



# SOUTH EASTERN KENYA UNIVERSITY

## UNIVERSITY EXAMINATIONS 2016/2017

### SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN RANGE MANAGEMENT

#### ARM 102: RANGE ECOLOGY 1

**DATE: 18<sup>TH</sup> APRIL 2017**

**TIME: 1.30 -3.30 PM**

#### INSTRUCTIONS TO CANDIDATES

- a. Answer **ALL** questions in **SECTION A**
- b. Answer any **TWO [2]** questions in **SECTION B**

#### SECTION A [40 MARKS]

1. Define the following terminologies as used in range ecology.

a. Acclimatization	[01 marks]
b. Ecology	[01 marks]
c. Resource	[01 marks]
d. Physiological time	[01 marks]
  
- 2a. State the **three [3]** levels of the biological spectrum as used in the science of ecology  
[03 marks]
  
- b. List **five [5]** characteristics that are critical in order to understand distribution and abundance of a species.  
[05 marks]
  
3. Discuss the **two [2]** principles pertaining to the limiting conditions and resources in the science of ecology.  
[08 marks]
  
4. Differentiate between the following terminologies:

a. Autoecology and synecology	[02 marks]
b. Ecological niche and Niche segregation	[02marks]
  
5. Briefly discuss the processes of heat exchange in ectotherms  
[06 marks]

## SECTION B [40 MARKS] ANSWER ANY TWO QUESTIONS

6. Discuss the relationship of Ecology to other branches of Biology and its contribution to mankind. [20 marks]
7. Classification of resources helps in clarifying our understanding on how to determine the distribution and abundance of species. With the help of well labeled diagrams, discuss the any five different classes of resources. [20 marks]
- 8a. State any four ways in which the endotherms adjust to high temperatures [04 marks]
- b. Discuss the **two [2]** basic patterns of population growth models [curves] [08 marks]
- c. Briefly discuss any four population attributes as they relate to range ecology [08 marks]