



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 2017/2018 ACADEMIC YEAR
REGULAR

COURSE CODE: AAS 3213

COURSE TITLE: ANIMAL PHYSIOLOGY

EXAM VENUE: LAB 4/5

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

DATE: 20/12/17

EXAM SESSION: 2.00 – 4.00PM

TIME: 2.00 HOURS

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 extracellular fluid and intracellular fluid in terms of ionic composition. (3 marks)
2. Explain, with examples, the concept of negative feedback mechanism. (3 marks)
3. Distinguish between somatic motor nerves and visceral motor nerves. (3 marks)
4. Explain the importance of taste reception in the animal kingdom. (3 marks)
5. Give the role of the following in muscle contraction:
 - a. Calcium (1 mark)
 - b. ATP (1 mark)
 - c. Sarcoplasmic reticuli (1 mark)
 - d. Myofilaments (1 mark)(4 marks)
6. Give the stimulus for the release of insulin and name three target tissues for this hormone. (4 marks)
7. State two functions of epididymis and one function of accessory sex glands. (3 marks)
8. Give the components of the following complexes:
 - a. Oxyhemoglobin
 - b. Carboxyhemoglobin
 - c. CarbaminohemoglobinIndicate which of the above complexes is stable. (4 marks)
9. Distinguish between endopeptidases and exopeptidases. Give examples. (3 marks)

SECTION B [40 MARKS]

Answer ANY TWO questions from this section

10.
 - a. Explore basic protein and amino acid metabolism in mammals. (14 marks)
 - b. Briefly evaluate basal metabolic rate (BMR) (6 marks)
12. Examine the physiology of egg formation and egg laying in birds. (20 marks)
13. Fully describe the anatomy and physiology of fish digestive system. (20 marks)
14. Demonstrate an understanding of the functional anatomy and physiology of mammalian respiratory system, including its role in acid-base homeostasis. (20 marks)