



FACULTY	Agriculture, Engineering and Natural Sciences		
DEPARTMENT	Environmental Science		
SUBJECT	Entomology		
SUBJECT CODE	EBL3822		
DATE	November 2021		
DURATION	2 hours	MARKS	90

REGULAR EXAMINATION

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

Moderator: Prof. C. T. Downs (University of KwaZulu-Natal)

This examination paper consists of **Three (3)** 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.

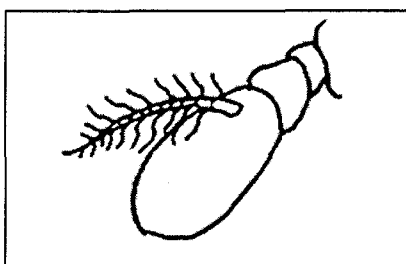
Question 1

a) Where would you find the following structures, and b) what is its principal function?

- | | | |
|------|-----------|------------|
| 1.1. | Furcula | 3 |
| 1.2. | Tentorium | 4 |
| | | /7/ |

Question 2

- | | | |
|------|--|----|
| 2.1. | Draw and label a neat diagram of a typical insect leg. | 10 |
| 2.2. | Refer to the figure below: | |



- | | | |
|------|--|-------------|
| a) | What is the insect antenna type depicted above called? | 1 |
| b) | Which insect order(s) use this type of antenna? | 1 |
| 2.3. | List the five most common types of insect leg modifications. | 5 |
| | | /17/ |

Question 3

- | | | |
|------|---|-------------|
| 3.1. | Differentiate between the following terms: Olfactory receptors and Gustatory receptors | 8 |
| 3.2. | Describe mechanisms employed by some insects for specific, directional means of host finding. | 12 |
| 3.3. | Briefly discuss the dynamics of plague (vector, pathogen and hosts). | 16 |
| | | /36/ |
| | Total Section A | 60 |

SECTION B

Answer any **ONE (1)** question from Section B.

Question 1

Differentiate between incomplete and complete metamorphosis with regards to the life cycles, habitat and feeding habits of the respective insect groups. 30
/30/

Question 2

A rare form of the AIDS virus has recently mutated into a new biotype that is extremely pathogenic to all arthropods. This disease is spreading rapidly across the planet and is expected to eliminate all insect life within two years. Describe at least five major biological consequences that such a mass extinction will have on human life. 30

/30/

Total Section B 30

Grand Total /90/