



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY**  
**SCHOOL OF BIOLOGICAL, PHYSICAL, MATHEMATICS AND ACTUARIAL SCIENCES**  
**UNIVERSITY SPECIAL EXAMINATION FOR THE DEGREE OF BACHELOR OF**  
**SCIENCE IN BIOLOGICAL SCIENCES**  
**FIRST YEAR SPECIAL EXAMS 2020/2021 ACADEMIC YEAR**  
**MAIN CAMPUS - REGULAR**

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**COURSE CODE:** SBB 1104  
**COURSE TITLE:** VERTEBRATE ZOOLOGY  
**EXAM VENUE:** \_\_\_\_\_  
**DATE:** \_\_\_\_\_ **EXAM SESSION:** \_\_\_\_\_  
**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**

**SECTION A: SHORT ANSWER QUESTIONS (30 MARKS)**

1. Outline three distinguishing characteristics of phylum Chordata (3 marks)
2. Describe three features of amniotes (3 marks)
3. List three systems used in the classification of vertebrates (3 marks)
4. Explain the importance of binomial nomenclature of vertebrate (3 marks)
5. State the major distinguishing feature of craniates and name two examples of such vertebrates (3 marks)
6. Name three classes of lower vertebrates/chordates and give an example of each (3 marks)
7. Name three vestigial structures found in living vertebrates (3 marks)
8. Explain why reptiles are more adapted to terrestrial existence than amphibians (3 marks)
9. Describe three characteristic differences between human brain and that of other vertebrates (3 marks).
10. State three distinctive characteristic differences between Chondrichthyes and Osteichthyes (3 marks)

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

11. Describe distinguishing and general characteristics of vertebrates (20 marks)
12. Describe characteristics of different subclasses in the class Mammalia (20 marks)
13. Discuss how birds are adapted to flight (20 marks)
14. Discuss features that adapt fishes to locomotion in different aquatic environments (20 marks)