



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

**FOURTH YEAR SEMESTER ONE EXAMINATION FOR THE DEGREE OF BACHELOR
OF SCIENCE IN AGRICULTURAL EDUCATION AND EXTENSION AND BACHELOR OF
SCIENCE IN ANIMAL SCIENCE**

2023/2024 ACADEMIC YEAR

COURSE CODE: AAB 1203

COURSE TITLE: ANIMAL PHYSIOLOGY

EXAM VENUE: **STREAM: (BSc. Agricultural Education and Extension
BSc. Animal Science)**

DATE: **EXAM SESSION:**

TIME:

Instructions

- 1. Answer ALL questions in Section A and ANY TWO questions in Section B**
 - 2. Candidates are advised not to write on the 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 in this section

1. State four ways by which animals exchange heat with the surrounding. (4 marks)
2. Explain, with examples, the concept of positive feedback mechanism. (3 marks)
3. What are the functions of the different parts of the neuron? (3 marks)
4. Highlight the importance of taste reception in the animal kingdom. (3 marks)
5. What are the roles sarcoplasmic reticuli, T-tubules, ATP and myosin heads in muscle contraction. (4 marks)
6. State the stimulus for the release of insulin and briefly explain three of its physiological effects. (4 marks)
7. Name five cell types found within lumen of seminiferous tubule. (5 marks)
8. Explain how both oxygen and carbon monoxide are complexed to hemoglobin. (4 marks)

SECTION B [40 MARKS]

Answer ANY TWO questions from this section

10. Discuss physiology of digestion in ruminants under the following headings:
 - a. Fermentative digestion of fiber in rumen. (10 marks)
 - b. Digestion of starch in small intestine. (10 marks)
12. Discuss the physiology of egg formation and egg laying in birds. (20 marks)
13. Discuss the physiology of lactation. (20 marks)
14. Explain mammalian respiratory system under the following headings:
 - a) Functional organization. (8 marks)
 - b) Gaseous exchange between alveolus and blood. (6 marks)
 - c) Role of lungs in acid-base balance. (6 marks)