



*(Knowledge for Development)*

# **KIBABII UNIVERSITY**

## **UNIVERSITY EXAMINATIONS 2020/2021 ACADEMIC YEAR**

### **SECOND YEAR SECOND SEMESTER SPECIAL/SUPPLEMENTARY EXAMINATIONS**

**FOR THE DEGREE OF BACHELOR OF EDUCATION**

**COURSE CODE: SBT 301**

**COURSE TITLE: PLANT ECOLOGY**

**DATE: 10<sup>TH</sup> JANUARY 2022      TIME: 2.00 - 4.00 PM**

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#### **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 3 printed pages. Please Turn Over 

**KIBU observes ZERO tolerance to examination cheating**

- Q1 (a) Define the following terms as used in plant Ecology
- (i) Abundance
  - (ii) Biodiversity
  - (iii) biome
  - (iv) Climax community
  - (v) Nutrient budget
- 5 marks
- (b) Distinguish between
- (i) Atmosphere and biosphere
  - (ii) Autoecology and synecology
  - (iii) Biotic and abiotic factors of the environment
  - (iv) Direction and disruptive selection
  - (v) Simpson index and Shannon-Weiner index
- 5 marks
- (c) Explain the levels of risk to extinction recognized by world conservation union (IUCN) 5 marks
- (d) List and explain the five steps in the nitrogen cycle 5 marks
- (e) List the shortcomings of Clements deterministic succession theory 5 marks
- (f) Outline the impacts of pastoralism on community structure, productivity and nutrient cycling 5 marks
- Q2 Discuss the reasons for conservation of natural resources. 20 marks
- Q3 State and describe the various forms of vegetation found in East Africa 20 marks
- Q4 Discuss the Inter Tropical Convergence Zone (ITCZ) and its influence on rainfall patterns in Africa 20 marks
- Q5 Describe the main branches of Ecology 20 marks