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KIBABII UNIVERSITY

**MAIN CAMPUS
SPECIAL/SUPPLEMENTARY**

**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: 17th October, 2018 **TIME:** 3:00 -5:00 p.m.

INSTRUCTIONS TO CANDIDATES

Answer Question One **compulsory (30mks)** and any other Two Questions (**20mks**) each.

TIME: 2 Hours

KIBABII observes ZERO tolerance to examination cheating

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SBT 221: PLANT ECOLOGY I

QUESTION ONE (30MKS)

- a) Using a well labelled diagram, describe an ecological pyramid in a named ecosystem (5 marks)
- b) State **FIVE** characteristics of pioneer species (5 marks)
- c) State and explain **TWO** important measures that ecologists use to describe the composition of a plant community (5 marks)
- d) Define the following terms and concepts giving examples as used in plant ecology (5 marks)
- i) Eutrophication
 - ii) Cryopreservation
 - iii) *Autogenic succession*
 - iv) Keystone species
 - v) Climax communities
- e) Describe important abiotic factors affecting plant primary productivity in an ecosystem (5 marks)
- f) Outline **FIVE** applications of plant germplasm conservation (5 marks)

QUESTION TWO

Discuss the qualitative structures of plant communities (20 marks)

QUESTION THREE

The structure of a community is the result of many interacting factors, both abiotic and biotic.

Discuss (20 marks)

QUESTION FOUR

Giving examples in each case, describe the range of interactions within ecosystems and how they affect plant population (20 marks)

QUESTION FIVE

Giving advantages and disadvantages, describe **FIVE** main methods of sampling plants (20 marks)