



**R2112**

**UNDERSTANDING THE CHOICE, ESTABLISHMENT &  
MAINTENANCE OF GARDEN PLANTS & LAWNS**

**Level 2**

**Tuesday 20 June 2023**

**11:20 – 12:10**

**Written Examination**

**Candidate Number:** .....

**Candidate Name:** .....

**Centre Name:** .....

**IMPORTANT – Please read carefully before commencing:**

- i) The duration of this paper is **50** minutes;
- ii) **ALL** questions should be attempted;
- iii) **EACH** question carries **10 marks**;
- iv) Write your answers legibly in the spaces provided. It is **NOT** necessary that all lined space is used in answering the questions;
- v) Use **METRIC** measurements only;
- vi) Use black or blue ink only. Pencil can be used for drawing purposes only. Ensure that all diagrams are labelled accurately with the line touching the named object;
- vii) Where plant names are required, they should include genus, species and where appropriate, cultivar;
- viii) Where a question requires a specific number of answers; only the first answers given that meet the question requirement will be accepted, regardless of the number of answers offered;
- ix) Please note, when the word '**distinct**' is used within a question, it means that the items have different characteristics or features.

## ANSWER ALL QUESTIONS

**MARKS**

**Q1 a)** Name the situation where plants are used for edging, groundwork (infill) and dot planting.

**1**

.....

.....

.....

**b)** State the meaning of **EACH** of the following terms

- i) edging,
- ii) groundwork (infill)
- iii) dot

giving **TWO** distinct named plant examples, by completing the table below:

	Meaning	Plant Examples
<b>Edging</b>		1
		2
<b>Groundwork (infill)</b>		1
		2
<b>Dot</b>		1
		2.

**3**

**3**

**3**

Total Mark
------------

Please see over/.....

**MARKS**

**Q2 a)** Describe the symptoms of the following diseases on herbaceous perennials:

- i) powdery mildew
- ii) grey mould

**3**  
**3**

i) .....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

ii) .....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

**b)** Name **FOUR** distinct herbaceous perennial plants suitable for an herbaceous border.

**4**

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

Total Mark
------------

Please turn over/.....

**MARKS**

**Q3 a)** Define the following plant groups

- i) wall shrub
- ii) climber

1  
1

i).....  
.....  
.....  
.....

ii).....  
.....  
.....  
.....

b) Name **FOUR** distinct plants grown as climbers and wall shrubs, by completing the table below:

	<b>Climbers</b>	<b>Wall shrubs</b>
<b>1</b>		
<b>2</b>		
<b>3</b>		
<b>4</b>		

2  
2  
2  
2

Total Mark

Please see over/.....

**MARKS**

**Q4 a)** State the characteristics of a compost for growing alpine or rock garden plants.

**6**

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

**b)** Name **FOUR** distinct alpine or rock garden plants suitable for growing in a container.

**4**

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

Total Mark
------------

**Please turn over/.....**

**MARKS**

**Q5** a) State why it is important to maintain the correct balance of water and vegetation in a garden pond.

**2**

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

b) Describe how to introduce a **NAMED** floating plant into a garden pond.

**3**

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

c) Describe how to divide a **NAMED** aquatic plant.

**5**

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

Total Mark
------------

**Please see over/.....**

**MARKS**

**Q6 a)** Describe the symptoms of the following lawn pests, including the time of year when they are most active

- i) leatherjackets
- ii) moles

**3**  
**3**

i).....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

ii).....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

**b)** Describe what is meant by the following lawn maintenance terms:

- i) aerating
- ii) scarifying

**2**  
**2**

i).....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

ii).....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

Total Mark

\*\*\*\*\*

**©These questions are the property of the Royal Horticultural Society.  
They must not be reproduced or sold.**

**The Royal Horticultural Society, Wisley, Woking, Surrey GU23 6QB.  
Charity Registration Number: 222879/SC038262**



## R2112

### UNDERSTANDING THE CHOICE, ESTABLISHMENT & MAINTENANCE OF GARDEN PLANTS & LAWNS

#### Level 2

Tuesday 20 June 2023

<b>Candidates Registered</b>	<b>737</b>		<b>Total Candidates Passed</b>	550	82%
Candidates Entered	672	91%	Passed with Commendation	274	41%
Candidates Absent/Withdrawn	53	7%	Passed	276	41%
Candidates Deferred	12	2%	Failed	122	18%

#### Senior Examiner's Comments:

- 1 Candidates should be able to demonstrate a good range of plant knowledge and be able to give accurately named plant examples where appropriate. Common names and generic names are often too vague and cannot be rewarded in the positive manner that genus, species and where appropriate, variety/cultivar can. This is particularly important when answering questions relating to particular (named) plant(s). Marks can only be awarded for these narratives where the example(s) are correctly and fully identified.
- 2 Candidates must be able to display accurate knowledge of the technical terms and concepts detailed in the syllabus, in the context of horticulture and also be aware that wider interpretation will not be rewarded. The examination should be regarded as a possible introduction to higher level studies, which will only be open to those who are in possession of a clear understanding of the horticultural terms and concepts which are current.
- 3 The introductory rubric given on the first page of each question paper should be read carefully by candidates. At each examination there are a significant number of candidates who ignore or misread the instructions given and consequently may not perform as well as they could have done.
- 4 Candidates should pace themselves during each paper. The most successful candidates allow sufficient time to read the question thoroughly before answering it and also take time to read through their answers. They should take care to write as legibly as possible, so that the examiner is in no doubt about what is intended.

- 5** Candidates need to interpret key words within questions, particularly those such as 'state', 'list' and 'describe'. Questions requiring descriptions or explanations obviously require a more detailed answer than those requiring a list.
- 6** It is important to ensure that responses to questions are to the point. Candidates should bear in mind that small sketches might be used to convey information more succinctly than words.
- 7** Successful candidates ensure that their answers are focused and to the point. It is disappointing when they cannot be rewarded for their efforts because the answer is irrelevant to the particular question. Candidates should take note of the mark allocation for specific sections and allocate their time and efforts accordingly.
- 8** Diagrams can enhance an answer and where appropriate can replace detailed descriptions. They should be large, clear and well annotated, ensuring that labels are properly attached to the features they describe. Diagrams should preferably be in pencil. Colour may be used successfully but only where it is relevant to the answer.
- 9** In each examination it is clear that some candidates are ill prepared to answer papers of the type set. It is essential that candidates have the opportunity to practice questions. Ideally some papers should be answered in a time constrained situation. Appropriate feedback must, in any case be provided.

**Q1 a)** Name the situation where plants are used for edging, groundwork (infill) and dot planting.

b) State the meaning of **EACH** of the following terms

- i) edging,
- ii) groundwork (infill)
- iii) dot

giving **TWO** distinct named plant examples, by completing the table below:

	<b>Meaning</b>	<b>Plant Examples</b>
<b>Edging</b>		<b>1</b>
		<b>2</b>
<b>Groundwork (infill)</b>		<b>1</b>
		<b>2</b>
<b>Dot</b>		<b>1</b>
		<b>2.</b>

~~~~~

**Q1 a)** The majority of candidates were able to correctly name seasonal/summer bedding as the situation plants are used for edging, groundwork (infill) and dot planting and were awarded full marks.

b) Candidates who were able to provide the meaning of specific terms relating to seasonal bedding gained maximum marks. Suitable answers included:

|                            | <b>Meaning</b>                                                                                                      | <b>Plant examples</b>                |
|----------------------------|---------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| <b>Edging</b>              | A row or rows of low growing plants that frame the border.                                                          | <b>1</b> <i>Lobelia erinus</i>       |
|                            |                                                                                                                     | <b>2</b> <i>Impatiens walleriana</i> |
| <b>Groundwork (infill)</b> | This is the bulk of the planting, a block of colour which is taller than the edging and the main impact in the bed. | <b>1</b> <i>Pelargonium zonale</i>   |
|                            |                                                                                                                     | <b>2</b> <i>Salvia splendens</i>     |
| <b>Dot</b>                 | Dot plants break up the bulk planting creating a focal point/s using height, contrast and architectural stature.    | <b>1</b> <i>Ricinus communis</i>     |
|                            |                                                                                                                     | <b>2</b> <i>Canna indica</i>         |

**Q2 a)** Describe the symptoms of the following diseases on herbaceous perennials:

- i) powdery mildew
- ii) grey mould

b) Name **FOUR** distinct herbaceous perennial plants suitable for an herbaceous border.

~~~~~

**Q2 a)** Good descriptions of specific diseases on herbaceous perennials were provided by candidates who achieved full marks. These included:

**i) powdery mildew**

A dusty white/grey coating can occur on all aerial parts of the plant causing distortion and loss of vigour.

**ii) grey mould**

Fuzzy/fluffy/furry growth which is brownish-grey in colour occurs on leaves, stems, buds, fruits and flowers which causes rotting and tissue death.

**b)** A range of herbaceous perennials suitable for an herbaceous border were named by the best candidates who were awarded full marks. These included:

*Verbena bonariensis, Papaver orientale, Helleborus argutifolius, Echinops ritro, Echinacea purpurea, Paeonia lactiflora.*

**Q3 a)** Define the following plant groups

- i) wall shrub
- ii) climber

b) Name **FOUR** distinct plants grown as climbers and wall shrubs, by completing the table below:

	<b>Climbers</b>	<b>Wall shrubs</b>
<b>1</b>		
<b>2</b>		
<b>3</b>		
<b>4</b>		

~~~~~

**Q3 a)** Full marks were awarded to candidates who defined specific plant groups correctly. Suitable answers included:

**i) wall shrub**

A wall shrub is a woody perennial which would benefit from the specific microclimate adjacent to a wall. It is necessary to train or tie the plant in place.

**ii) climber**

Climbers have natural adaptations which enable the plant to climb e.g. tendrils, twining stems, adventitious roots, sucker pads.

b) Most candidates were able to name plants grown as climbers and wall shrubs and gained maximum marks. Acceptable answers included:

|          | <b>Climbers</b>                                      | <b>Wall shrubs</b>              |
|----------|------------------------------------------------------|---------------------------------|
| <b>1</b> | <i>Clematis montana</i>                              | <i>Pyracantha</i> 'Orange Glow' |
| <b>2</b> | <i>Wisteria sinensis</i>                             | <i>Garrya elliptica</i>         |
| <b>3</b> | <i>Hedera helix</i>                                  | <i>Ceanothus</i> 'Concha'       |
| <b>4</b> | <i>Hydrangea anomala</i> subsp.<br><i>petiolaris</i> | <i>Itea ilicifolia</i>          |

- Q4 a)** State the characteristics of a compost for growing alpine or rock garden plants.
- b) Name **FOUR** distinct alpine or rock garden plants suitable for growing in a container.

~~~~~

- Q4 a)** Candidates who showed a good knowledge of the characteristics of a compost for growing alpine or rock garden plants achieved full marks. Suitable answers included:

A compost for growing alpine or rock garden plants should be free draining, well aerated, low in nutrients and moisture retentive. It should also be free from weeds/weed seeds, pests and diseases, be stable and have an appropriate pH for the plants being grown.

- b)** The best candidates were able to name a range of alpine and rock garden plants suitable for growing in a container and were awarded full marks. These included:

*Pulsatilla vulgaris, Saxifraga oppositifolia, Phlox subulata, Lewisia cotyledon, Dianthus alpinus, Sempervivum arachnoideum.*

- Q5 a)** State why it is important to maintain the correct balance of water and vegetation in a garden pond.
- b) Describe how to introduce a **NAMED** floating plant into a garden pond.
- c) Describe how to divide a **NAMED** aquatic plant.

~~~~~

**Q5 a)** Candidates who were able to state why it is important to maintain the correct balance of water and vegetation in a garden pond gained maximum marks. Acceptable answers included:

- adequate balance to limit direct light and minimise algae
- to provide shelter for pond life, including fish and amphibians
- to encourage biodiversity
- to ensure that the water is well oxygenated
- the surface of the water should be half covered and half open water.

**b)** Suitable descriptions of how to introduce a floating plant into a garden pond were provided by many candidates who achieved full marks. These included:

*Pistia stratiotes* or *Hydrocharus morsus-ranae* would be quarantined for a short period prior to being introduced into a garden pond to enable any duckweed to be removed. One plant per square metre should be released from a container into still water.

**c)** The majority of candidates were able to describe how to divide an aquatic plant and were awarded full marks. Acceptable answers included:

*Caltha palustris* or *Iris versicolor* can be divided by removing the compost/soil from around the roots and dividing it with a knife or two hand forks back-to-back. It is important to ensure that there is an adequate rhizome or roots present with at least one growth bud. Any dead and/or diseased material should be trimmed away.



**Q6 a)** Describe the symptoms of the following lawn pests, including the time of year when they are most active

- i) leatherjackets
- ii) moles

b) Describe what is meant by the following lawn maintenance terms:

- i) aerating
- ii) scarifying

~~~~~

**Q6 a)** Candidates with a knowledge of specific lawn pests were able to describe their symptoms and gained maximum marks. Suitable answers included:

**i) leatherjackets**

Leatherjackets are most active in spring where brown dying patches of turf are visible. Grass seedlings collapse, showing signs of being eaten at ground level and starlings tearing up the grass are all symptoms of the presence of leatherjackets.

**ii) moles**

Moles are mostly active during spring and autumn. Mole hills are present and a linear drop to the surface of the ground denotes where tunnelling has occurred. Seedlings or small plants are often disturbed near a lawn.

**b)** Full marks were achieved by candidates who provided suitable descriptions of specific lawn maintenance terms. These included:

**i) aerating**

Aeration is where holes/slits are made in the lawn using a mechanical aerator with solid or hollow tines or a garden fork. The holes are made 10-15cm apart to a depth of 2.5-15cm every two to three years.

**ii) scarifying**

Scarifying is carried out to remove dead grass, thatch, moss and debris by raking to a depth of 1cm with a spring tined rake or a mechanical scarifier.

\*\*\*\*\*