



FACULTY	Agriculture, Engineering and Natural Sciences		
DEPARTMENT	Environmental Science		
SUBJECT	Biosystematics II		
SUBJECT CODE	EBL3722		
DATE	October/November 2022		
DURATION	2 hours	MARKS	70

REGULAR EXAMINATION

Examiner: Dr. S. J. Eiseb (University of Namibia)

Moderator: Prof. I. Mapaire (University of Namibia)

This examination paper consists of 2 pages including the front page.

Instructions.

Answer **ALL** questions in Section A.

Answer **ONLY ONE** question in Section B.

UNIVERSITY OF NAMIBIA EXAMINATIONS

Section A.

Answer **all** the questions in section A

Question 1

- | | | |
|------|---|-------------|
| 1.1. | A population of lizards is split by an earthquake which leaves half of the population on an island and the other half on the tip of the peninsula. These lizards cannot swim. What type of speciation will occur? | 1 |
| 1.2. | Define reproductive isolation in zoological systematics. | 3 |
| 1.3. | Differentiate between the following terms: Paratype and Syntype. | 4 |
| 1.4. | Are homonyms across Codes permitted, for example between plants and animals? | 3 |
| 1.5. | What is the status of the ICZN ruling on electronic-only publications of nomenclature? | 4 |
| 1.6. | Briefly describe the clade Lophotrochozoa as depicted within the “New View of Animal Phylogeny”. | 6 |
| | | /21/ |

Question 2

- | | | |
|------|---|-------------|
| 2.1. | The same genus name was allocated to a snail: <i>Argus</i> Bohadsch , 1761 as well as a butterfly species: <i>Argus</i> Scopoli , 1763.
(a) Which one of the “Ruling Principles” will taxonomists use to resolve the naming conflict that arises from this situation?
(b) Which genus name will be preserved? | 6 |
| 2.2. | Why are there sometimes brackets around the author names in systematics? Answer this question with reference to the scientific name of the African lion. | 8 |
| 2.3. | Briefly describe the Morphological Species Concept (MSC) with elaborations on the advantages and disadvantages of the MSC. | 10 |
| | | /24/ |
| | Total Section A | 45 |

Section B

Answer only **one (1)** question from this section.

Question 1

- | | |
|---|-------------|
| Discuss, with examples, the four major lineages of the arthropod phylogeny. | 25 |
| | /25/ |

Question 2

- | | |
|--|---------------------------|
| Discuss the species concept that best conserves adaptive potential, with reference to the below article.
Stanton, D. W. G. et al (2019) More grist for the mill? Species delimitation in the genomic era and its implications for conservation. <i>Conservation Genetics</i> , 20 : 101–113. | 25 |
| | /25/ |
| | Total Section B 25 |
| | Grand Total 70 |

END OF QUESTION PAPER