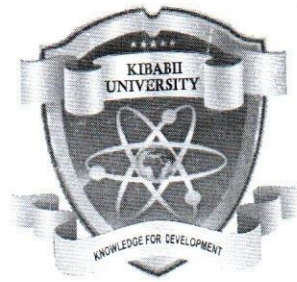


120 ✓



(Knowledge for Development)

**KIBABII UNIVERSITY
UNIVERSITY EXAMINATIONS
2017/2018 ACADEMIC YEAR**

**FIRST YEAR 2ND SEMESTER
MAIN EXAMINATIONS**

**FOR THE DEGREE OF BACHELOR OF SCIENCE IN BIOLOGY,
BACHELOR OF SCIENCE IN BIORESOURCE MANAGEMENT,
BACHELOR OF EDUCATION SCIENCE AND BACHELOR
AGRICULTURE EDUCATION AND EXTENSION**

COURSE CODE: SZL 123

COURSE TITLE: FUNDAMENTALS OF ECOLOGY


DATE: TUESDAY 7TH August, 2018.

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 2 printed pages. Please Turn Over 

KIBU observes ZERO tolerance to examination cheating

1.

- a) Explain your understanding of the following terms i) Ecology ii) Ecosystem iii) Biome (3 marks)
- b) Briefly describe how edaphic factors affect plant community distribution. (3 marks)
- c) Explain why trees in Kakamega forest never invests more resources in below ground biomass. (2 marks)
- d) Differentiate between allelopathy and symbiotic interactions. (2 marks)
- e) Explain the 2nd law of thermodynamics in relation to trophic levels. (3 marks)
- f) State the effects of herbivores on Nitrogen cycling in an ecosystem (3 marks)
- g) Differentiate between fundamental niche and realized niche. (3 marks)
- h) List demographic factors that influence population size. (4 marks)
- i) State the ways by which man affects plant communities. (4 marks)
- j) Explain why tundra biome remains waterlogged despite the low levels of precipitation. (3 marks)

2. Using illustrations, briefly describe hydrological and Nitrogen cycles. (20 marks)

3. Write an essay on east African terrestrial ecosystems. (20 marks)

4. a) Briefly explain why tropical regions have high species diversity compared to temperate regions. (6 marks)

b) Giving examples, discuss three abiotic factors that determine distribution and abundance of plant communities. (14 marks)

5. Citing relevant bodies, discuss wildlife conservation and management in Kenya. (20 marks)