



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF AGRICULTURAL AND FOOD SCIENCES

**FOURTH YEAR SECOND SEMESTER UNIVERSITY EXAMINATION FOR THE
DEGREE OF BACHELOR OF SCIENCE ANIMAL SCIENCE AND FOOD
SECURITY**

2019/2020 ACADEMIC YEAR

SPECIAL EXAMS/RESIT

COURSE CODE: AAS 3225

COURSE TITLE: Utilization and Conservation of Animal Genetic Resources

EXAM VENUE:

STREAM: BSc. Animal Science and BSc.Food Security

DATE:

EXAM SESSION:

TIME: 2 HOURS

Instructions:

- 1. Answer ALL the questions in section A and any TWO in section B.**
 - 2. Candidates are advised not to write on question paper.**
 - 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.**
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SECTION A [30 MARKS]

Answer ALL questions from this Section.

Question 1

- a) What are Animal Genetic resources? (2 marks)
- b) Giving examples, explain two basic methods of preserving animal genetic materials (4 marks)
- c).Give three reasons for the loss of Animal genetic resources in developing countries (3 marks)

Question 2

- a) Explain the term conservation of AnGR. (2 marks)
- b) Why is the conservation of AnGR important in a country (4 marks)
- c) Outline the Food and Agriculture Organization's contribution to the sustainable use and conservation of animal genetic resources (AnGR). (4 marks)

Question 3

- a) Explain the terms characterization, inventory and monitoring of trends of AnGR. (3 marks)
- b) Identify four tools used in characterization of AnGR (4 marks)
- c. Which factors should be considered in allocating limited resources for the conservation of a breed at risk of extinction? (4 marks)

SECTION B [40 MARKS]

Answer ANY TWO questions from this Section.

Question 4

- a) Discuss briefly the relationship biodiversity, agrobiodiversity and AnGR. (6 marks)
- b) Outline the current global status of AnGR. (6 marks)
- c) What are the 7 risk categories in the conservation of AnGR? (8 marks)

Question 5

Discuss *in situ* conservation under the following aspects:

- a) Meaning and mode of conservation. (5 marks)
- b) Key operational components. (5 marks)
- c) Advantages and disadvantages. (10 marks)

Question 6

Write short notes on the following in the context of use and conservation of AnGR:

- a) Camel genetic resources of Kenya . (8 marks)
- b) *Ex situ in vivo* conservation. (4 marks)
- c) Determination of risk. (4 marks)
- d) Agrobiodiversity (4 marks)

