



# **MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY**

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## **UNIVERSITY EXAMINATIONS 2021/2022**

SECOND YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE OF  
BACHELOR OF SCIENCE IN EDUCATION SCIENCE BIOLOGY/CHEMISTRY AND  
BACHELOR OF SCIENCE IN EDUCATION SCIENCE BIOLOGY/MATHEMATICS  
BACHELOR OF SCIENCE EDUCATION SCIENCE BIOLOGY/AGRICULTURE

### **SBT 3200: PLANT ECOLOGY**

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**DATE: JANUARY 2022**

**TIME: 2 HOURS**

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**INSTRUCTIONS:** Answer Question ONE and any other TWO questions.

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#### **QUESTION ONE (30 MARKS)**

- a) Give the parameters you would assess quantitatively describe the structure of a plant community (4marks)
- b) Define leaf Area Index (LAS) and briefly explain the relationship to terrestrial primary productivity (5marks)
- c) Distinguish between podolization and gleization (5marks)
- d) Explain the water balance equation in terrestrial ecosystems and how it influences nutrients budget (4marks)
- e) Explain how the structure and properties of 2:1 clay's differ from 1:1 clay's(6marks)
- f) Describe the adaptions of mangroves to high salinity (6marks)

#### **QUESTION TWO (20 MARKS)**

Discuss the adaptive trends in afro alpine flora (20marks)

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

Discuss types of East African wetlands and effects of seasonal flooding (20marks)

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

Discuss the factors that influence community structure of Savannas (20marks)