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முழுப் பதிப்புரிமையுடையது]
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Department of Examinations, Sri Lanka

Department of National Botanic Gardens - Open /Limited Competitive
Examination for Recruitment to Posts in the Grade III of the
Sri Lanka Technological Service - 2017(2018)

(02) Subject Related Knowledge
(Garden Development Assistant/
Research Assistant)

Question No.	Marks
1	
2	
3	
4	
5	
Total	
Marking Examiner:	
Checked by:	

Three hours

● Answer all questions on this paper itself.

Index No. :

1. (i) State **three** of the main cut flowers for the export market.

- (a)
- (b)
- (c)

(ii) Name the main climate zones of Sri Lanka.

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(iii) "Sigiriya is one of the ancient landscape wonders of the world." Explain this statement briefly.

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(iv) List **three** main important facts that should be considered when harvesting vegetable crops.

- (a)
- (b)
- (b)

(v) State **two** laws and regulations applicable to export of plants.

- (a)
- (b)

(vi) Give **two** main types of micro-irrigation systems.

- (a)
- (b)

(vii) Write **one** propagule for each crop given in the following table.

Type of crop	Propagule type
Orchids
<i>Dracaena sanderiana</i>
Ferns
Palms
Roses

(viii) What are the **two** types of engines found in garden machinery?

(a)

(b)

(ix) State the suitable climatic zones for the following vegetable crops.

Crop	Climatic zones
Beans	
Carrots	
Chillies	
Red onions	

(x) List out **five** bedding annuals for a sunny site in Kandy.

(a)

(b)

(c)

(d)

(e)

(20 marks)

2. (i) Assume that you have been assigned to complete a landscape plan for a client. List out the basic steps you should complete to achieve an acceptable design.

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Index No. :

(ii) Mention **three** main types of landscape materials.

- (a)
- (b)
- (c)

(iii) Give **two** examples for each of the following.

- (a) Showy flowering trees suitable to provide shade around a playground in the dry zone.
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.....
- (b) Lawn grasses suited for upcountry home gardens in Nuwara Eliya.
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.....
- (c) Types of final plans included in a final design of a landscape.
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- (d) Shrubs suitable for a three feet tall thick formal hedge.
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.....
- (e) Colourful ground cover plants suitable for a place under a shady tree.
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(iv) Write short notes on the following.

- (a) **Three** main objectives of pruning a tree.
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- (b) Control of fungal infections of a tree.
.....
.....
.....
- (c) Use of colours in landscaping.
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(d) Method of transplanting trees.

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(20 marks)



3. (i) Mention **three** important factors to be considered when doing a site inspection to start growing Anthuriums.

- (a)
- (b)
- (c)

(ii) Explain briefly how you would maintain a poly tunnel in Nuwara Eliya.

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(iii) Briefly discuss the main criteria which should be considered in quality standards of cut flowers.

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(iv) Fill the columns of the table given below.

Product	Suitable storage temperature
(a) Rose flowers	
(b) Gerbera flowers	
(c) Anthurium flowers	
(d) <i>Draceana sanderiana</i> cuttings	
(e) Cane palm leaves	

(20 marks)



4. (i) Define 'bio-diversity'. List out **four** major threats to bio-diversity.

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(ii) (a) Name **three** data sources to be considered in plant identification.

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(b) Explain why we write a plant name as follows.

Mango – *Mangifera indica* (Anacardiaceae)

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(c) What is a 'gene'?

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.....

(iii) What is ex-situ conservation? List **two** ex-situ conservation measures practiced currently in Sri Lanka?

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(iv) (a) List **three** main soil types and state how they differ from each other.

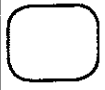
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(b) State **four** macro and micro nutrients needed for plant growth.

Macro nutrients

Micro nutrients

(20 marks)



5. (i) (a) What are the **three** main stages in bee keeping?

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(b) Describe in brief how tomato plants are nursery raised from seed.

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(ii) Briefly explain post-harvest procedures for the following crops.

(a) Carrots

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(b) Roses

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(c) Chillies

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(d) Pineapples

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(iii) Explain the basic principle of tissue culture.

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(iv) (a) What is meant by 'plant quarantine'?

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(b) Mention the plant quarantine procedure you should follow to import a plant from another country.

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(20 marks)

