

  
**KISII UNIVERSITY**  
**UNIVERSITY EXAMINATIONS**

**SECOND YEAR EXAMINATION FOR THE AWARD OF THE**  
**DEGREE OF BACHELOR OF EDUCATION SCIENCE**  
**FIRST SEMESTER 2021/2022**  
**(FEBRUARY-JUNE, 2022)**

**BOTA 241: TAXONOMY OF HIGHER PLANTS**

**STREAM: Y2 S1**

**TIME: 2 HOURS**

**DAY: MONDAY, 9:00 AM – 11:00 AM**

**DATE: 09/05/2022**

**INSTRUCTIONS:**

- 1. Do not write anything on this question paper.**
- 2. Answer Section A (Compulsory) and any other TWO Questions in section B.**

**SECTION A: ANSWER ALL QUESTIONS (40 MARKS)**

- 1. Citing relevant examples explain the following concepts used in plant taxonomy**
  - i. *Nomina familia conservenda* (3 marks)
  - ii. Principle of priority (3 marks)
  - iii. Effective publication (3 marks)
  - iv. Folk taxonomy (3 marks)
- 2. Differentiate between the following terms**
  - i. Epitype and holotype (1 mark)
  - ii. Homonym and autonym (1 mark)
- 3. Describe the following**
  - i. Fumigation (3 marks)
  - ii. Lectotypification (3 marks)
- 4. The ICBN has proposed a nomenclature method recognizing ethnosystematics and folk taxonomy. How would this be useful to the science of taxonomy. (3 marks)**

5. State three reasons for the lack of interest in botanical nomenclature and taxonomy in society. (3 marks)
6. State why a code of plant nomenclature is still important today. (4 marks)
7. Name the sources of commemorative epithets in plant nomenclature. (4 marks)
8. Find below the naming history/ protologue of a plant in the family Acanthaceae.
  - i. *Justicia mollissima* Wallich nom. nud. 1830
  - ii. *Justicia mollissima* Wallich ex Nees (1832)
  - iii. *Justicia mollissima* (Nees) Y.F. Deng & T.F. Daniel (2011)

Which name is the legitimate as per ICBN and explain why? (6 marks)

**SECTION B: ANSWER ANY TWO QUESTIONS (30 MARKS)**

9. Outline the similarities and differences of the Solanaceae, Scrophulariaceae and Convolvulaceae. (15 marks)
10. Compare and contrast the plant families Acanthaceae, Verbenaceae and Lamiaceae (*n.a.* Labiatae) (15 marks)
11. Compare and contrast the plant families Sterculiaceae, Malvaceae and Tiliaceae (15 marks)