



THE OPEN UNIVERSITY OF SRI LANKA
B.Sc. DEGREE PROGRAMME – LEVEL 05
BOU 3209/ BTU 3207 – HORTICULTURE
FINAL EXAMINATION
DURATION: THREE (03) HOURS

Date: 07th December 2012

Time: 9.30-12.30 pm

This paper consists of two parts
Part A and Part B

Part A –Structured questions Answer **all** questions.

Questions should be answered on the space provided with the question paper itself. There are Four (04) questions and Six (06) pages in this question paper.

Part B-Essay type questions-You are required to answer **only Four (04)** questions out of Six (06) questions given.

Part A

01. (a) Define the term 'Cation Exchange Capacity' (CEC)?

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(b) Soil A is found to have CEC of 50 meq/100g. Soil B has a CEC of 150-300 meq/100g. Textural Analysis shows both soils contain approximately 75% sand and silt. What can you infer about the make-up of the colloidal fractions of the two soils? Give reasons of your inferences.

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(c) Briefly state the 'Preparation of Field bed nursery'

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(d) What do you mean by 'Solarization'. Explain your answer with illustrations?

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2. (a) Define the following terms

Espalier system

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Thinning out

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Air layering

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Topiary

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(b) Complete the following table.

Crop	02 Common diseases and causal organisms	Symptoms
Pineapple		
Banana		
Papaya		
Mango		

3(a) What are the most commonly used irrigation systems in citrus orchards?

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(b) What is the most effective irrigating system for citrus grown in arid zones?

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(c) Illustrate the above mentioned irrigation system in Part (b) using a diagram.

(d) Write **five (05)** advantages of the irrigation system mentioned in Part (b).

- 1.....
- 2.....
- 3.....
- 4.....
- 5.....

4 (a) List the most commonly used grafting methods in propagating trees in your home garden?

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(b) Briefly mention the grafting procedure of one of the methods mentioned in Part (a)

- 1.....
- 2.....
- 3.....
- 4.....
- 5.....

(b) State the steps involved in micro propagation of flowers?

- 1.....
- 2.....
- 3.....
- 4.....

(c) What are the importance of micro propagation of a crop plant?

- 1.....
- 2.....
- 3.....
- 4.....
- 5.....

Part B-**Essay type questions**

Answer **Four (04)** questions out of **Six (06)** questions

1. *'Floating hydroponics of static solution culture is commonly used in developed countries to grow leafy vegetables'*

(a) Differentiate between the floating technique of hydroponics culture and aggregate system of hydroponics of growing vegetables.

Illustrate your answer with diagrams

(b) Discuss the different types of aggregate systems used in growing plants.

Give examples of the types of crops could be grown in each type aggregate system mentioned in Part (b).

2. Suppose that your mission is to explain the productivity of soils and its impotency in crop productivity to a group of farmers and entrepreneurs who are not familiar with technical aspects of soil management. Explain how you would proceed to accomplish your mission.

3 (a) Briefly mention the propagation methods of mango?

(b) Discuss how would you employ the management system for mango?

4. (a) List the factors affecting commercial vegetable cultivation in Sri Lanka?

(b) Explain the role of temperature on growth and development of vegetable crops

(c) How would you advice a farmer to grow Okra in the field?

5. Write an account on management of cultivation and best postharvest practices employed for attaining the quality flowers of orchids and roses

6. *'Trees play an important role in landscaping other than beauty'*

(a) Explain the factors to be considered when selecting trees for landscaping?

(b) How would you prune a tree used in landscaping?

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