



**FreeExams.co.ke**

**UNIVERSITY EXAMINATIONS**

2017/2018 ACADEMIC YEAR

**SPECIAL/SUPPLEMENTARY EXAMINATION**

**THIRD YEAR SECOND SEMESTER**

**FOR THE DEGREE OF BACHELOR OF EDUCATION ARTS**

**COURSE CODE:** GEO 315

**COURSE TITLE:** BIOGEOGRAPHY

**DATE:** 19<sup>TH</sup> OCTOBER, 2018

**TIME:** 11:30AM – 1:30PM

---

**INSTRUCTIONS TO CANDIDATES**

1. Answer Question ONE (Q1) Compulsory
2. Answer any other TWO (2) Questions
3. Use illustration where appropriate

This paper consists of 3 printed pages. Please Turn Over.

### QUESTION 1 (COMPULSORY)

- a. Describe what an ecotone means in relation to ecosystems? (2 marks)
- b. Briefly explain the significance of simple autotrophs like lichen and mosses in the process of ecological succession. (2 marks)
- c. Apart from soil micro-organisms and plant roots, give two other ways of nitrogen fixation. (2 marks)
- d. Account for less biodiversity on the forest floor of a typical climax tropical rainforest. (4 marks)
- e. Explain two ways by which humans have contributed to ecosystem fragility. (4 marks)
- f. Explain how soil and topography affect distribution of biomes. (8 marks)
- g. Differentiate between in situ and ex situ methods of biodiversity conservation. (4 marks)
- h. Explain how migration and dispersal have contributed to distribution of organisms throughout the world. (4 marks)

### QUESTION 2

- a. Define the term bio-diversity and briefly highlight the three levels of biodiversity. (7 marks)
- b. Discuss ways in which humans have negatively impacted on ecosystems over the years. (13 marks)

### QUESTION 3

- a. Describe the concept of ecological succession. (4 marks)
- b. Briefly highlight two types of ecological succession. (12 marks)
- c. Highlight how carbon dioxide is released through the trophic structure. (5 marks)

### QUESTION 4

- a) List and explain the importance of four basic components of an ecosystem. (20 marks)

### QUESTION 5

- a) Write short notes on the following.
- i. Parasitism and Predation. (4 marks)
  - ii. Ecological Niche. (3 marks)
  - iii. Biome. (2 marks)
  - iv. Population. (3 marks)
  - v. Community. (2 marks)
- b) Highlight two ecosystem services of forests. (6 marks)