



# MACHAKOS UNIVERSITY

University Examinations for 2021/2022 Academic Year

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

SECOND YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE IN BIOLOGY

BACHELOR OF EDUCATION

SBT 200: PLANT ECOLOGY

DATE: 6/12/2021

TIME: 2.00-4.00 PM

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## INSTRUCTIONS

Answer Question One And Any Other Two Questions

### SECTION A (COMPULSORY)

#### QUESTION ONE (30 MARKS)

- a) Distinguish the terms Autecology and Synecology. (3 marks)
- b) Explain the biological nitrogen fixation. (3 marks)
- c) Describe the causes of global warming. (3 marks)
- d) Explain briefly the major sub-divisions of the atmosphere. (3 marks)
- e) Describe endemic distribution of plants (3 marks)
- f) Outline three shortcomings of the life –form classification. (3 marks)
- g) Describe Carbon Dioxide method in determination of productivity. (3 marks)
- h) Discuss the adaptations of the Afro-Alpine vegetation to water stress conditions. (3 marks)
- i) Describe Calcification in the soil maturation and profile development. (3 marks)
- j) Describe the impacts of constructing artificial ecosystems on natural ecosystems. (3 marks)

#### QUESTION TWO (20 MARKS)

Describe the attributes measured in vegetation ecology.

### **QUESTION THREE (20 MARKS)**

Describe ecological succession.

### **QUESTION FOUR (20 MARKS)**

- a) Discuss Wetland vegetation zonation. (10 marks)
- b) Discuss the physical and chemical environment of swamps. (10 marks)

### **QUESTION FIVE (20 MARKS)**

- a) Describe the devices used in measuring humidity (10 marks)
- b) Describe species interaction within the community (10 marks)