

GWANDA STATE UNIVERSITY



FACULTY OF NATURAL RESOURCES MANAGEMENT AND AGRICULTURE

DEPARTMENT OF HORTICULTURE AND CROP PRODUCTION

PROGRAMME: BSc HONOURS HORTICULTURE AND CROP

PRODUCTION/BSc (HONOURS) ANIMAL PRODUCTION AND HEALTH

**LCS 1201/NHC1201 INTRODUCTION TO ENTOMOLOGY AND
PARASITOLOGY FINAL EXAMINATION**

APRIL 2025

This examination paper consists of 3 pages

Time Allowed: 3 hours
Total Marks: 100
Special Requirements: none
Examiner's Name: **Ms. N Mbiza**

Instructions

1. Answer **ALL** questions in Section A
2. Answer any **TWO (2)** questions in Section B

Mark allocation

Question	Marks
Section A	60
Section B	40
Total attainable marks	100

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SECTION A: Answer ALL questions.

Question 1

- a) Analyze the impact of climate change on insect populations and their ecological roles. (8)
- b) Citing a relevant example, explain the effects of parasites on the host (12)

Question 2

- a) Identify the major insect orders and their characteristics. (5)
- b) Describe the process of insect metamorphosis giving examples. (5)
- c) Discuss the advantages and disadvantages of insects' high reproductive capacity in Zimbabwe's agricultural systems (10)

Question 3

- a. Describe the thorax region of the insect with the use of a diagram (10)
- b. Briefly explain the following insect abdomen modifications
 - (i) Sensory appendages (3)
 - (ii) Defensive structures (3)
 - (iii) Reproductive structures (4)

SECTION B: Answer any TWO questions.

Question 4

- a) Demonstrate the method for classifying an unknown insect specimen. (10)
- b) Compare the economic impact of ectoparasites and endoparasites on livestock. (10)

Question 5

- a) Analyse the role of environmental factors in the spread of agricultural parasites (8)
- b) Apply your knowledge of chemical communication to describe how pheromones are used by ants. (12)

Question 6

- a) Summarize the economic importance of nematodes. (5)
- b) Explain the ecological roles of mites, ticks, and spiders. (10)

c) Match the type of reproduction in insects with the definition (5)

Type of Reproduction	Definition
Oviparity	One fertilized egg divide into multiple embryos, resulting in genetically identical offspring. Certain parasitic wasps.
Viviparity	Reproduction without fertilization, resulting in offspring that are clones of the mother. Some aphids, some wasps.
Parthenogenesis	Female insects give birth to live young. Certain species of cockroaches, aphids.
Paedogenesis	Female insects lay eggs which may be fertilized internally or externally. Butterflies, moths.
Polyembryony	Larval reproduction, where larvae produce offspring without becoming adults. Some beetles.

END OF QUESTION PAPER!!!