

UNIVERSITY OF RUHUNA
BACHELOR OF SCIENCE (SPECIAL) DEGREE EXAMINATION
LEVEL I SEMESTER I, 2020
(OCTOBER 2021)

Subject: Botany

Course Unit: Principles of Horticulture and Landscaping (BOT4022)

Time : TWO hours

Index No.:.....

Answer **only FOUR** questions including question No. 1

Part A

1) **Select/Underline the most suitable answer from a, b, c and d** (20 marks)

- i) Pomology is
a. growing plants b. caring animals c. growing vegetables d. growing fruits
- ii) What is the correct answer regarding vegetative propagation?
a. occurs naturally and can be performed artificially producing genetically identical plants
b. occurs naturally producing genetically different plants
c. produces highly productive daughter plants
d. produces daughter plants that have different rate of disease resistance
- iii) ----- is not vegetative propagation material
a. root b. bulb c. stem d. seed
- iv) What is the plant species which can't be propagated by leaf cuttings?
a. *Begonia* b. *Plumeria* c. *Bryophyllum* d. *Sansiveria*
- v) Which of the following plant layering method produce more plantlets at a time?
a. tip layering b. simple layering c. air layering d. trench layering
- vi) Which is not an important principle of landscaping?
a. rhythm b. balance c. form d. harmony

- vii. Which of the following is not an important element of landscaping?
 a. colour b. style c. line. d. scale
- viii. One of the objectives for pruning of dense canopies of plants is to?
 a. reduce vegetative growth
 b. allow penetrate light and air in to canopies
 c. promote growth of smaller, weaker branches
 d. Promote the spread of disease
- ix. does not use as a Bonsai tool
 a. concave cutter b. shear c. saw d. wire cutter
- x. Post-harvest technology does not include
 a. harvesting b. cleaning c. grading d. blunching

Part B

Circle "T" or "F" if the statement given is TRUE or FALSE respectively (20 Marks)

- i) T F Horticulture is growing plants and caring animals
- ii) T F It is possible to graft more than one scion on a single rootstock.
- iii) T F Root dipping technique is applied in a close hydroponic system
- iv) T F Focalization point is the most attractive place in a landscape
- v) T F Ppruning of plants induces flowering and fruiting
- vi) T F Landscape architect is the person who design flower gardens
- vii) T F Protected farming enables to reduce genetic diversity
- viii) T F Mulching helps to reduce the evaporation from the ground
- ix) T F Herbaceous plants are not normally used in Bonsai
- x) T F Nurserymen should keep only ornamental plants in their nurseries

Part C

a) How do you distinguish horticulture and agriculture?

(10 marks)

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b) Give FIVE direct job opportunities available in the horticultural sector.

(10 marks)

- i.
- ii.
- iii.
- iv.
- v.

c) Giving a suitable diagram mark the major areas of a residential landscape

(15 marks)

d) Give four major importance of plant propagation

(10 marks)

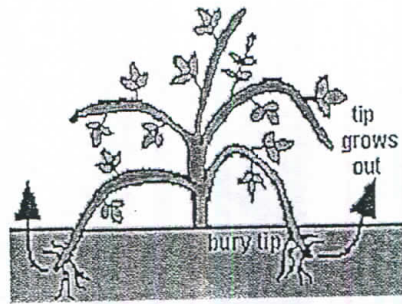
- i.....
- ii.....
- iii.....
- iv.....

e) Identify following diagrams

(15 marks)



Eg. Leaf cutting,



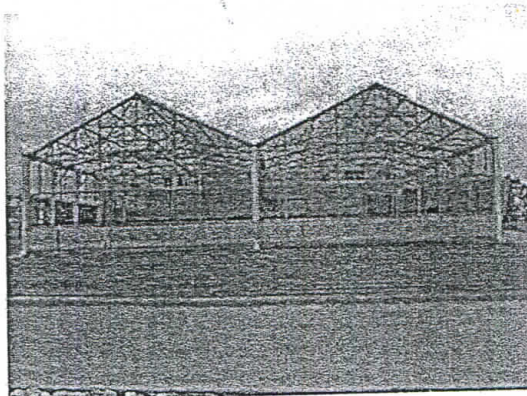
i).....



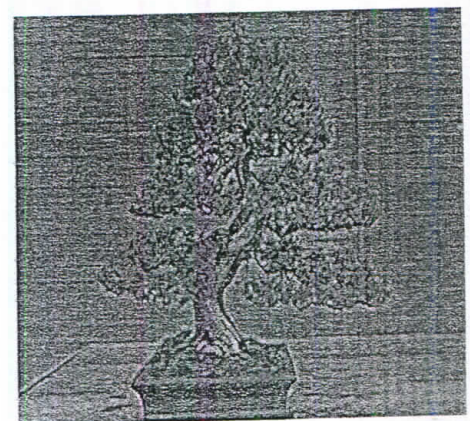
ii)



iii)



iv)



v)

- 2). a) Who are the professionals mainly involving in "Landscaping"?
Briefly explain the duties of those professionals
- b) Briefly discuss the importance of landscaping
- c) List the information collected by a landscape designer after visiting the proposed residential site and meeting the owner of the site in order to prepare a landscape plan
- d) How do you distinguish a soft and hard landscaping site?
- 3) Briefly discuss the followings
- a) Limitation of horticulture in Sri Lanka
- b) Benefits of vegetative propagation
- c) Immediate care for plants just after planting
- 4) a) Explain the importance of hydroponics.
- b) Classify/ State different hydroponic growing systems.
- c) You are provided with materials such as two weeks old seedlings of tomato, Albert's fertilizer mixture, distilled water, 2 Styrofoam box with lid with 7 holes, black polythene, tapes, plastic cups and coir dust. Describe how you would establish a suitable hydroponic system mentioned in question (4) b.
- 5) a) Describe the roles of a nurseryman
- b) List the advantages of raising seedlings in a nursery
- c) What are the different nursery types according to
- i. types of plants propagated
 - ii. types of sale
 - iii. types of ownership
- d) Explain the factors to be considered before preparing a nursery.