



UNIVERSITY OF EMBU

2018/2019 ACADEMIC YEAR

SECOND SEMESTER EXAMINATIONS

FIRST YEAR EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE IN
AGRICULTURAL RESOURCE MANAGEMENT/PLANT BREEDING

ACS 603: CROP PESTS MANAGEMENT

DATE: APRIL 8, 2019

TIME: 2.00 – 5.00PM

INSTRUCTIONS:

Answer any FOUR Questions

QUESTION ONE (30 MARKS)

- a) Discuss weed classification according to lifespan (9 marks)
- b) Seed dormancy is important in the survival of the weeds. Explain the effects of the following factors on seed dormancy which enhances germination ;
- i) Moisture (2 marks)
 - ii) Light (2 marks)
 - iii) After –ripening (2 marks)
 - iv) Mechanically resistant seed coat (2 marks)
 - v) Burning (6 marks)
 - vi) Oxygen (2 marks)

QUESTION TWO (20 MARKS)

- a) Define the following terms :
- i) Economic injury level (1 mark)
 - ii) Economic threshold (1 mark)
 - iii) Economic pest (1 mark)
- b) Discuss the economic theory concept of pest control and highlight it's deficiencies (15 marks)



ISO 27001:2013 Certified

Knowledge Transforms



ISO 9001:2015 Certified

- c) In the effort to manage pests, Integrated Pest Management (IPM) system is important. You being a consultant in this field, explain to the visiting farmers the role of biological control in the IPM system (7 marks)

QUESTION THREE (20 MARKS)

- a) The cause of the disease is established through Koch's postulates. Discuss (8 marks)
- b) Outline three factors which cause an epidemic of the disease to occur (3 marks)
- c) Write short notes on the following;
- i) Monocyclic pathogens (5 marks)
 - ii) Polycyclic pathogens (4 marks)
 - iii) Polyetic pathogens (2 marks)
- d) In identifying the viral diseases in the field, macroscopic symptoms are used. Discuss (3 marks)

QUESTION FOUR (20 MARKS)

- a) Discuss five direct losses caused by weeds to agriculture (10 marks)
- b) Outline any five (5) ways of diagnosis of viral infections where symptomatology is difficult (5 marks)
- c) Discuss the characteristics of a chemical that can be used in the IPM system with the intention of conserving the environment (10 marks)

QUESTION FIVE (20 MARKS)

- a) Discuss the control of weeds under the following categories
- i) Prevention (2 marks)
 - ii) Eradication (2 marks)
 - iii) Management (6 marks)
- b) Discuss the cultural methods of pest control, outlining various strategies involved (8 marks)
- c) The severity of a disease on a plant is influenced by some factors. Qualify the statement (7 marks)

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