



UNIVERSITY OF EMBU

2016/2017 ACADEMIC YEAR

SECOND SEMESTER EXAMINATION

FOURTH YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN
AGRICULTURE

ACP 403: POSTHARVEST PESTS AND DISEASES

DATE: APRIL 5, 2017

TIME: 8:30-10:30AM

INSTRUCTIONS:

Answer Question ONE and ANY other TWO Questions

QUESTION ONE

- a) Describe the three major causes of postharvest losses (3 Marks)
- b) State any three sources of postharvest arthropod pest infestation (3 Marks)
- c) Briefly describe signs of infestation and the damage caused by maize weevil on maize (5 Marks)
- d) Describe how bean bruchids are disseminated (3 Marks)
- e) State any four mycotoxins that affect produce (2 Marks)
- f) Outline the economic importance of mycotoxins (5 Marks)
- g) Describe baiting methods used in rat control (2 Marks)
- h) Describe the symptoms and signs of grey mould disease (5 Marks)
- i) Outline any four indicators of the presence of rats in a store (2 Marks)

QUESTION TWO

- a) Discuss postharvest disease control (10 Marks)
- b) Discuss any five methods that are used in the control of arthropod pests of produce in storage (10 Marks)

QUESTION THREE

- a) With regard to bean bruchids, describe:
- i. the sources of infestation on new crop (2 Marks)
 - ii. conditions favouring infestation (2 Marks)
 - iii. life cycle (4 Marks)
 - iv. signs of infestation and damage caused (2 Marks)
- b) Discuss how detoxification of mycotoxins from a product is performed (10 Marks)

QUESTION FOUR

- a) Considering bacterial soft rot disease:
- i. Name the causative agent(s) (3 Marks)
 - ii. Describe the distinctive signs/symptoms of the disease (2 Marks)
 - iii. Mode of pathogen spread and (2 Marks)
 - iv. Conditions favouring disease development (3 Marks)
- b) You have been appointed by the National Cereals and Produce Board to advise them on the management of rats in their stores. Outline your recommendations (10 Marks)

QUESTION FIVE

- a) For aflatoxin:
- i. Name the pathogen responsible for its production (2 Marks)
 - ii. Types (2 Marks)
 - iii. Toxicity in farm animals (3 Marks)
 - iv. Conditions favouring production (3 Marks)
- b) You are appointed as a plant disease consultant by the Embu County government. You encounter anthracnose of mango in many of the farmers' fields. Prepare an advisory report on the field management strategies that could be used by the farmers to reduce the disease problem at the post-harvest stage (10 Marks)

END