



UNIVERSITY OF SWAZILAND

SUPPLEMENTARY EXAMINATION PAPER

PROGRAMMES:

BACHELOR OF SCIENCE IN AGRONOMY YEAR 2

BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION AND EXTENSION YEAR 2

BACHELOR OF SCIENCE IN HORTICULTURE YEAR 2

COURSE CODE: CP 203

TITLE OF PAPER: AGRICULTURAL ENTOMOLOGY

TIME ALLOWED: TWO (2) HOURS

INSTRUCTION: ANSWER ALL QUESTIONS

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CHIEF INVIGILATOR

**Question 1 (20 Marks)**

Name five unique features of insects and five features they share with other arthropods

**Question 2 (20 Marks)**

For each of the insect orders below provide the following:

1. The original Latin or Greek meaning of the Order name (1mark)
  2. The common of the Order (1mark)
  3. Two key features of insects belonging to the Order (2mark)
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- a) Orthoptera (4 Marks)
  - b) Dermaptera (4 Marks)
  - c) Phthiraptera (4 Marks)
  - d) Diptera (4 Marks)
  - e) Mantodea (4 Marks)

**Question 3 (20 Marks)**

Describe the following structures and discuss their role in insect physiology:

- a) Peritrophic membrane (10 Marks)
- b) Salivary gland (10 Marks)

**Question 4 (20 Marks)**

Describe the functions of the following arthropod structures

- a) Basement membrane (2 Marks)
- b) Chitin in the insect integument (2 Marks)
- c) Cephalothorax of a spider (2 Marks)
- d) Elytra (2 Marks)
- e) Tympanum (2 Marks)
- f) Cerci (2 Marks)
- g) Spiracles (2 Marks)
- h) Mandible of a grasshopper (2 Marks)
- i) Halter of a house fly (2 Marks)
- j) Fossorial legs (2 Marks)

**Question 5 (20 Marks)**

- a) Name five common situations that lead to pest outbreaks (5 Marks)
- b) Explain how the situations you mentioned on Q5 above lead to a pest outbreak (15 Marks)