

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	: AGI4561 Postharvest Biology and Technology
Academic Year	: 2024/2025
Date	: 6 th March 2026
Time	: 09.30 a.m. – 12.30 p.m.
Duration	: 3 hours

General Instructions

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

Section 1

- Consists of 15 questions in **five (5) pages**.
- Answer all questions.
- Each question carries 05 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.

Index number

Section 1

1. Differentiate between “perishables” and “durables”.

Perishables

.....

.....

Durables

.....

.....

2. List **five (05)** features of durables.

- i.
- ii.
- iii.
- iv.
- v.

3. List **five (05)** reasons for the increased postharvest losses in fruits and vegetables compared to the cereals and grains.

- i.
- ii.
- iii.
- iv.
- v.

4. "Postharvest losses in developing countries are higher than the postharvest losses in developed countries". Justify the statement giving **five (05)** reasons.

- i.
- ii.
- iii.
- iv.
- v.

5. List **four (04)** characteristics, which determine the quality of harvested fruits and vegetables in relation to maturity?

- i.
- ii.
- iii.
- iv.

6. List **five (05)** maturity indices of fruits and vegetables.

- i.
- ii.
- iii.
- iv.
- v.

7. Briefly explain the importance of maturity indices in postharvest Biology and Technology.

-
-
-

8. What is meant by “commercial maturity” in fruits and vegetables.

-
-

9. List **five (05)** changes that take place during fruit ripening.

- i.
- ii.
- iii.
- iv.
- v.

10. Differentiate between climacteric fruits and non - climacteric fruits

Climacteric fruits

.....

Non climacteric

.....

11. Name the postharvest treatment that can be adopted to minimize postharvest losses in following instances.

i. Remove the contaminated microgs/spores

ii. Prevent penetration of microorganisms into certain fruits.....

iii. Prevent contamination of microgs

iv. Prevent mechanical injuries.....

v. Inactivate microgs

12. What is meant by postharvest disorder?

.....

.....

.....

13. List **five (05)** reasons for the postharvest losses of stored grain

i.

ii.

iii.

iv.

v.

14. Indicate whether the following statements are **true or falls**.

- i. Presence of free water suppress the microbial growth on fruits and vegetables.
(.....).
- ii. Water loss from fruits and vegetables cause only the weight loss of such commodities.
(.....).
- iii. Storage of fruit under high temperature level increases the water loss (.....).
- iv. Storage of fruit under high RH levels increase the water loss from fruits. (.....).
- v. Mechanical injuries aggravate the water loss from fruits and vegetables. (.....).

15. Indicate whether the following statements are **true or falls**.

- i. Diseases that appear and develop on the harvested parts of the plants are postharvest diseases.
(.....)
- ii. The infection process of postharvest diseases can happen only after harvesting
(.....)
- iii. Only pathogens can cause postharvest losses of stored grains. (.....)
- iv. The field pathogens can penetrate into the plant parts either before harvesting or during storage.
(.....)
- v. The storage pathogens can penetrate into the plant parts before the harvesting of them.
(.....)

End of section 1

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 : AGI4561 Postharvest Biology and Technology
Academic Year : 2024/2025
Date : 6th March 2025

Section 11

1. Describe the negative impact of postharvest losses on a country's economy.
2. Explain **five (05)** measures that can be taken to prevent and control postharvest diseases in Sri Lanka.
3. Describe **five (05)** reasons that can aggravate postharvest losses during transportation of fruits and vegetables.
4. Identify and briefly describe **five (05)** preharvest practices that contribute to minimize the postharvest losses of fruits and vegetables.
5. Discuss the challenges and limitations in the adoption of postharvest technologies among farmers in Sri Lanka, with relevant examples.
6. Describe the measures that can be taken to minimize the postharvest losses of stored cereal and grain
