



"Investing in Africa's future"

**COLLEGE OF HEALTH AGRICULTURE AND NATURAL
SCIENCES**

NESN201 ECOLOGICAL BIOGEOGRAPHY

END OF SECOND SEMESTER EXAMINATION

APRIL 2026

**LECTURER: Mr G. P. MITI
DURATION: 3 HRS**

INSTRUCTIONS

Answer all questions in Section A and any **three**
from Section B

Section A carries **40 marks** and each question in
section B carries **20 marks**.

Section A Answer all Questions in this section

Question 1

- a. Explain the importance of ecological biogeography to global health? (3)
- b. Distinguish between descriptive and interpretive biogeography. (4)
- c. Define the following biogeographical terms: (20)
 - i. Species;
 - ii. Dispersal;
 - iii. Speciation;
 - iv. Vicariance;
 - v. Habitat;
 - vi. Endemism;
 - vii. Biodiversity,
 - viii. Biotic factors;
 - ix. Abiotic factors;
 - x. climate envelope
- d. What is disjunct distribution? (2)
- e. Use examples to explain the possible causes of disjunct distribution of species. (6)
- f. Why are Ecological biogeographers interested in island biogeography? (5)

Section B Answer any three questions from this section

Question 2

- a. Use a specific example to explain how dispersal of a species can be limited by an "Ecological barrier". [5]
- b. Describe how organisms utilise each of the following natural channels to overcome ecological barriers: [15]
 - i. Corridor
 - ii. Filter
 - iii. Sweepstakes

Question 3

- a. Attempt a definition for:
 - a. biogeography [2]
 - b. ecology [2]
- b. Distinguish between each of the following: [12]
 - i. Ecological biogeography
 - ii. Conservation biogeography
 - iii. Historical biogeography
- c. Give two examples of biotic and two examples of abiotic factors that influence the distribution of species. [4]

Question 4

A suitable wildlife habitat should have the following components for any species:

- a. cover (shelter)
- b. food and water
- c. Space.

Explain the importance of each of the components to the survival and reproduction of a named animal population. [20]

Question 5

Distinguish between each of the following types of succession:

- Primary succession and secondary succession (10)
- Allogenic succession and autogenic succession (10)

Question 6

- What is animal geography? [2]
- How has animal geography evolved over time [18].

END OF QUESTION PAPER!!!