



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF AGRICULTURAL AND FOOD SCIENCES**

**SECOND YEAR SECOND SEMESTER UNIVERSITY EXAMINATION FOR THE
DEGREE OF BACHELOR OF SCIENCE ANIMAL SCIENCE AND BACHELOR
SCIENCE IN FOOD SECURITY 2017/2018 ACADEMIC YEAR**

REGULAR

COURSE CODE AAS 3225

**COURSE TITLE: CONSERVATION AND UTILIZATION OF ANIMAL GENETIC
RESOURCES**

EXAM VENUE

STREAM: BSc. (ANIMAL SCIENCE)

DATE

EXAM SESSION

TIME: 2 HOURS

INSTRUCTIONS

- 1. Answer ALL questions in section A and ANY other two questions in section B.**
- 2. Candidates are advised to write on the question paper.**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.**

SECTION A [30 MARKS]

Answer ALL questions in this Section.

Question 1

- a) What is biodiversity? Explain how the term originated. (3 marks)
- b) State 4 ways in which biodiversity impacts life on earth. (4 marks)
- c) State any three outcomes of the 1992 United Nations Conference on Environment and Development (the Earth Summit). (3 marks)

Question 2

- a) Outline the Food and Agriculture Organization's contribution to the sustainable use and conservation of animal genetic resources (AnGR). (4 marks)
- b) What is Agenda 21 in the context of the Earth Summit? (3 marks)
- c) Explain the terms characterization, inventory and monitoring of trends of AnGR. (3 marks)

Question 3

- a) Why is the knowledge of AnGR of a country important? (4 marks)
- b) State the first 4 of the 6 issues (steps) in the conduct of national AnGR inventory. (4 marks)
- c) Explain the term conservation of AnGR. (2 marks)

SECTION B [40 MARKS]

Answer ANY TWO questions from this Section.

Question 4

- a) Discuss the term categorization of status in the context of conservation of AnGR. (20 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. (4 marks)
- b) *Ex situ in vivo* conservation. (4 marks)
- c) Determination of risk. (4 marks)
- d) Agrobiodiversity. (4 marks)

Question7

- 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. (7 marks)