



*(Knowledge for Development)*

**KIBABII UNIVERSITY  
UNIVERSITY EXAMINATIONS  
2022/2023 ACADEMIC YEAR**

**SECOND YEAR SECOND SEMESTER**

**MAIN EXAMINATION**

**FOR THE DEGREE OF BACHELOR OF SCIENCE IN BIOLOGY,  
BACHELOR OF AGRICULTURAL EDUCATION AND EXTENSION AND  
BACHELOR OF EDUCATION SCIENCE.**

**COURSE CODE: SBT 211 / SBT 211**

**COURSE TITLE: PLANT TAXONOMY/ SYSTEMATICS AND  
PLANT TAXONOMY**

**DATE: 23<sup>RD</sup> DECEMBER 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 carries 30 marks, the other Questions carry 20 marks each.

TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over



**KIBU Observes ZERO tolerance to examination cheating**

### **QUESTION ONE**

- a) Define the following:
- i. Systematics,
  - ii. Identification,
  - iii. Omega taxonomy (3 Marks).
- b) What changes were made to nomenclature during the Melbourne conference in 2012 (3 Marks).
- c) Explain author citations in plant taxonomy (4 Marks).
- d) Using examples distinguish an autonym from a tautonym (4 Marks).
- e) With a justification, list the order of preference in selecting a type specimen (4 Marks).
- f) Explain the technological innovations during the Renaissance period and how they affected modern day classification (3 Marks).
- g) Elucidate two concepts from the theory of evolution that have impacted plant classification (2 Marks).
- h) What basic elements does systematics and taxonomy offer to conservation and management of species (3 Marks).
- i) Distinguish how plant metabolites are used in circumscription of taxa (4 Marks).

### **QUESTION TWO**

Write an essay on the international code of nomenclature for Plants, Algae, and Fungi (20 Marks).

### **QUESTION THREE**

Suppose you get a plant that has not been described before, explain how you would prepare a quality type specimen for reference (20 Marks).

### **QUESTION FOUR**

Describe the characteristics of the families Fabaceae and Umbelliferae (20 Marks).

### **QUESTION FIVE**

Discuss methods used in plant taxonomy and systematics (20 Marks).