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.**

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)**