

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

**JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY**

**UNIVERSITY EXAMINATIONS 2019/2020**

**SECOND YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN WATER AND ENVIRONMENT MANGEMENT**

**SBT 2278: PRINCIPLES OF ECOLOGY**

**DATE: DECEMBER, 2019 TIME: 2 HOURS**

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

**QUESTION ONE: 30 MARKS**

a. Distinguish the following terms:-

 i. Habitat and Niche. (2 marks)

 ii. Species richness and species composition. (2 marks)

 iii. Pollution and Eutrophication. (2 marks)

 iv. Transect and quadrat. (2 marks)

 v. R-selected and K-selected species. (2 marks)

b. Briefly describe ecological pyramids. (6 marks)

c. Explain the factors that affects pupation size. (4 marks)

d. Outline ten (10) types of ecological interactions. (5 marks)

e. Using a minimum of five species illustrate a food web and a food chain.

(5 marks)

**QUESTION TWO: 20 MARKS**

Discuss characteristics, composition and structure of a community.

**QUESTION THREE: 20 MARKS**

Discuss the threats to biodiversity

**QUESTION FOUR: 20 MARKS**

Describe the nitrogen cycle