



(Knowledge for Development)

KIBABII UNIVERSITY
UNIVERSITY EXAMINATIONS
2020/2021 ACADEMIC YEAR

FIRST YEAR SECOND SEMESTER
MAIN EXAMINATIONS

FOR THE DEGREE OF BACHELOR OF SCIENCE IN BIOLOGY AND
BACHELOR OF SCIENCE IN
BIORESOURCE CONSERVATION AND MANAGEMENT

COURSE CODE: SZL 123

COURSE TITLE: FUNDAMENTALS OF ECOLOGY

DATE: Monday 19th July, 2021.

TIME: 2:00 – 4:00 p.m.

INSTRUCTIONS TO CANDIDATES

Answer Question one (1) and any other two (2) Questions. Question one is compulsory and carries 30 marks, the other Questions carry 20 marks each.

TIME: 2 Hours

This paper consists of 3 printed pages. Please Turn Over 

KIBU observes ZERO tolerance to examination cheating

QUESTION 1

- a) Define the term Ecology (3 Marks)
- b) Distinguish between population and community (2 Marks)
- c) State the **Main** categories of an ecosystem (4 Marks)
- d) Using a diagram illustrate the nitrogen cycle (5 Marks)
- e) Explain **Three** types of Ecological pyramids and state when each type is used
- f) Define the following terms: (3 Marks)
- i. Specific growth rate
 - ii. Net reproductive rate
 - iii. Survival rate (3 Marks)
- g) Describe water treatment methods used in water monitoring (4 Marks)
- h) What is Ecological Niche? (2 Marks)
- i) Differentiate between biome and biosphere (2 Marks)
- j) Distinguish between food chain and food web (2 Marks)

QUESTION 2

Explain the effects of human activities on hydrological cycles (20 Marks)

QUESTION 3

Describe the measures of productivity used in plant community (20 Marks)

QUESTION 4

Explain the different patterns in a community (20 marks)

QUESTION 5

Describe the ecological importance of aquatic and wetland ecosystems (20 Marks)