

THE OPEN UNIVERSITY OF SRI LANKA

B.Sc. DEGREE PROGRAMME – LEVEL 05

BOU3209/BTU3207 – HORTICULTURE

FINAL EXAMINATION

DURATION: THREE (03) HOURS

INDEX NO.

Date : 03rd December 2014

Time : 9.30am -12.30 pm

This paper consists of two parts Part A and Part B

Part A –Structured questions- Answer **all** questions **only** in the space provided.

Part B-Essay type questions-Answer **only Four (04)** questions out of **Six (06)** questions

Part A

1. Agricultural and horticultural businesses involve production of flowers in green houses under controlled environmental conditions.
 - (a) State the environmental conditions needed to be controlled in green houses to grow the following plants.
 - (i) Orchids

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(ii) Chrysanthemums

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(iii) Gerbera

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(b) Light is one of the major factors for the growth of plants in Green houses. The light inside the green houses can be controlled by active and passive methods
Write **Four (04) passive methods** used for **increasing** light intensity

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2. The table below indicates the scientific names of common pests and diseases affected to certain fruits at the pre harvest stage.

(a) Identify the pest/disease and fill out the blanks

Scientific name	Pest/disease	Fresh produce it effects
<i>Dysmicoccus brevipes</i>		
<i>Pseudomonas solanasiarum</i>		
Ring spot(PRV)		
<i>Phyllocnistis citrella</i>		
<i>Colletotrichum gleosporioides</i>		

(b) Select **two (02)** pests or diseases from the Table above, and Describe the symptoms of the corresponding pest or disease.

(i)Pest/disease-

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Symptoms

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(ii) Pest/disease -

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Symptoms

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(c) Suggest two ways by which this pest or disease could be controlled?

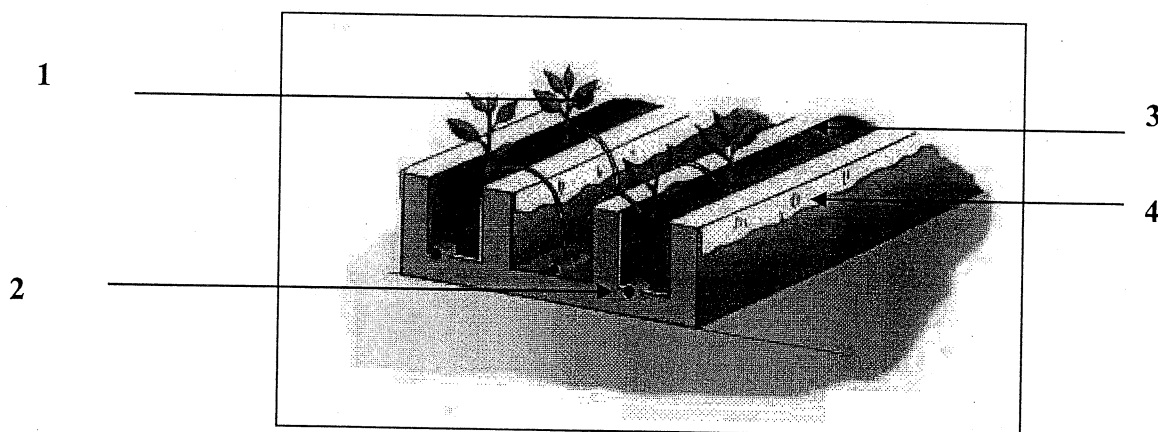
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3. The following diagram indicates the system of cultivation of vegetable crops



(a) What is this system?.....

(b) Identify 1-4

1.....

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(b) List Four (04) advantages of this system of cultivation

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(c) What modification that you would propose for this system if you are planning to grow tuberous plants?

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4. Briefly explain the following terms

Moving of grasses.....

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Turfing (sodding) a lawn

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Root balled tree

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Invigoration of shoots

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Part B-**Essay type questions**

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

1. Suppose there is a land which has been used for mono-crop cultivation for 10 years. An official from the Department of Agriculture visited the site and suggested that soil has to be rehabilitated to improve its structure and the texture for further cultivation. As a horticulture expert how would you suggest the land owner to improve the soil structure and texture? Your answer should include the methods of improving soil structure and texture in detail.

2. Discuss how would you manage the plantation of pineapple (*Ananas comosus*) with respect to the following cultivation practices
 - (a) Mulching
 - (b) Irrigation
 - (c) Induction of flowering

3. (a) List three (03) possible systems/methods that could be used for commercial cultivation of tomato (*Lycopersicon esculentum*)
 (b) Compare the **two (02)** methods you mentioned in part (a).

4. (a) Discuss the importance of grafting and budding in propagation of plants?
 (b) How would you do budding of a fruit crop grown in your home garden? Write the steps that you need to follow to make a successful budding of a fruit crop.
 (c) State importance of **micropropagation** of crop plants.

5. 'Fertilizers are substances supplied directly or indirectly to crops in order to promote their growth, yield and quality'
 - (a) Name/List **two (02)** inorganic fertilizers that can be used for supplying Nitrogen, Phosphorous and potassium to the soil.
 - (b) State the methods of fertilizer application
 - (c) Explain 'passive process of making compost'

6. Discuss the fruit nursery management in Sri Lanka with special reference to preparation of sand beds, seed extraction and pests and diseases