



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY**

**SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES**

**UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF EDUCATION  
SCIENCE WITH IT & BACHELOR OF SCIENCE IN BIOLOGICAL SCIENCES**

**1<sup>ST</sup> YEAR 2<sup>ND</sup> SEMESTER 2018/2019 ACADEMIC YEAR**

**MAIN CAMPUS - REGULAR**

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**COURSE CODE:**

**SZL 102/SBI 3122**

**COURSE TITLE:**

**VERTEBRATE ZOOLOGY**

**EXAM VENUE: LR 1**

**STREAM: (BED/BIO)**

**DATE: 25/015/2019**

**EXAM SESSION: 9.00-11.00AM**

**TIME: 2 HOURS**

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**Instructions:**

- 1. Answer ALL questions in Section A and Any two questions in Section B**
  - 2. Candidates are advised not to write on question paper**
  - 3. Candidates must hand in their answer booklets to the invigilator while in the examination room**
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**SECTION A: SHORT ANSWER QUESTIONS (30 MARKS).**

1. Describe any three types of fish tails. (3 Marks)
2. Describe the structure of the amniotic egg. (4 Marks)
3. Describe any three forms flight in birds. (3 Marks)
4. Describe any three challenges of the transition from water to land in vertebrates.(3 Marks)
5. Describe the significance of synapsid reptiles. (3 Marks)
6. Describe the structural differences between the heart of reptiles and amphibians. (3 Marks)
7. Describe any three modes of respiration in Amphibians. (3 Marks)
8. Explain the origins birds. (3 Marks)
9. Describe any three forms of dentition in mammals. (3 Marks)
10. Describe any two reptilian characteristics that are present in birds, (2 Marks)

**SECTION B: ESSAY QUESTIONS (40 MARKS)**

11. Discuss the structure and functions of birds' feathers. (20 Marks)
12. Discuss the distinguishing features of chordates. (20 Marks)
13. Birds have the most efficient gas exchange system in the animal kingdom. Discuss. (20 Marks)
14. Discuss reproductive strategies in mammals. (20 Marks)