



FACULTY	AGRICULTURE, ENGINEERING AND NATURAL SCIENCES		
DEPARTMENT	ENVIRONMENTAL SCIENCE		
SUBJECT	BIOSYSTEMATICS 1		
SUBJECT CODE	EBL3721		
DATE	MAY/JUNE 2023		
DURATION	2 Hours	MARKS	70

### **First Opportunity Examination**

**Examiner: Prof. E.G. Kwembeya (University of Namibia)**

**Moderator: Prof. I. Mapaure (University of Namibia)**

This Question Paper consists of TWO pages including this front page

#### ***Instructions***

Answer ALL Questions in Section A

Answer ONE Question in Section B

Read questions carefully and answer accordingly

Section A carries 45 marks, and Section B carries 25 marks

**UNIVERSITY OF NAMIBIA EXAMINATIONS**

**Section A: Answer ALL questions from this section (45 marks)**

**QUESTION 1**

Distinguish between systematics and taxonomy.

(4 marks)

**QUESTION 2**

(a) Explain how herbarium specimens could be used in climate change research.

(3 marks)

(b) Refer to the principle of typification to explain the following types: holotype; isotype, lectotype, paratype.

(4 mark)

**QUESTION 3**

Explain how you can determine whether a herbaceous plant is an annual, perennial or biennial.

(8 marks)

**QUESTION 4**

(a) Refer to the rejection of scientific names to explain the following concepts: superfluous names, synonyms, tautonym, homonyms.

(4 marks)

(b) Distinguish between valid publication and effective publication of scientific names.

(6 marks)

(c) Explain the concept of author citation in plant nomenclature.

(2 marks)

**QUESTION 5**

(a) Evaluate some major advantages of the phenetic approach in conventional taxonomy.

(8 marks)

(b) Summarise the major differences between Phenetics and Cladistics.

(6 marks)

**Section B: Answer ONE question from section B (25 marks)**

**QUESTION 1**

Discuss the different types of herbarium collections and how they are established and maintained.

(25 marks)

**QUESTION 2**

Discuss the relevance of systematics to science and society.

(25 marks)

..... **End of Examination**.....