



THE UNIVERSITY OF ZAMBIA
SCHOOL OF AGRICULTURAL SCIENCES
DEPARTMENT OF PLANT SCIENCE

AGC 3342: Crop Protection

Test 1 Duration: 2 hrs 1st JULY 2016 ANSWER ALL QUESTIONS

Question 1

Write short notes on the following

- a. Solarisation as used in Nematode Control (5 marks)
- b. Integrated Disease Management (5 marks)
- c. Continuous Infection chain (5 marks)

Question 2

- i. Define the following terminologies used in plant pathology (12 marks)
 - a. Avirulence ✓
 - b. Inoculum ✓
 - c. Facultative Saprophyte ✓
 - d. Susceptible ✓
 - e. Pathogenesis ✓
 - f. Nectroph ✓
- ii. Explain four ways on why plant diseases are important (8 marks) ✓

Question 3

- a) With the aid of an illustration and appropriate examples discuss the plant disease cycle as conceptualized in plant pathology (13 marks)
- b) A new race of *Agrobacterium tumefaciens* is been suspected to be gram positive. Explain in detail how you can verify this claim (12 marks)

- c. Explain the concept of "Plant Disease Triangle" as used in plant pathology. (10 marks)

SECTION B ENTOMOLOGY- ANSWER QUESTION 4 AND ANY OTHER

Question 4

Insects are found in almost every conceivable habitat on the planet earth.

- Discuss the reasons that have made Insects very successful animals on earth (12 marks).
- There is an increasing realization about the importance of insects to man and the ecosystem. Discuss (8 marks).

Question 5

Insects mainly depend on chemical signals for their communication. Describe the different groups of semiochemicals (10 marks).

Question 6

Briefly describe how insects become pests (10 marks)

SECTION C: WEED SCIENCE- ANSWER QUESTION 7 AND ANY OTHER

Question 7

Weeds are among pests of great economic importance in agriculture. Before a control measure is applied, correct identification of a weed forms a key preliminary step.

- Discuss the major classifications of weeds (12 marks).
- State the characteristics of annual weeds (4 marks).
- List 4 examples of perennial weeds (with correct scientific names) (4 marks).

Question 8

Define cultural control, and state 8 of its components (10 marks).

Question 9

What is biological control of weeds? Briefly state 5 major components of biological control of weeds (10 marks).

END OF EXAMINATION