



THE OPEN UNIVERSITY OF SRI LANKA

B.Sc. DEGREE PROGRAMME – LEVEL 05

BOU3209/ BTU3207 – HORTICULTURE

FINAL EXAMINATION

DURATION: THREE (03) HOURS

INDEX NUMBER.....

REGISTRATION NUMBER.....

Date: 20th December 2013

Time: 9.30-12.30am

This paper consists of two parts

Part A and Part B

Part A –Structured questions

Answer **all** questions.

Write answers **only** in the space provided

There are **Four (04)** questions and **Seven (07)** 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

1(a) *'Dwarfing apple cultivars could be produced through grafting of scion, interstock and root stock'.*

Briefly explain the importance of an **interstock** in this grafting method?

.....

.....

.....

.....

.....

.....

(b) How do you graft a plant with an **interstock**? Illustrate your answer using a diagram

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(c) Briefly explain one method of grafting which could increase the vigor of a scion.

.....

.....

.....

.....

.....

.....

.....

2. (a) Define the following terms

Scarification

.....

.....

.....

.....

Apomixis

.....

.....

.....

.....

Cryopreservation

.....

.....

.....

.....

Totipotency

.....

.....

.....

.....

.....

(b) Complete the following table.

Crop/flower	Two (02) Common diseases	Management of cultivation
Orchid		
Gerbera		
Cabbage		
Carrot		

3(a) Briefly explain how the structure of a soil would influence plant growth?

.....

.....

.....

.....

.....

.....

.....

(b) State the role of humus and clay particles on the **Cation Exchange Capacity (CEC)** of a soil?

.....

.....

.....

.....

.....

.....

4. 'Fertilizers are substances supplied directly or indirectly to crops in order to promote their growth, yield and quality of the product'

(a) Name/List **two (02)** inorganic fertilizers that can be used to supply each of the following nutrient to the soil.

Nitrogen

Phosphorous

Potassium

(b) Briefly explain the methods of fertilizer application?

.....

.....

.....

.....

.....

.....

(c) Briefly explain 'Passive process of making compost'

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

Part B

Essay type questions

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

1. A leading commercial company plans to initiate an export industry of strawberry, foliage cuttings and lettuce as a new business venture. The proposed methods are to cultivate them in three different soil-less media
 - (a) List out **three (03)** different methods that could be used to grow strawberry, foliage cuttings and lettuce in commercial scale.
 - (b) Give reasons for your selection of each method.
 - (c) Discuss the advantages and disadvantages of each method of cultivation.

2. (a) Describe the importance of nursery management in fruit crop production
 - (b) Explain methods of grafting or budding commonly used in propagating durian and rambutan. Give reasons for your selection.
 - (c) Explain the importance and current practices used by farmers to prepare field bed nurseries for vegetables.

3. (a) List possible designs of plant growing structures which are used to cultivate orchid, anthuriums and gerbera.
 - (b) Differentiate irrigation system/s that can be used in irrigating the above cultivations.
 - (c) Write a brief note on post harvest handling of gerbera

4. Discuss the importance of pruning of tree crops giving emphasis to local conditions.

5. (a) Briefly describe the agronomic practices which could be adopted in conventional and dense planting of banana.
 - (b) What are the most common diseases found in a banana cultivation and their control measures?

6. *'A lawn is a piece of land on which grass grows and it can be in a residential, commercial or recreational area'*
 - (a) Explain how would you establish a lawn?
 - (b) List the importance of a hedge and differentiate between a formal hedge and an informal hedge?

-Copyright reserved-