

UNIVERSITY OF RUHUNA  
BACHELOR OF SCIENCE (GENERAL) DEGREE EXAMINATION  
LEVEL III SEMESTER I, 2020  
(NOVEMBER 2021)

**Subject:** Botany

**Course Unit:** Principles of Horticulture and Landscaping (BOT3122)

**Time:** 1.5 hours

**Index No.:**.....

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

1) **Part A**

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

- i) Olericulture 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  
b. produce genetically different progenies  
c. propagules used for vegetative propagation are bulky and can't be stored for a long time  
d. produces daughter plants with different rates of disease resistance
- iii) By ....., a branch of a plant can be rooted when it is still attached to the mother plant  
a. grafting                      b. layering                      c. budding                      d. hydroponic
- iv) What is most compatible pair of species for successful grafting?  
a. Apple and wood apple  
b. Mango and Guava  
c. Rose and Bougainville  
d. Lemon and orange
- v) What is the most distinctive layering method among the following layering methods?  
a. tip layering                      b. simple layering                      c. air layering                      d. trench layering

- vi) Which of the following is not a role of landscape architect?
- site visit and gather information
  - produce sketch of the landscape plan
  - cost estimation
  - installation of non-plant materials in the landscape
- vii). Which of the following is suitable for public area of residential landscape?
- cloth line
  - compost bin
  - flower bed
  - garage
- viii). Select correct statement
- bulb, corms, and runners cannot be used in vegetative propagation
  - apomixis is a sexual propagation method of plants
  - cytokinin, gibberellin, and auxins are some plant growth regulators
  - in grafting, diameter of scion and rootstock should be similar
- ix). Open (circulatory) hydroponic system is
- Nutrient film technique (NFT)
  - Root dipping technique
  - Floating technique
  - Capillary action technique
- x) Post planting immediate care of plant does not include
- mulching
  - fencing and wiring
  - wrapping and shading
  - fertilizing

### Part B

Circle "T" or "F" if the statement given is TRUE or FALSE respectively (16 Marks)

- T F Horticulture provides mental therapy for stressed people
- T F It is not possible to graft more than one scion on a single rootstock.
- T F Hydroponically grown vegetables are highly demanded
- T F Flower beds in a residential landscape should be installed in private area
- T F Topiary form of plants can be gained by periodic pruning

- vi) T F Landscape contractor is the person who responsible for installing plants
- vii) T F Focalization is a principle of landscape design
- viii) T F Pollarding is a special method of plant training

Part C

a) What is horticulture and floriculture?

(12 marks)

Horticulture.....  
 .....  
 .....  
 .....  
 Floriculture.....  
 .....  
 .....  
 .....

b) State **FOUR (04) merits and demerits of horticulture.**

(12 marks)

Merits

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

Demerits

- v. ....
- vi. ....
- vii. ....
- viii. ....

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

(15 marks)

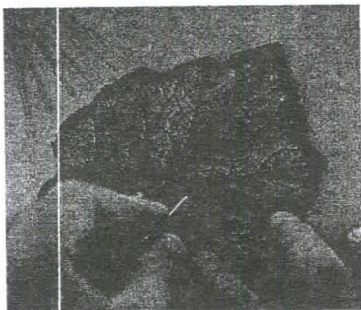
d) List four major importance of vegetative propagation of plants

(10 marks)

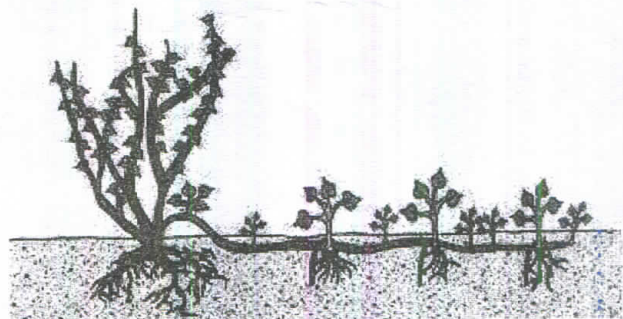
- i. ....
- ii. ....
- iii. ....
- iv. ....

e) Identify following diagrams

(15 marks)

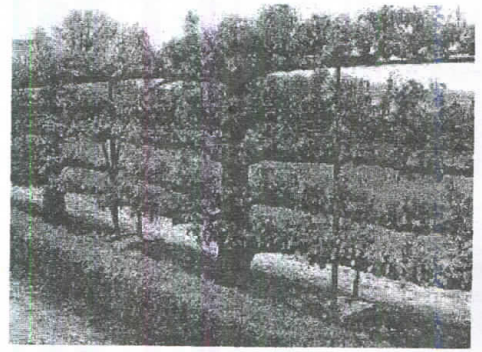
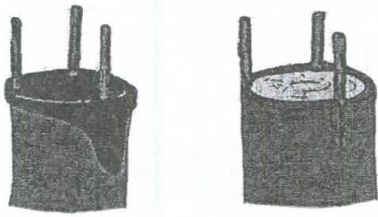


Eg. Leaf cutting,



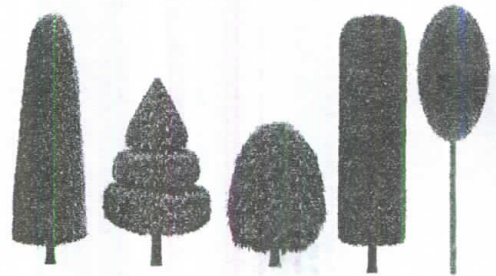
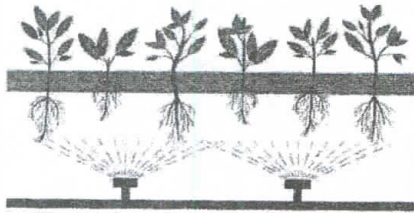
i).....

INSERTING THE SCIONS INTO THE ROOTSTOCK



ii) .....

iii) .....



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iv) .....

v) .....

- 2)
  - a) "Landscaping does not just beautifying the environment but it provides more benefits to the environment and people" Discuss the statement.
  - b) What is the difference of hard and soft landscaping?
  - c) What are the factors to be considered in selecting plants for a flower garden?
  
- 3) Briefly describe the following
  - a) Roles of nurserymen
  - b) Advantages of hydroponic systems
  
- 4)
  - a) Explain briefly the reasons for pruning horticultural plants
  - b) Describe the basic guidelines for plant pruning
  - c) Discuss briefly crown thinning and crown raising system of pruning