

The Open University of Sri Lanka
Faculty of Engineering Technology
Department of Agricultural and Plantation Engineering



0039

Study Programme : Bachelor of Industrial Studies Honours (Agriculture)
Name of the Examination : Final Examination
Course Code and Title : AGI6486 Field and Laboratory Techniques in Plant Protection
Academic Year : 2024/2025
Date : 25th February 2026
Time : 09:30 -12:30 hr
Duration : 03 Hours

Index No. :

Examination Type: Closed Book Test

General Instructions

1. Read all instructions carefully before answering the questions.
2. Answers should be in clear handwriting.
3. Do not use red colour pen.
4. This question paper consists of two (02) sections.

Section 1

- Consists of 15 questions in six (06) pages.
- Answer all questions.
- All questions carry equal marks.
- Write answers only in the space provided.
- Please do not remove the question paper from the examination hall.
- You may spend one (01) hour to answer this section.

Section 11

- Contain six (06) questions.
- Answer any four (04) questions.
- You may spend two (02) hours to answer this section.
- All questions carry equal marks.
- Answer for each question should commence from a new page.

SECTION I: Answer all questions. Use the space given under each question.

1. Define the term 'Economic Threshold Level (ETL)'

.....

.....

.....

2. Categorize the different plants used in ecological engineering, giving one example for each.

i

ii

iii

iv

3. Mark the correct statements as "✓" and incorrect as "X" regarding pests of paddy

i. Rice thrips damage the vegetative stage

☐

ii. Brown plant hopper damage is at the reproductive stage

☐

iii. Leaf hopper damage is at reproductive stage

☐

iv. Termites damaging the paddy plants are soil-inhabiting pests

☐

v. Paddy bug damage at the ripening stage

☐

4. List three (03) damage symptoms of Shot hole borer attack in tea.

i

ii

iii

5. Briefly explain the damage symptoms of Diamondback moth attack in cruciferous crops.

6. Differentiate signs and symptoms in plant diseases.

7. Mark the correct statements as "✓" and incorrect as "X", regarding disease symptoms.

- i. Vein clearing is a symptom of virus attack.
- ii. Powdery mildew is a symptom of fungus attack.
- iii. Rust is a symptom of fungus attack.
- iv. Vein enation is a symptom of virus attack.
- iv Plant wilting is a symptom of nematode attack.

☐
☐
☐
☐
☐

8. Name four (04) serological methods applied in plant pathogen identification.

i.

ii

iii

iv

9. Identify the major advantages of IPM compared to conventional pesticide-based pest control.

10. Explain the role of vectors in spreading viral diseases in banana and papaya.

11. Briefly explain the effects of environmental conditions on development of anthracnose in fruit crops.

12. State favorable environmental conditions for development of pulse diseases.

13. Explain the economic importance of ornamental plant diseases in commercial floriculture.

This image shows a full page of white paper with ten horizontal dashed lines, typical of primary school handwriting practice paper. The lines are evenly spaced and extend across the entire width of the page. There is no text or other markings on the paper.

14. List two (02) major coconut diseases and their causal organisms.

i

ii

15. List two (02) symptoms of Weligama Coconut Leaf Wilt Disease.

i

ii

The Open University of Sri Lanka
Faculty of Engineering Technology
Department of Agricultural and Plantation Engineering



Study Programme : Bachelor of Industrial Studies Honours (Agriculture)
Name of the Examination : Final Examination
Course Code and Title : AGI6486 Field and Laboratory Techniques in Plant Protection
Academic Year : 2024/2025
Date : 25th February 2026
Time : 09:30 -12:30 hr

SECTION 2: Answer any four (04) questions.

1. Compare fungal, bacterial, and viral diseases in terms of mode of spread, survival, and management (25 marks).
2. (a) Describe the reason for considering pest monitoring as the foundation of effective pest management system (10 marks).
(b) Explain how pest resistance develops due to repeated pesticide use (15 marks).
3. Design a comprehensive Integrated Pest Management (IPM) program for a specific crop of your choice (25 marks).
4. Explain a method applied under laboratory conditions to extract the soil inhabiting nematodes (25 marks).
5. Explain the "Blast" disease of paddy under following topics
 - a. Damaging symptoms (5 marks).
 - b. Favorable conditions for disease development (10 marks).
 - c. Controlling the disease (10 marks).
6. Discuss why sanitation is considered as the key disease management strategy in vegetable crops (25 marks)