

CHUKA



UNIVERSITY

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## UNIVERSITY EXAMINATIONS

### EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN AGRICULTURE

**AGRI 233: CROP ENTOMOLOGY**

**STREAMS: BSC (AGRIC)**

**TIME: 2 HOURS**

**DAY/DATE: TUESDAY 03/12/2019**

**11.30 AM – 1.30 PM**

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#### INSTRUCTIONS:

- **This paper has two sections A and B**
- **Section A accounts for 30 marks while Section B accounts for 40 marks**
- **Section A is compulsory**
- **Answer any two questions in section B**

#### SECTION A (30 MARKS): ANSWER ALL QUESTIONS

1. Describe the characteristics of arthropods. [6 marks]
2. Describe two types of metamorphosis typical of insects. [4 marks]
3. Describe how legislation can be used as a strategy to control pests. [4 marks]
4. With relevant examples, describe the control of insect pests using the following strategies:
  - (i) Border crops [4 marks]
  - (ii) Trap crops [4 marks]
  - (iii) Pathogens [4 marks]
  - (iv) Insect growth regulators [4 marks]

#### SECTION B (40 MARKS): ANSWER TWO QUESTIONS

5.
  - (i) Define the term integrated pest management (IPM) [2 marks]
  - (ii) Describe steps that should be considered when implementing an IPM program. [12 marks]

- (iii) Describe the mode of action of the organophosphate class of insecticides. [6 marks]
6. (a) Discuss potato tuber moth under the following sub-headings: [6 marks]
- (i) Host range [2 marks]
  - (ii) Biology & damage [6 marks]
  - (iii) Control [6 marks]
- (b) Discuss botanical control limitations in insect pest management. [6 marks]
7. Describe how you would develop an integrated pest management programme to control Green peach aphid (*Myzus persicae*). Give reasons for selecting the strategies named. [20 marks]
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