

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	: AGI5373 Agroforestry
Academic Year	: 2024/2025
Date	: 19.02.2026
Time	: 1.30 p.m. – 4.30 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 (05) pages**.
- Answer all questions.
- All questions carry equal marks (5marks/question)
- 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 (25marks/question).
- Answer for each question should commence from a new page.

Index number

Section 1

1. Name the **three (03) major components** of an agroforestry system

i.

ii.

iii.

2. **“Home gardens provide balance diet to the rural community”** justify the statement.

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3. **“Agroforestry plays an important role in mitigating climate change”** What would be the most valid reason to formulate the statement?

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4. List **five (05)** sustainable features of agroforestry

i.....

ii.....

iii.....

iv.....

v.....

5. **“Agroforestry plays a major role in maintaining soil fertility”**. justify the statement giving **five (05)** reasons.

i.

ii.

iii.

iv.

v.

6. "Agroforestry can be used to minimize malnutrition among the rural poor". Justify the statement.

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7. Name the most suitable agroforestry system that can be used to achieve the following objectives.

i. Improve the pollination of a Cashew plantation.

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ii. Restore the steep slopes used to cultivate tobacco in the upcountry of Sri Lanka.

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iii. Improve the animal protein production.

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iv. Prevent crops from wind damages.

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v. Improve the availability of food and breeding places for aquatic fauna.

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8. Briefly explain how agroforestry can help farmers to mitigate the risk of market failures.

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9. What is meant by "net interaction" in an agroforestry system?

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- To answer from question number 10 and 11, use the following list of component interactions that can be found in an agroforestry system.

- | | |
|--------------------------------------|--|
| (i). Plant microclimate amelioration | (v). Allelopathy |
| (ii). Reduced digestibility | (vi). Provision of feed |
| (iii). Reduced palatability | (vii). Mulching |
| (iv). Competition for light | (viii). Shading for shade loving crops |
| | (ix). Shade for animals |

10. (a). What are the **tree – crop positive interactions** in the above list (indicate only the relevant roman number below).

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(b). What are the **tree – crop negative interactions** in the above list (indicate only the relevant roman number below).

.....

11. (a). What are the **tree – animal positive interactions** in the above list (indicate only the relevant roman number below).

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(b). What are the **tree – animal negative interactions** in the above list (indicate only the relevant roman number below).

.....

- To answer from question number 12 and 13 use the following list of crop/tree species.

- | | | |
|--------------|------------------|------------------|
| (i). Pepper | (iv). Pineapple | (vii). Ipil Ipil |
| (ii). Coffee | (v). Banana | |
| (iii). Cocoa | (vi). Gliricidia | |

12. Select and write down **two (02)** crop species from the above list which is more suitable to intercrop in a 0 – 5 years of age coconut plantation.

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13. Select and write down **two (02)** crop species from the above list which is more suitable to intercrop in a 6 – 20 years of age coconut plantation.

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14. Name the **three (03)** pillars of sustainable agriculture

i.

ii.

iii.

15. Briefly explain, how agroforestry empowers the rural women?

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(End of the section 1)

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Section 11

1. Evaluate the suitability of agroforestry to improve soil fertility.
2. "Agroforestry can be used to improve the living standards of rural poor in Sri Lanka"
Justify the statement giving reasons.
3. Evaluate the potential for agroforestry in coconut monocultures in Sri Lanka.
4. Critically evaluate the suitability of Chena cultivation for poverty alleviation in rural poor of Sri Lanka.
5. Describe the role of multipurpose trees (MPTs) in agroforestry systems.
6. "Agroforestry can be considered as a sustainable agricultural practice". Justify the statement giving reasons.

(Each question carries 25 marks)
