



(*Knowledge for Development*)
KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS

2022/2023 ACADEMIC YEAR

SECOND YEAR - FIRST SEMESTER

MAIN EXAMINATION

**FOR THE DEGREE OF BACHELOR OF EDUCATION
SCIENCE**

COURSE CODE: SBL 211

COURSE TITLE: GENERAL ECOLOGY

DATE: 19TH DECEMBER 2022 TIME: 2.00 - 4.00 PM

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 2 printed pages. Please Turn Over
KIBU observes ZERO tolerance to examination cheating



QUESTION ONE

- a. Explain the meaning of the following terms: (5 marks)
- i. Endangered species
 - ii. Endemic species
 - iii. Threatened species
 - iv. Rare species
 - v. Extinct species
- b. Describe 5 reasons why wetland ecosystems should be conserved (5 marks)
- c. Differentiate between pioneer species and keystone species (2 marks)
- d. What are the consequences of reduced genetic variability in a population (4 marks)
- e. Describe the challenges associated with invasive species in any ecosystem (5 marks)
- f. Differentiate between primary and secondary succession in plant communities (4 marks)
- g. Define the following terms: (5 marks)
- i. Pyramid of energy
 - ii. Pyramid of biomass
 - iii. Biotic factors
 - iv. Carrying capacity
 - v. Climax community

QUESTION TWO

- a. Discuss the interrelationships between biotic and abiotic factors in an ecosystem (10 marks)
- b. Discuss the concept of the “blue economy” as being implemented in Kenya (10 marks)

QUESTION THREE

By use of well labelled diagrams, describe how the energy flow, nutrient and biogeochemical cycles occur in an ecosystem (20 marks)

QUESTION FOUR

Discuss the various national and international laws and policies that have been enacted to support conservation of biodiversity in Africa (20 marks)

QUESTION FIVE:

Discuss the concept of ecosystem resilience and resistance to the ecological pressure (20 marks)