTRUCTIONS TO CANDIDATES
Answer **ALL** questions

This paper consists of 2 printed pages. Please turn over

ANIMAL BREEDING AND GENETICS [100 Marks]

1. a. Define the below terms commonly used in the context of animal genetics and breeding: (12 marks)
   i. Trait.
   ii. Phenotype.
   iii. Natural selection.
   iv. Domestication.
   v. A gene.
   vi. An allele.

   b. Briefly explain four prerequisites for domestication. (8 Marks)
2. You have been employed as a manager at Ole Tipis Beef Cattle Breeding farm. Briefly explain the set up or key components of an ideal breeding programme. (20 marks)

3. a. Define the term genetic diversity. (2 Marks)
   b. Briefly discuss the forces that influence genetic diversity. (10 Marks)
   c. Briefly discuss how selection can lead to population bottlenecks. (8 Marks)

4. a. Discuss the two main causes of inbreeding. (10 marks)

   b. Briefly explain the significance of maintaining genetic diversity in animal populations. (6 Marks)
   c. List the three main methods of ranking animals for selective breeding. (3 Marks)
   d. Define the term 'Breed'. (1 Mark)

5 a. List five dog breeds. (5 Marks)
   b. Name one cat breed. (1 Mark)
   c. List six cattle breeds. (6 Marks)
   d. List two sheep breeds. (2 Marks)
   e. List two goat breeds. (2 Marks)
   f. List two pig breeds. (2 Marks)
   g. Name one domestic poultry breed. (1 Mark)
   i. Give one horse breed. (1 Mark)

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