



MACHAKOS UNIVERSITY

University Examinations for 2022/2023 Academic Year

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

**THIRD YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR
BACHELOR OF SCIENCE IN AGEDE**

KST301: AGRICULTURAL ENTOMOLOGY

DATE: 9/3/2023

TIME: 8.30 – 10.30 AM

INSTRUCTIONS

1. Answer question 1 (compulsory) and any other two questions
2. Illustrate your answers with diagrams wherever appropriate.

QUESTION ONE (30 MARKS)

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|----|---|-----------|
| a) | Explain the regulation of insecticide use in Kenya | (3 marks) |
| b) | Describe the mouthparts of the desert locust <i>Schistocerca gregaria</i> | (3 marks) |
| c) | Explain why diapause is important in the lifecycle of an insect | (3 marks) |
| d) | Characterize ametabolous metamorphosis in insects | (3 marks) |
| e) | Describe the tracheal system of insects | (3 marks) |
| f) | Outline the features of the cassava green mite | (3 marks) |
| g) | Outline the characteristics of the order Hemiptera | (3 marks) |
| h) | Explain the economic importance of insect <i>Sitotroga cerealella</i> | (3 marks) |
| i) | Outline the structure of the female reproductive system of an insect | (3 marks) |
| j) | differentiate between a pesticide and an insecticide | (3 marks) |

QUESTION TWO (20 MARKS)

Discuss the biology of a named desert locust and explain its economic importance (20 marks)

QUESTION THREE (20 MARKS)

Discuss the role of fumigation in the management of insect pest problems (20 marks)

QUESTION FOUR (20 MARKS)

Discuss how you would prevent damage of stored grain by insects (20 marks)

QUESTION TWO (20 MARKS)

Discuss the economic importance of named bruchids (20 marks)