



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

**SCHOOL OF AGRICULTURAL AND FOOD SCIENCES**

**FIRST YEAR SECOND SEMESTER EXAMINATIONS FOR THE DEGREE OF  
BACHELOR OF SCIENCE IN AGRICULTURAL EXTENSION AND EDUCATION –**

**2013/2014 ACADEMIC YEAR**

**AAS 3121: ZOOLOGY**

**Instructions:**

1. This paper consists of **TWO** sections, **A** and **B**.
2. Answer **ALL** questions from section **A** and any **TWO** from section **B**.
3. Write all answers in the booklet provided.

**SECTION A** **[30 MARKS]**

**Answer ALL questions.**

1. (a) Outline three unifying characteristics of class *Mammalia*. [3marks]  
(b) Give three characteristics of mammals in Subclass *Prototheria* (monotremes). [3marks]  
(c) Briefly describe the breathing process in mammals. [3marks]  
(d) Distinguish between endothermy and ectothermy. [3marks]
  
2. (a) Describe three characteristics of modern birds. [3marks]  
(b) Give the various adaptations of birds for flight. [3marks]  
(c) Briefly describe how birds maintain their feathers. [3marks]
  
3. (a) Give the two 'lifestyles' found in amphibians. [3marks]  
(b) Explain the meaning of 'amniote egg' [3marks]  
(c) Explain the significance of low resting metabolism in reptiles. [3marks]

**SECTION B** **[40 MARKS]**

**Answer ANY TWO questions.**

4. Describe the general characteristics of fish in the class *Osteichthyes*. [20marks]
  
5. Describe amphibians under the following headings:  
(a) Circulatory system (both juvenile and adult stage). [10marks]  
(b) Digestive system. [10marks]
  
6. (a) Describe the relationship that exists between humans and birds. [10marks]  
(b) Describe economic importance of birds to humans. [10marks]
  
7. Discuss characteristics of Class *Reptilia* under the following headings:  
(a) Defence mechanism [8marks]  
(b) Reproduction [8marks]  
(c) Shedding and regeneration of tail [4marks]