



2nd SEMESTER 2009/2010

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**UNIVERSITY OF SWAZILAND
SUPPLEMENTARY EXAMINATION PAPER**

PROGRAMMES: BACHELOR OF SCIENCE IN AGRONOMY YEAR 2, BACHELOR OF SCIENCE IN HORTICULTURE YEAR 2, AND BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION 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 (Compulsory)

- (a) What do the following terms mean? (10)
 - (i) Metamorphosis
 - (ii) Coarctate
 - (iii) Acuity (visual)
 - (iv) Open blood circulatory system
 - (v) Tympanum

- (b) Give 2 examples of insects in the following Orders. (10)
 - (i) Diptera
 - (ii) Lepidoptera
 - (vi) Coleoptera
 - (vii) Orthoptera
 - (viii) Homoptera

- (c) Give an example of a pesticide in each of the following groups. (5)
 - (i) Chlorinated Hydrocarbon
 - (ii) Organophosphate
 - (iii) Carbamate
 - (iv) Pyrethroid
 - (v) Insect Growth Regulator (IGR)

(25 Marks)

Question 2

How would you identify each of the following economically important insect Orders:- (5 marks each)

- (a) Heteroptera
- (b) Thysanoptera
- (c) Siphonaptera
- (d) Mallophaga
- (e) Diptera

(25 Marks)

Question 3

The pests given below are some of the most destructive in agriculture in practically every country in Africa. What crops do they affect and what damage do they cause in these crops?

- (a) African bollworm (5)
- (b) Cutworms (5)
- (c) Diamond-back moth (5)
- (d) Larger grain borer (5)
- (e) Bagrada bug (5)

(25 Marks)

Question 4

Answer the following questions on pesticide labels:-

- (a) How would you tell how toxic a chemical is? (15)
- (b) How are the names of pesticides shown on the label (10)

Question 5

(a) Give an example of a phytosanitary pest as well as at least 5 countries where it is found.

(6)

(b) Suggest ways in which this pest should be controlled in Swaziland

(10)

(c) What are the differences between the following:-

(i) Anoplura and Mallophaga

(3)

(ii) Heteroptera and Homoptera

(3)

(iii) Lepidoptera and Trichoptera

(3)

(25 Marks)