



MASENO UNIVERSITY
UNIVERSITY EXAMINATIONS 2016/2017

**FOURTH YEAR FIRST SEMESTER EXAMINATIONS FOR
THE DEGREE OF BACHELOR OF SCIENCE IN AGRONOMY
AND ANIMAL SCIENCE WITH INFORMATION
TECHNOLOGY**

MAIN CAMPUS

AHC 404: ECONOMIC ENTOMOLOGY

Date: 29th November, 2016

Time: 12.00 - 3.00 pm

INSTRUCTIONS:

- Answer ALL questions in SECTION A and any THREE questions in SECTION B.



AHC 406: ECONOMIC ENTOMOLOGY

TIME 3.00 HRS (TOTAL MARKS 70)

ATTEMPT ALL THE QUESTIONS IN SECTION A AND ANY THREE IN SECTION B. DO NOT USE ANY RELEVANT EXAMPLE MORE THAN ONCE IN ANSWERING ANY QUESTION (Provided in the paper or otherwise)

SECTION A

1. Account for Silviculture and Apiculture in Kenya (5 marks)
2. With any relevant two examples, account for direct losses incurred in agriculture as a result of major pests that attack the following crops: Tea, Sugarcane, Maize, Cabbage, Cotton, Roses, Mango, Coffee, Sweet Paper, Sweet Potato (10 marks)
3. Elucidate specifically the roles played by the following insects in crop damage and their management: *Hercithrips bicinctus*, *Aleucanthus woghumi*, *Nacolea octasema*, *Brevicoryne brassicae*, *Plutella xylostella*, *Bemisia tabaci*, *Trioza erytrea* (10.5 marks)
4. Briefly discuss the role of integrated pest management in Kenya's Agriculture (5 marks)
5. Using the Biology of the following pests, account for their management: Irish Potato Leaf Beetle, Mango Mealy Bug, Citrus Whitefly and Grain Flour Moth (4 marks)
6. *Tuta absoluta* is a fairly new pest that attacks the tomato crops and without care, it usually destroys the entire crop in any given area, as it is the case in the Rift Valley of Kenya. It is alleged to have invaded the Country from the neighbouring of Ethiopia and there is no prescribed management method in the public domain. Briefly explain what could have led to the outbreak of this epidemic (5.5 marks)

SECTION B

- 7 With relevant examples, give an account of pest damage symptoms by: pests with chewing and biting mouthparts, piercing and sucking mouthparts, damage to fruits and seeds damage to flowers and buds
(10 marks)
- 8 Discuss the factors that influence insects' population in the tropics and sub tropics
(10 Marks)
- 9 With relevant examples, in each case, give a detailed account of the role played by: Botanicals, Organo-phosphorus Carbamates in the management of pests in agriculture
(10 Marks)
- 10 Discuss systematically the management of pests in Carnations, Wheat and Oranges
(10 Marks)