

The Open University of Sri Lanka
Faculty of Natural Sciences
B.Sc/ B. Ed Degree Programme



Department	: Botany
Level	: 05
Name of the Examination	: Final Examination
Course Title and - Code	: Horticulture BYU5609
Academic Year	: 2024/2025
Date	: 26.05.2025
Time	: 9.30-12.30am
Duration	: 03 hours

General Instructions

1. Read all instructions carefully before answering the questions.
2. This question paper consists of **two parts. Part A-Structured type and Part B -Essay type.**
Part A- Answer all the questions in the space provided on the paper.
Part B- Select only Four (04) questions out of Six (06) number of questions given (Write answers in provided answer sheets).
3. Answer for each question should commence from a new page.
4. Draw fully labelled diagrams where necessary.
5. Involvement in any activity that is considered as an exam offense will lead to punishment.
6. Use blue or black ink to answer the questions.
7. Clearly state your index number in your answer script.

Index Number:

PART A- Structured Type Questions**Answer ALL the questions**

1. *Plants need essential elements for their growth. Some basic elements are absorbed by the plants from the air and water and the remaining elements are supplied either from soil*

(a) Give two commercially available inorganic fertilizers used to provide below given nutrients?

N i.

ii.

P i.

ii.

K i.

ii.

Mg i.

ii.

(b) Give two deficiency symptoms for the given macro and micro nutrients deficiencies.

N i.

ii.

P i.

ii.

K i.

ii.

Mg i.

ii.

2.(a) List four (04) possible designs of plant-growing structures that are used to cultivate salad cucumber.

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(b) State the types of irrigation system/s that can be used in the above cultivation.

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(c) Briefly mention the active and passive methods that you would employ to control temperature and humidity inside the greenhouse.

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3. (a) Complete the table below with suitable words

Vegetables	Practices employed before and after cultivation	Most common pests and diseases
Tomato (<i>Lycopersicon esculentum</i>)	(i)..... (ii).....	(i)..... (ii)..... (iii)..... (iv).....
Capsicum (<i>Capsicum annum</i>)	(i)..... (ii).....	(i)..... (ii)..... (iii)..... (iv).....
Egg plant (<i>solanum malongina</i>)	(i)..... (ii).....	(i)..... (ii)..... (iii)..... (iv).....
Pumpkin (<i>cucurbita maxima</i>)	(i)..... (ii).....	(i)..... (ii)..... (iii)..... (iv).....

Part B-Essay type Questions

Answer ONLY Four (04) Questions

1. In a world of limited time and space, container gardens seem to make more and more sense. Containers allow people to enjoy growing plants in a place that might thought of as impossible or unthinkable in which to plant.
 - (a) Briefly mention the importance of undertaking container gardening
 - (b) Discuss the advantages of growing plants in containers
 - (c) List major indoor gardening styles and explain **one (01)** in detail

2. *Soil-less techniques for plant growing are considered the best option for sustainable agriculture production in Sri Lanka*
 Discuss this statement by highlighting types of suitable soil-less cultivation systems that could be used for sustainable crop production in Sri Lanka.

3.
 - (a) Describe the agronomic practices adopted in banana in conventional planting systems, dense planting and group planting systems.
 - (b) Explain **three (03)** major diseases found in banana
 - (c) What precautions would you adopt to reduce postharvest loss of banana?

4. Organic farming is based on enhancing the natural biological cycles in soil, crop and livestock, on building up soil fertility through the use of nitrogen (N) fixation by legumes and enhancing soil organic matter and avoiding pollution.
 - (a). Briefly mention the aims of organic farming employed in Sri Lanka for crop production
 - (b). Discuss the advantages and disadvantages of organic farming
 - (c). Explain how do you maintain organic farming by controlling organic matter, cropping systems and biofertilizer

5. Suppose you are given a mission to educate entrepreneurs to initiate Orchid cut flower industry under Plant growing structure in the western province of Sri Lanka.
 - (a) List the species of orchids popular in floriculture
 - (b) If you are asked to start the orchid cut flower industry, how would you start your business?
 - (c) Briefly mention the most common pests and diseases observed in orchids

6. *Many woody plants of horticultural importance are propagated by grafting and budding.*
 - (a) Give the importance of grafting and budding techniques-in plant propagation.
 - (b) Discuss **four (04)** common types of grafting and budding techniques employed in the Agricultural sector in Sri Lanka for propagation of fruit trees.
 - (c) State different methods (other than the methods described in part b) that you have observed in propagating fruit trees at the horticultural institute you recently visited.

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