



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
1ST YEAR 2ND SEMESTER 2019/2020 ACADEMIC YEAR
REGULAR

COURSE CODE: AAS 3121

COURSE TITLE: ZOOLOGY

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

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. Explain the defining characteristic of a vertebrate animal. (3 marks)
2. Name the three main layers of integumentary system, and give the components of each layer. (3 marks)
3. Describe any three unique features of mammals belonging to order *Monotremata*. (3 marks)
4. Bird calls and songs are used for a variety of purposes. Elaborate. (3 marks)
5. Outline any three ways by which birds maintain their feathers. (3 marks)
6. Describe the circulatory system in juvenile amphibians. (3 marks)
7. Briefly explain the benefits of low resting metabolism in reptiles. (3 marks)
8. Define encephalization quotient and explain why reptiles are considered to be less intelligent than mammals and birds. (3 marks)
9. Give differences between frogs and toads. (3 marks)
10. Briefly explain predatory behavior of adult amphibians. (3 marks)

SECTION B [40 MARKS]

Answer ANY TWO questions from this section

11. Explore parental care, fledging and brood parasitism in birds. (20 marks)
12. Examine in detail the feeding and vocalization behavior in amphibians. (20 marks)
13. Demonstrate an understanding of the distinguishing features between lobe-finned fish and ray-finned fish. (20 marks)
14. Analyze the characteristics of reptiles under the following headings:
 - a) Defence mechanism (10 marks)
 - b) Shedding and regeneration of tails. (10 marks)