

**The Open University of Sri Lanka**  
**Faculty of Natural Sciences**  
**B.Sc/ B. Ed Degree Programme**



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<b>Department</b>	<b>: Botany</b>
<b>Level</b>	<b>: 05</b>
<b>Name of the Examination</b>	<b>: Final Examination</b>
<b>Course Title and - Code</b>	<b>: Horticulture BYU5609/BOU3209</b>
<b>Academic Year</b>	<b>: 2020/2021</b>
<b>Date</b>	<b>:01.04.2022</b>
<b>Time</b>	<b>: 9.30-12.30am</b>
<b>Duration</b>	<b>: 03 hours</b>

**General Instructions**

1. Read all instructions carefully before answering the questions.
2. This question paper consists of **two parts**.

**Part A-Structured type and Part B -Essay type.**

**Part A- Answer all questions. Part B- Select only Four (04) questions out of Six (06)**  
**Number of questions given..**

3. Answer for each question should commence from a new page.
  4. Draw fully labelled diagrams where necessary
  5. Use blue or black ink to answer the questions.
  6. Clearly state your index number in your answer script
  7. Involvement in any activity that is considered as an exam offense will lead to punishment
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**PART A- Structured Type Questions**

**Answer ALL the questions**

1. *Plants need essential elements for their growth. Some basic elements are absorbed by the plants from the air and water and the remaining elements are supplied either from soil*

(a) Give two commercially available inorganic fertilizers used to provide below given nutrients?

N i. ....

ii. ....

P i. ....

ii. ....

K i. ....

ii. ....

Mg i. ....

ii. ....

(b) Give two deficiency symptoms for the given macro and micro nutrients deficiencies.

N i. ....

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ii. ....

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P i. ....

.....

ii. ....

.....

K i. ....

.....

ii. ....

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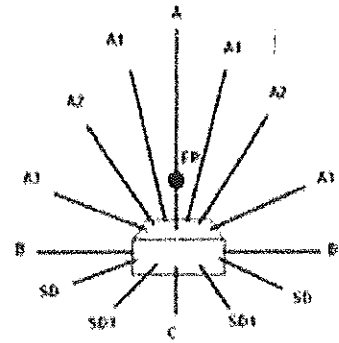
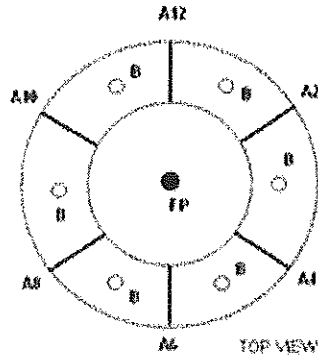
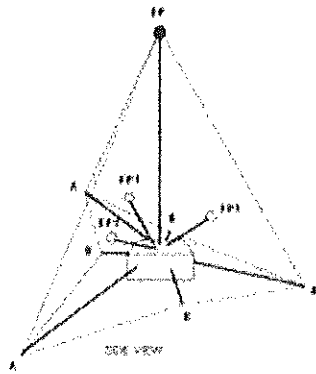
- Mg i. ....  
.....  
ii. ....  
.....
- Ca i. ....  
.....  
ii. ....  
.....

(c) Compare and contrast Slow releasing and Fast releasing nutrients.

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2.

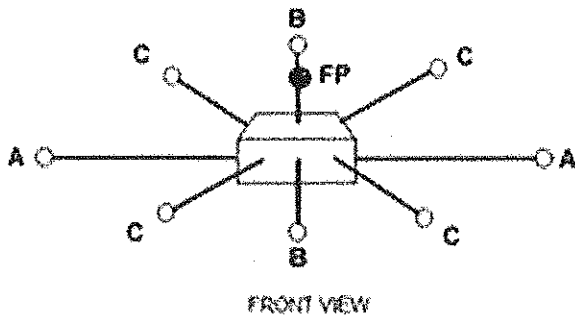
(a) Name the below given basic floral arrangement forms.  
*(Pyramid, Dome, Crescent, Horizontal and Fan)*



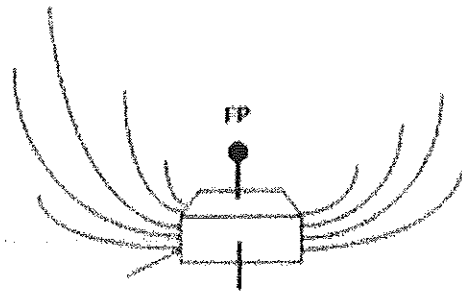
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FRONT VIEW



FRONT VIEW

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(b) Write down the steps in making a terrarium.

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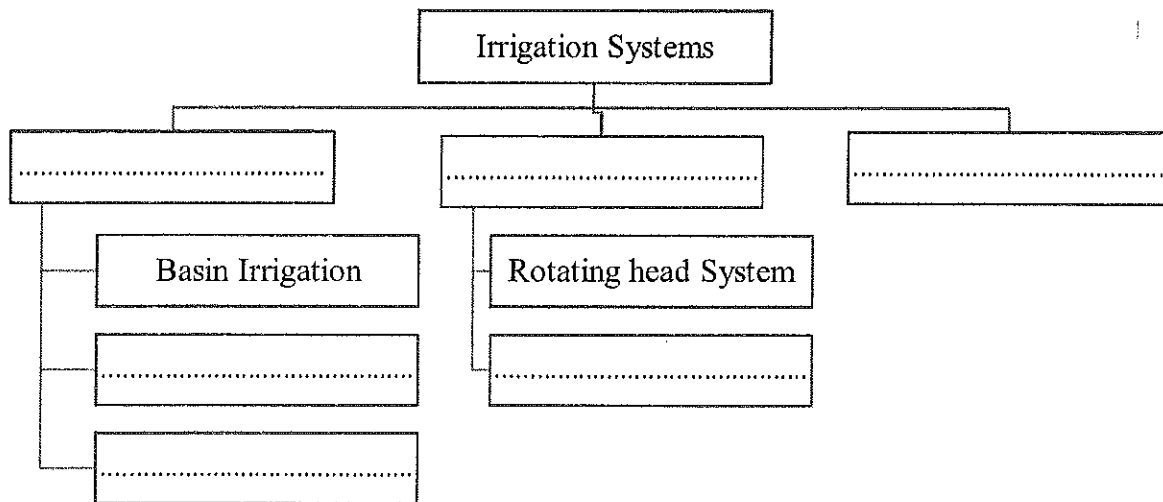
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(c) State the difference between Bonsai and Dwarfing processes.

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3. 'For the production of high-quality horticultural crops, one of the most essential requirements is an adequate supply of water all year round'

(a) Fill in the blanks of the given chart using your knowledge on different irrigation systems.



(b) Give **Five** factors to be considered in choosing an irrigation method.

i. ....

ii. ....

iii. ....

iv. ....

v. ....

(c) Briefly describe the irrigation scheduling process farmers use to determine the timing and the quantity of water to be applied to the crop.

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## **Part B-Essay type Questions**

### **Answer ONLY Four (04) Questions**

1. Suppose you are given a mission to educate entrepreneurs to initiate one cut flower industry under Plant growing structure in the western province of Sri Lanka. Discuss how would you explain the entrepreneur to accomplish this task? Justify your answer by indicating; selection of cut flower, environmental conditions needs to be maintained at the plant growing structure and postharvest handling practices
  
2. 'Organic farming is widely recognized as a sustainable farming system in contrast to the farming systems which use inorganic fertilizers extensively'
  - (a) Critically discuss the above statement by highlighting the advantages and disadvantages of the two systems of farming.
  - (b) Briefly describe constraints faced by the Sri Lankan farmers in adoption of organic farming?
  
3. 'Micropropagation is one of the widely used vegetative propagation method in economically important crops'
  - (a) Discuss the advantages of micro propagation over conventional system of propagation.
  - (b) Write a concise account on four(04) commonly used grafting methods
  
4. 'Soil-less techniques for plant growing is considered as a best option for sustainable agriculture production in Sri Lanka'

Discuss this statement by highlighting types of suitable soil less cultivation systems that could be used for sustainable crop production in Sri Lanka?
  
5. Write a concise account on postharvest handling of Mango, Pineapple and Papaya
  
6. 'A landscape design is installed to serve functional and aesthetic purposes. This could be achieved by employing best management practices'

Discuss this statement by highlighting the best management practices that need to be employed to maintain the landscape designs.

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