



**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**

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**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**

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**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)

