



UNIVERSITY OF EMBU

2019/2020 ACADEMIC YEAR

SUPPLEMENTARY/SPECIAL EXAMINATIONS

SECOND YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE

AGRICULTURE, BACHELOR OF SCIENCE HORTICULTURE, BACHELOR OF

SCIENCE AGRICULTURAL EDUCATION AND BACHELOR OF SCIENCE

AGRIBUSINESS

ACP 201/AEB 211: PRINCIPLES OF PLANT PATHOLOGY AND DISEASE

MANAGEMENT

DATE: OCTOBER 23, 2020

TIME: 11:00 AM – 1:00 PM

INSTRUCTIONS:

Answer Question ONE and ANY Other TWO Question

QUESTION ONE (30 MARKS)

- a) Briefly outline the disease management strategies for bacterial diseases (5 marks)
- b) Briefly explain how plant nutrition is used in plant disease management (3 marks)
- c) Outline six disease symptoms viruses exhibit on plants (3 marks)
- d) Briefly outline how you would proof the pathogenicity of a pathogen (5 marks)
- e) Outline five methods used to characterize plant pathogenic fungi (3 marks)
- f) Explain the mechanism of variability in plant pathogens (4 marks)
- g) Farmers could manipulate the environment in the management of plant diseases. Describe to any three ways a farmer could undertake this practice. (3 marks)



ISO 27001:2013 Certified

Knowledge Transforms



ISO 9001:2015 Certified

- h) Describe the characteristics of plant pathogenic bacteria (4 marks)

QUESTION TWO (20 MARKS)

- a) Describe how you could determine the causal agent of a disease (8 marks)
- b) You are required to train farmers on over-seasoning in relation to plant pathogenic bacteria for the purposes of helping them to reduce the impacts of disease in the fields. Prepare notes that you would use in this training (12 marks)

QUESTION THREE (20 MARKS)

- a) For the grey leaf spot disease in maize:
- i) Name the causative agent
 - ii) Describe the symptoms and or signs
 - iii) Mode of pathogen spread and
 - iv) Conditions favouring disease development of rice blast disease (10 marks)
- b) Discuss the dissemination modes of plant pathogenic fungi (10 marks)

QUESTION FOUR (20 MARKS)

- a) Discuss sources of inoculum of plant pathogenic agents (10 marks)
- b) Discuss vertical resistance (10 marks)

QUESTION FIVE (20 MARKS)

Discuss the following:

- a) Pathogen penetration in host plants (10 marks)
- b) The concept of disease triangle (10 marks)

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