



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**SCHOOL OF AGRICULTURAL AND FOOD SCIENCES**

**THIRD YEAR FIRST SEMESTER UNIVERSITY EXAMINATION FOR THE DEGREE  
OF BACHELOR OF SCIENCE IN ANIMAL SCIENCE**

**2023/2024 ACADEMIC YEAR**

**SIAYA**

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COURSE CODE: AAB 1307

COURSE TITLE: Livestock Production Systems

EXAM VENUE:

STREAM: BSc. Animal Science, Y3, S1

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.**

1. a. Briefly explain the following terms:
  - a. Body Condition Scoring
  - b. Dairy Ranching
  - c. Feedlot
  - d. Climate-smart Agriculture
  - e. Killing out percentage [5 marks]
  
- b. Explain two important drivers of (factors that stimulate) the landless production system of dairy production, giving examples of two areas in Kenya where you are likely to encounter such a system. [6 marks]
  
2. Briefly explain the three “s” representing core objectives of sustainable livestock production systems. [9 marks]
  
3. a. Briefly explain the three major ways in which animals adapt to heat under tropical climate. [6 Marks]
  
- b. Briefly explain the two most important indirect effects on livestock, associated with tropical climate. [4 Marks]

## **SECTION B [40 MARKS]**

**Answer any TWO QUESTIONS from this Section.**

1. a. Discuss the main features of the extensive low-input livestock production system, explaining the advantages and disadvantages of the system. [15 Marks]
- b. Briefly explain one innovative strategy that the Kenya government is implementing to increase the incomes of communities practicing this system [5 Marks]
  
2. Livestock production has been greatly affected by climate change:
  - a. Discuss two important constraints in livestock production that are directly associated with climate change. [10 marks]
  - b. Briefly explain two innovative strategies that can reduce the impact of climate change on livestock production. [10 marks]
  
3. a. Discuss the role of livestock in a crop-livestock system. [10 marks]
- b. Discuss two strategies for reducing greenhouse gas emissions from ruminant livestock production systems. [10 Marks]