



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF AGRICULTURAL AND FOOD SCIENCES
UNIVERSITY EXAMINATION FOR DEGREE OF BACHELOR OF SCIENCE IN
AGRICULTURAL EDUCATION AND EXTENSION AND BACHELOR OF SCIENCE IN
ANIMAL SCIENCE
2ND YEAR 1ST SEMESTER 2021/2022 ACADEMIC YEAR
REGULAR

COURSE CODE: AAB1203

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 (compulsory) 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. Distinguish between intracellular fluid and extracellular fluid in terms of ionic composition. (3 marks)
2. Explain, with examples, the concept of negative feedback mechanism. (3 marks)
3. Give 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. Give the roles of T-tubules, calcium, ATP and myosin heads in muscle contraction. (4 marks)
6. Examine the physiological effects of catecholamines. (4 marks)
7. Outline functions of testis and epididymis. (3 marks)
8. Give the name of the complex formed between the following:
 - a. Oxygen and hemoglobin
 - b. Carbon monoxide and hemoglobin
 - c. carbon dioxide and hemoglobinIndicate which of the above complexes is stable. (4 marks)
9. Describe mammary involution. (3 marks)

SECTION B [40 MARKS]

Answer ANY TWO questions from this section

10. Explore 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. Examine the physiology of egg formation and egg laying in birds. (20 marks)
13. Demonstrate an understanding of the structure of various blood cells and give their respective functions. (20 marks)
14. Evaluate 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)