



2nd SEMESTER 2010/ 2011

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**UNIVERSITY OF SWAZILAND
FINAL 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. What is the difference between the following:- (20 Marks)
Each question carries 2 marks
- a. Legs of ticks and those of insects?
 - b. Insect pollinated flowers and wind pollinated flowers?
 - c. Ordinary crabs and horse-shoe crabs
 - d. Ants and termites
 - e. Apposition and superposition eyes?
 - f. Dioptic and holoptic vision?
 - g. Heteroptera and Homoptera?
 - h. Pectinate and plumose antennae?
 - i. Moths and butterflies?
 - j. Rats and mice?
- B. What do we mean when we say insects have become resistant to pesticides? Give an example to illustrate your answer. (5 marks)
(25 Marks)

Question 2

- A. Which living organism is referred to as the armyworm in southern Africa? How would you identify each of its development stages? (5 Marks)
- B. Give the life cycle of this pest. (10 Marks)
- C. Briefly explain how the outbreak of armyworms occurs? (10 Marks)
(25 Marks)

Question 3

- A. Name any TWO (2) crop pests that transmit diseases in citrus as well as the diseases each transmits. (8 Marks)
- B. Name any TWO (2) pests with biting and chewing mouthparts in crucifers (4 Marks)
- C. Name FOUR stem borers found in cereals in Swaziland and also indicate how you would identify each of them. (12 Marks)
- D. Name an exotic storage pest in stored cereals in Swaziland. (1 Mark)
(25 Marks)

Question 4

Briefly explain how you would use legislation to control pests? **(25 Marks)**

Question 5

- A. Give names of FOUR (4) different types of synthetic pesticide with at least TWO examples of each. (12 Marks)
- B. Give names of FOUR insect Orders in which you find predators and also give examples in each case. (8 Marks)
- C. Give one example of each of the following:- each carries 1 mark. (5 Marks)
- a. A storage pest that affects stored cowpeas
 - b. A disease that is transmitted by leafhoppers in maize
 - c. A very tiny parasitoid
 - d. An insect that is predaceous on the Australian bug
 - e. Any chemical that can be used as a synergist

(25 Marks)