

**W1-2-60-1-6**

**JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY**

**UNIVERSITY EXAMINATIONS 2016/2017**

FOR THE DEGREE OF BACHELOR OF SCIENCE IN PLANT ECOLOGY AND ENVIRONMENTAL SCIENCE

**SZL 2303: ANIMAL ECOLOGY**

**DATE: JUNE, 2017 TIME: 2 HOURS**

**INSTRUCTIONS: ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS**

1. a. Define the following terms:-

 i. Evolution (2 marks)

 ii. Speciation (2 marks)

 iii. Population (2 marks)

 iv. Fecundity (2 marks)

 v. Generation time (2 marks)

 b. Describe the following attributes used to describe communities.(5 marks)

 i. Species richness

 ii. Species diversity

 iii. Species evenness

 c. Differentiate between migration, immigration and emigration. (5 marks)

 d. Explain the concept of keystone species. (5 marks)

 e. Discuss the advantages of biological control in the management of invasive

 species. (5 marks)

2. Describe the challenges that herbivores have to contend with when selecting dietary items from their foraging environment. (20 marks)

3. Explain the four steps of natural selection and what happens at each stage.

(20 marks)

4. a. Describe the typical features of the age pyramids of underdeveloped

 countries. (10 marks)

 b. Explain the impact of high human population growth on biodiversity

 conservation. (10 marks)

5. a. Explain the concept of carrying capacity. (10 marks)

 b. Discuss the factors that limit population growth. (10 marks)