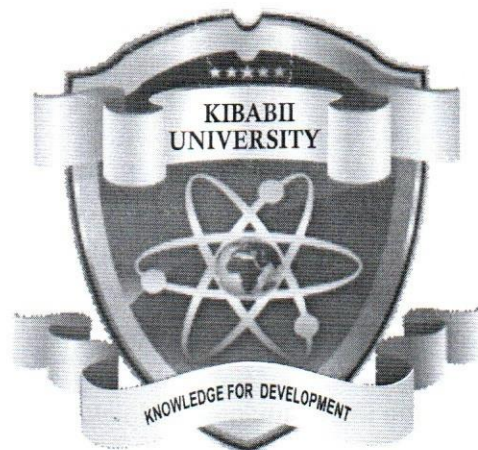


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**UNIVERSITY EXAMINATIONS  
2017/2018 ACADEMIC YEAR**

**SECOND YEAR SECOND SEMESTER EXAMINATIONS  
FOR THE DEGREE OF BACHELOR OF SCIENCE IN  
BIOLOGY/BIORESOURCE MANAGEMENT &  
CONSERVATION/AGRICULTURAL EDUCATION &  
EXTENSION**

**COURSE CODE: SBT 221**

**COURSE TITLE: PLANT ECOLOGY I**

**DATE: Tuesday 7<sup>th</sup> 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

KIBU observes ZERO tolerance to examination cheating

This Paper Consists of 2 Printed Pages. Please Turn Over. ►

### QUESTION ONE (30MKS)

- a) Define the following terms giving examples as used in plant ecology (5 marks)
- i) Biosphere
  - ii) Ecosystem
  - iii) Allogenic succession
  - iv) Foundation species
  - v) Trophic cascades
- b) Giving examples, distinguish between analytical and synthetic plant characters as used in the study of plant structure and composition (5 marks)
- c) With specific examples, state **FIVE** factors that shape plant community structure in an ecosystem (5 marks)
- d) State and explain any **FOUR** methods used in the quantitative analysis of plant structures in a plant community (5 marks)
- e) Describe the main steps of ecological succession (5 marks)
- f) With illustrations, describe the structure and components of an ecosystem (5 marks)

### QUESTION TWO

Discuss any **FOUR** methods of vegetation sampling and analysis (20 marks)

### QUESTION THREE

Discuss the biotic and abiotic factors that determine the distribution and abundance of plant communities (20 marks)

### QUESTION FOUR

Human-caused environmental change has impacts on plant diversity and evolution. Discuss (20 marks)

### QUESTION FIVE

Discuss the methods of plant germplasm conservation giving their advantages and limitations (20 marks)