



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2011/2012

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF
SCIENCE (CROP IMPROVEMENT AND PROTECTION) AND BACHELOR OF
EDUCATION (SCIENCE)

KST 302: PLANT PATHOLOGY AND MANAGEMENT

DATE: TUESDAY, 27TH MARCH 2012

TIME: 11.00 A.M.- 1.00 P.M.

INSTRUCTIONS:

Answer **ALL** questions in Section A and **ANY TWO** questions
in Section B.

Answers in Section A should be **concise**.

SECTION A: SHORT ANSWER QUESTIONS (5 marks each)

1. Define the following terms
 - a. Tyloses
 - b. Scab
 - c. pathogenicity
 - d. Predisposition
 - e. Phytoalexins
2. Explain how plant parasitic nematodes can be extracted from roots.
3. State at least five differences between vertical and horizontal resistance in plant.

4. Match correctly the diseases listed below with their causal agent.

Disease	Causal Agent
a. Late blight of potatoes	<i>Agrobacterium tumefaciens</i>
b. Club root of Crucifers	<i>Podosphaera fusca</i>
c. Crown gall of plums	<i>Puccinia graminis</i> var. <i>tritici</i>
d. Powdery mildew of cucurbits	<i>Phytophthora infestans</i>
e. Wheat rust	<i>Plasmodiophora brassicae</i>

5. Briefly discuss survival of plant pathogens.
6. Explain the significance of plant cellular structures in defending the plants against attack by the pathogen.
7. Write short notes on mechanical penetration of plant by parasitic fungi.
8. Briefly discuss the significance of heat treatment in plant disease management.

SECTION B: ESSAY QUESTIONS (15 marks each)

Answer **ANY TWO** questions.

9. Critically examine the role of KEPHIS in the management and control of plant diseases in Kenya.
10. Write an essay on root-knot disease of vegetables.
11. Discuss the economic importance of plant pathogens with special reference to Kenya.
12. Assume you have been given a diseased spinach leaf showing necrotic spots. Explain how you would go about determining the causal agent of the disease.
