



MACHAKOS UNIVERSITY COLLEGE

(A Constituent College of Kenyatta University)
University Examinations for 2015/2016 Academic Year

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF PHYSICAL SCIENCES

FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF
SCIENCE IN BIOLOGY

SBT 205: PHYTOPATHOGENS

DATE: 10/8/2016

TIME: 8.30-10.30 AM

INSTRUCTION

Answer question one and any other two questions

SECTION A

QUESTION ONE

- Explain how a host, a pathogen and environment interaction can cause a disease in plants. (3 marks)
- Explain how moisture levels can interfere with a plant physiological functions. (3 marks)
- Define the distinguishing features of a healthy plant. (3 marks)
- Giving an example describe what is a facultative saprophyte. (3 marks)
- State three main ways in which plant disease pathogens can affect plants (3 marks)
- Briefly describe the following generations of diseases: monocyclic, polyetic and polycyclic. (3 marks)
- Distinguish plesionecrosis from holonecrosis in plants, giving examples. (3 marks)

- h) Briefly describe damping off in nursery seedlings. (3 marks)
- i) Explain three main factors that influence spore germination on a plant leaves. (3 marks)
- j) Explain agents and conditions responsible for the spread of plant viral diseases. (3 marks)

SECTION B (40 MARKS)

QUESTION TWO

- a) Discuss how cultural practices can be employed in managing crop diseases in Kenya. (10 marks)
- b) Discuss the three main ways of classifying and application of plant pesticides (10 marks)

QUESTION THREE

- a) Discuss classification of plants pathogens on the basis of occurrence and distribution. Give examples. (10 marks)
- b) Discuss the histological plant symptoms. (10 marks)

QUESTION FOUR

- a) Describe the life cycle of the leaf wheat rust. (10 marks)
- b) Describe the action of pectin degrading enzymes involved in pathogenesis. Give one example. (10 marks)

QUESTION FIVE

- a) Discuss ways of pathogen survival in plants. Give examples. (10 marks)
- b) Discuss ways by which pathogens invade their host, giving examples. (10 marks)