



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF AGRICULTURAL AND FOOD SCIENCES
UNIVERSITY EXAMINATION FOR DEGREE OF BACHELOR OF SCIENCE IN
AGRICULTURAL EXTENSION AND EDUCATION
1ST YEAR 1ST SEMESTER 2017/2018 ACADEMIC YEAR
REGULAR

COURSE CODE: AAS 3111

COURSE TITLE: ZOOLOGY

EXAM VENUE: LR 2

STREAM: (BSc Animal Science)

DATE: 12/12/17

EXAM SESSION: 9.00 – 11.00 AM

TIME: 2 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. State the defining characteristic of all vertebrates. (3 marks)
2. Give two specialized hairs in mammals and state their unique functions. (3 marks)
3. Describe any three unique features of mammals belonging to order *Monotremata*. (3 marks)
4. Give three reasons why bird migrate. (3 marks)
5. Outline two disadvantages and one advantage of flocking in birds. (3 marks)
6. Elaborate on how birds use visual and auditory signals to communicate. (3 marks)
7. Briefly describe how amphibians catch their prey. (3 marks)
8. Define encephalization quotient and explain why reptiles are considered to be less intelligent than mammals and birds. (3 marks)
9. Describe the single loop circulatory system in tadpoles. (3 marks)
10. Briefly describe skeleton of ray-finned fish. (3 marks)

SECTION B [40 MARKS]

Answer ANY TWO questions from this section

11.
 - a. Describe the various mammalian adaptations that explain their success in the environment. (12 marks)
 - b. Explore characteristics of reproductive system and nervous system in placental mammals. (8 marks)
12. Examine the various features considered as unique in amphibians but are not seen in bony fish. (20 marks)
13. Compare and contrast the biology of *Osteichthyes* and *Chondrichthyes*. (20 marks)
14. Evaluate characteristics of reptiles under the following headings:
 - a. Defence mechanism (10 marks)
 - b. Shedding and regeneration of tail (10 marks)