



**1<sup>st</sup> SEMESTER 2009/2010**

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**UNIVERSITY OF SWAZILAND  
FINAL EXAMINATION PAPER**

**PROGRAMME: BACHELOR OF SCIENCE IN AGRONOMY YEAR 2**

**TITLE OF PAPER: AGRICULTURAL ENTOMOLOGY (M)**

**COURSE CODE: CP 201**

**TIME ALLOWED: TWO (2) HOURS**

- INSTRUCTIONS:**
- 1. THIS PAPER HAS FIVE (5) QUESTIONS**
  - 2. ANSWER QUESTION 1 AND ANY OTHER THREE (3) QUESTIONS**
  - 3. ALL QUESTIONS CARRY EQUAL MARKS OF TWENTY FIVE (25). MARKS FOR SUBSECTIONS ARE GIVEN IN BRACKETS WHERE APPLICABLE**

**THIS PAPER IS NOT TO BE OPENED UNTIL PERMISSION HAS BEEN GRANTED BY THE CHIEF INVIGILATOR**

INSTRUCTION:- ANSWER QUESTION 1 AND ANY OTHER THREE (3) QUESTIONS

**QUESTION 1**

Very briefly explain what each of the following mean:-

- (a) Labrum
- (b) Scape
- (c) Corbiculum
- (d) Trochanter
- (e) Ommatidium
- (f) Tympanum
- (g) Camouflage
- (h) Metamorphosis
- (i) Coxa
- (j) Mandibles
- (k) Tergum
- (l) Tarsus
- (m) Pronotum
- (n) Tegmen
- (o) Coxa
- (p) Spiracle
- (q) Labium
- (r) Proleg
- (s) Femur
- (t) Ovipositor
- (u) Maxilla
- (v) Sternum
- (w) Elytron
- (x) Ootheca
- (y) Clypeus

**(25 Marks)**

**QUESTION 2**

Make a labelled sketch of each of the following:-

- (a) A typical insect antenna (5)
- (b) A typical insect leg (5)
- (c) A typical insect's abdomen (5)
- (d) The front view of a grasshopper showing all the different parts (10)

**(25 Marks)**

**QUESTION 3**

- (a) Insects have various ways in which they survive in the face of hardships. Give one word that describes how they survive in the following circumstances:-
- (i) By looking like the surrounding area (2 marks)
  - (ii) By being deliberately conspicuous in their surroundings (2 marks)
  - (iii) By going into a period of rest when it is too cold for them to function (2 Marks)
  - (iv) By going into a period of rest when it is too hot for them to function (2 Marks)
  - (v) By producing viable eggs that have not been fertilized (2 Marks)
  - (i) By retaining the eggs until and give rise to live young (2 Marks)
- (b) Describe each of the following types of larvae and also write where they are found
- (i) Vermiform (3 Marks)
  - (ii) Eruciform (3 Marks)
  - (iii) Elateriform (3 Marks)
  - (iv) Compodeiform (3 Marks)
- (c) As far as you know which is the smallest insect known? (1 Mark)

**(25 Marks)****QUESTION 4**

Copy this table onto your answer-book and then complete it by filling in blank spaces below:-

Insect Order	Example (1 Mark each)	Typical mouthparts (1 Mark each)	Wings (2 Marks each)	Unique structure(s) (1 Mark each)
Orthoptera				
Coleoptera				
Lepidoptera				
Heteroptera				
Homoptera				

**(25 Marks)**

**QUESTION 5**

What are the differences between the following? You may make sketches to illustrate your explanations.

- (a) Capitate and clavate (5)
- (b) Pectinate and plumose (5)
- (c) Aristate and setaceous (5)
- (d) Filiform and moniliform (5)
- (e) Apposition and superposition (5)

**(25 Marks)**