

COLLEGE OF AGRICULTURE, FISHERIES & FORESTRY

Bachelor of Science in Agriculture Year 3: Trimester 1 Examination, 2017

PPA 601: Plant Diseases & Their Management

Allocated Time: 3 hours and 10 Minutes (Reading Time)

Allocated Marks: 60

Instructions:

1. This paper is consist of **four** sections. All Sections are **compulsory**.
2. Ensure to write your names and ID Number on each sheet of paper of the answer sheet.
3. No written or printed materials are allowed into the examination room.
4. No mobile phone and other electronic device is allowed into the examination room.
5. You need to provide your own writing materials for the examination.

The table below shows the breakdown of the assessment paper and allocated time.

Section	Section Description	Suggested Time	Allocated Marks
A	10 Multiple Choices	15 Minutes	10
B	10 Matching	15 Minutes	10
C	6 Short Answer Questions	30 Minutes	20
D	2 Essay Questions	120 minutes	20

Section A: Multiple Choice Questions

(10 Marks)

1. Shealth Blight is a fungal disease of rice caused by:

- a. *Rhizoctonia solani*
- b. *Pyricularia oryzae*
- c. *Magnaporthea grisea*
- d. *Xanthomonas Oryzae*

2. Majority of plant diseases are caused by:

- a. Bacteria
- b. Virus
- c. Fungus
- d. Nematode

3. Which of the following part is a reproductive structure of a fungus.

- a. Plasma
- b. Sclerotia
- c. Root
- d. Egg

4. Tumeric is a common spicy crop grown in Fiji under the family.

- a. Colocasia
- b. Curcubits
- c. Fabaceae
- d. Zingerberaceae

5. Citrus greening disease is also known as

- a. Huanglongbing disease
- b. Taenglongbing disease
- c. Citrus broom disease
- d. Green dragon disease

6. Papapa ringspot disease is an endemic disease to Fiji caused by

- a. Cytoplasm
- b. Protozoa
- c. Virus
- d. Bacteria

7. Which of the following is **not** part of integrated disease management practice?

- a. Exclusion
- b. Eradication
- c. Avoidance
- d. Biological

8. The principle where a pathogen is eliminated after it has been introduced into the area before it become widely spread is known as:

- a. Chemical control c. Eradication
 b. Quarantine d. Exclusion

9. The apple scab disease is usually caused by:

- a. *Venturia inaequalis* c. *Erwinia psidii*
 b. *Erwinia amylovora* d. *Puccinia psidii*

10. Crop Rotation is an example of :

- a. Biological Control c. Mechanical control
 b. Cultural control d. Physical Control

SECTION B:

Matching

(10 marks)

Match the following term in the table below to their correct description on the right.

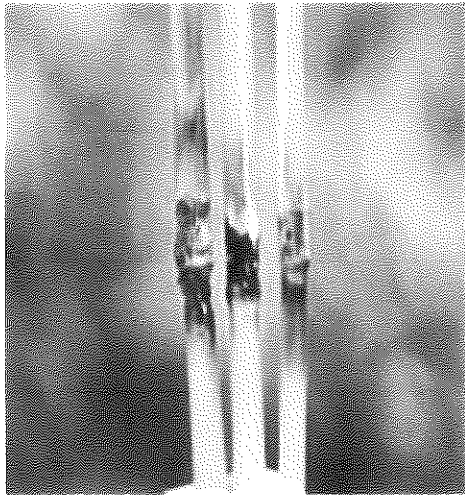
1	Sooty Mould	<i>Meliola mangiferae</i>
2	Citrus Powdery Mildew	Taro family name
3	Grapevine	Rice variety
4	Truban	Reproductive structure of fungus
5	Catahoula	<i>Vitis vinifera</i>
6	Araceae	Payaya ringspot vector
7	Zoospore	<i>Candidatus Liberobacter</i>
8	Grapevine Downey mildew	<i>Oidium magniferae</i>
9	Aphids	Fungicide
10	Citrus greening	<i>Plasmopara viticola</i>

SECTION C

Short Answer Questions

(20 Marks)

1. With the supplied diagrams, write down the name of the disease and causal agents. (8 marks)



Disease Name: _____

Causal Agent: _____



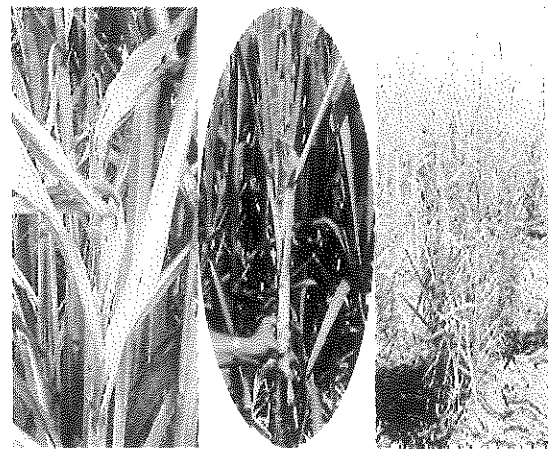
Disease Name: _____

Causal Agent: _____



Disease Name: _____

Causal Agent: _____



Disease Name: _____

Causal Agent: _____

2. List and explain any three principles of plant disease management. (3 marks)
3. Explain how insect vectors plays a major role in disease outbreak with given examples. (2 marks)
4. Explain the importance of controlling disease outbreak before it reaches the Economic Injury level. (2 marks)
5. List and explain 2 methods of cultural control with given examples. (3 marks)
6. Briefly explain the importance of genetic resistance in the management of disease outbreak. (2 marks)

SECTION D: Essay Questions

(20 Marks)

Based on the topics below, you are to select **2 Plant Diseases** and write an essay of 800-1000 words. The Essay should address the following:

- i. Name of disease
- ii. Causal agent
- iii. Signs and symptoms
- iv. Favorable conditions
- v. Disease cycle
- vi. Management practices.

This is an opportunity for you to show your writing skills and critical thinking as a Plant pathologist working on different types of diseases common to most of the crops in Fiji. You can also include local examples with illustrations if there is a need.

The following are the some of the selected crops covered in lecture where you have to select **any two crops' diseases**. Ensure to include the above mentioned areas of disease development and management.

The crops are: **Rice, Sugarcane, Taro, Papaya, Mango, Ginger, Peanuts, Cassava, Banana and kava.**

The End

