



2nd SEMESTER 2010/ 2011

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**UNIVERSITY OF SWAZILAND
SUPPLEMENTARY EXAMINATION PAPER**

**PROGRAMMES: BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION
YEAR 2, BACHELOR OF SCIENCE IN AGRONOMY YEAR 2,
AND BACHELOR OF SCIENCE IN HORTICULTURE YEAR 2**

TITLE OF PAPER: AGRICULTURAL ENTOMOLOGY

COURSE CODE: CP 203

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**

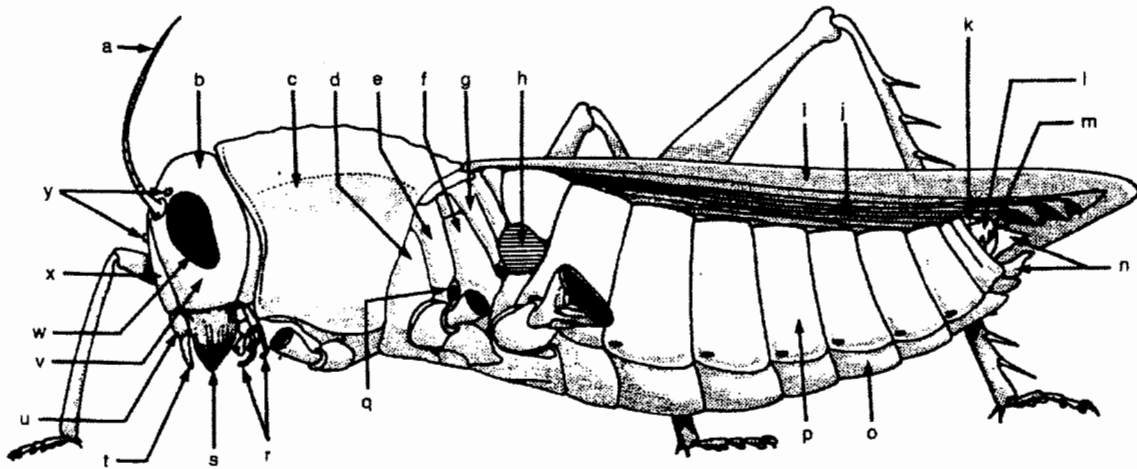
**THIS PAPER IS NOT TO BE OPENED UNTIL PERMISSION HAS BEEN GRANTED
BY THE CHIEF INVIGILATOR**

Instruction:- Answer Question 1 and any other three (3) questions

Question 1

A. Give the names of the parts labelled a – y

(25 Marks)



Each carries 1 Mark

- (a)
- (b)
- (c)
- (d)
- (e)
- (f)
- (g)
- (h)
- (i)
- (j)
- (k)
- (l)
- (m)
- (n)
- (o)

- (p)
- (q)
- (r)
- (s)
- (t)
- (u)
- (v)
- (w)
- (x)
- (y)

(25 Marks)

Question 2

- A. Name any FOUR (4) species of locusts found in the African continent and also indicate the geographical location of each. (Marks 8)
 - B. Give the life cycle of one of the locust species you have named. (10 Marks)
 - C. How does a locust outbreak occur? (7) Marks)
- (25 Marks)**

Question 3

- A. Make a well-labelled sketch of the bodywall of an insect and give at least one function of the parts you have labelled. (15 Marks)
- B. What are semiochemicals? Give at least TWO examples of these that come from living organisms? (6 Marks)
- C. Name any TWO (2) commercial products that are extracted from insects. (4 Marks)

(25 Marks)

Question 4

- A. Give the names of insect Orders that have the following:-
- | | |
|--|-----------|
| a. A furcula | (1 Mark) |
| b. Caudal filaments | (2 Marks) |
| c. Halteres | (2 Marks) |
| d. Opisthognathous piercing and sucking mouthparts | (1 Mark) |
| e. Scansorial legs | (2 Marks) |
| f. Moniliform antennae | (2 Marks) |
| g. Scales on their bodies | (2 Marks) |
| h. Elytra | (1 Mark) |
| i. Polymorphism | (2 Marks) |
| J. Hemimetabolous type of metamorphosis | (3 Marks) |
| k. Bilaterally flat | (1 Mark) |
| l. Hypermetamorphosis | (2 Marks) |
| m. Rasping and sucking mouthparts | (1 Mark) |
| n. Hemelytra | (1 Mark) |
- B. What is the difference between ants and termites? (2 marks)
- (25 Marks)**

Question 5

Give an account what is meant by biological control" giving examples to illustrate your explanation (25 Marks)