

BINDURA UNIVERSITY OF SCIENCE EDUCATION
FACULTY OF AGRICULTURE AND ENVIRONMENTAL SCIENCE

Department of Crop Science
BSc Crop Science (Honours) Part II Examination
Introduction to Entomology and Nematology

AGC 209

3 HOURS (100 Marks)

INSTRUCTIONS

Answer any TWO questions from each of sections A and B. Each question carries 25 marks.

SECTION A: ENTOMOLOGY

1. (a) Use five morphological features to distinguish butterflies from moths. [5 marks]
- (b) Distinguish insects in the order Thysanoptera from Hemiptera. [5 marks]
- (c) With reference to the order Isoptera, describe the classes/castes that are found in insects. [15 marks]
2. (a) Draw and label the insect egg. [5 marks]
- (b) Classify any insect of your choice into its Phylum, Class, Sub-class and Order. [5 marks]
- (c) Write notes on the binomial system of nomenclature used in insect classification. [15 marks]
3. (a) Briefly explain the harmful effects of insects in crop agriculture. [5 marks]
- (b) Discuss five features that make insects successful. [20 marks]

SECTION B: NEMATOLOGY

4. (a) With the aid of a diagram, describe the digestive system of a nematode. [10 marks]
- (b) Explain how adding organic matter to the soil may help in nematode control. [7 marks]
- (c) Distinguish, with relevant examples, sedentary endoparasitic and migratory

endoparasitic nematodes.

[8 marks]

5. (a) Describe the passive dispersal of nematodes. [16 marks]
- (b) Explain the effects of the following on nematode populations;
- (i) Water [3 marks]
- (ii) Temperature [3 marks]
- (iii) pH. [3 marks]
6. (a) With the aid of a diagram, describe the structure of the nematode cuticle. [10 marks]
- (b) Discuss the role of nematodes in agriculture. [15 marks]

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