MACHAKOS UNIVERSITY

University Examinations for 2018/2019 Academic Year

SCHOOL OF AGRICULTURAL SCIENCES

DEPARTMENT OF AGRIBUSINESS AND TRADE

SECOND YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF SCIENCE IN AGRIBUSINESS AND TRADE

AGR 307 PRINCIPLES OF CROP PROTECTION

DATE: 24/7/2019 **TIME: 8.30-10.30 AM**

INSTRUCTIONS;

Answer *ALL* questions from Section A and any other *TWO* from Section B:

SECTION A: COMPULSORY: (30 MARKS)

QUESTION ONE

(a) Explain THREE steps followed in pest damage assessment (3 marks)

(b) Explain threshold for pest control on a specific crop (3 marks)

(c) Describe TWO types of insect identification methods of pest species (4 marks)

(d) Explain FOUR advantages of Integrated Pest Management (IPM) over all other control methods (4 marks)

(e) Citing an example explain importance of predatory insect in a production system (4 marks)

(f) Explain THREE major economic importance in crops production (6 marks)

(g) Giving examples of known major pests or diseases, explain the economic impact on the production of the following SIX crop types (6 marks)

SECTION B: ANSWER ANY TWO QUESTIONS (40 MARKS)

QUESTION TWO (20 MARKS)

(a) Explain FIVE main roles of Pesticide Control Products Board (PCPB) in Kenya (10 marks).

(b) Explore the FOUR steps of agro chemical product licensing procedure in Kenya (10 marks)

QUESTION THREE (20 MARKS)

a) Explain FIVE methods of pest control on crops in different systems giving specific examples pests and diseases where the methods are applied (10 marks)

b) Explain TWO advantage of the pest management options in (i) above. (10 marks)

Control method	**Advantage**
1.	
2.	
3.	
4.	
5.	

QUESTION FOUR (20 MARKS)

a) Give TWO examples of insect pollinators in maize production systems in Kenya, describing their nesting and availability (8marks)

b) Given that one of the above (i) pollinators contributes 90% of maize pollination, calculate actual grain yield loss of four 90kg-bags of maize if grown in greenhouse where no access by pollinators (12 marks).

QUESTION FIVE (20 MARKS)

(a) Explain the FOUR emerging mitigation mesures of preventing crop loss and compensating farmers with increased climate variability or change in crop production systems (12 marks)

(b) Making reference to current input production costs, calculate the cost of maize production on an acre-plot showing the inputs required with estimate value in KES (8 marks).