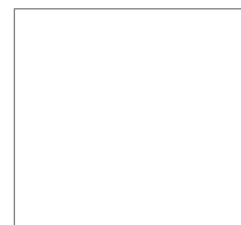




Including examiner comments



R2112

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

Level 2

Tuesday 7 February 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) Describe **TWO** methods of sowing hardy annuals directly into a border.

6

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

b) Describe the symptoms and control of **TWO** distinct pests that affect hardy annuals.

4

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

Total Mark

Please see over/.....

MARKS
6

Q2 a) Describe **THREE** maintenance tasks for an established herbaceous border.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

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

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

Total Mark

Please turn over/.....

MARKS

Q4 a) State what is meant by the term scree bed for growing alpines.

2

.....

.....

.....

.....

b) Describe the maintenance task of mulching a rock garden.

3

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

c) Name **FIVE** distinct alpine or rock garden plants.

5

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

Total Mark

Please turn over/.....

MARKS

Q5 Describe how to plant **ONE NAMED** deep water aquatic plant into a container, under **EACH** of the following headings:

- i) **NAMED** plant
- ii) suitable container
- iii) growing media
- iv) planting into container

1
2
2
5

i).....

.....

ii).....

.....

.....

.....

iii).....

.....

.....

.....

.....

iv).....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

Total Mark

Please see over/.....

MARKS

Q6 Describe the process of establishing a lawn from turf under **EACH** of the following headings:

- i) soil preparation
- ii) turf laying
- iii) aftercare.

4
4
2

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

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

iii).....
.....
.....
.....
.....
.....
.....

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 7 February 2023

Candidates Registered		Total Candidates Passed	
Candidates Entered	627	Passed with Commendation	274
Candidates Absent/Withdrawn	TBA	Passed	276
Candidates Deferred	TBA	Failed	122

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) Describe two methods of sowing hardy annuals directly into a border.
- b) Describe the symptoms and control of **TWO** distinct pests that affect hardy annuals.

Q1a) Candidates who were able to describe suitable methods of sowing hardy annuals directly into a border achieved maximum marks. These included:

Sowing in drills

Seeds are sown evenly in drills 300mm apart to a depth of 15mm. The drifts of drills are usually created in different directions and can be watered prior to sowing. After sowing the soil is raked over to cover the seeds.

Broadcast sowing

The drifts to be sown can be marked out with sand prior to sowing the seed broadcast, in two directions at 90° to each other to ensure even distribution of the seed. The seed is lightly raked into the soil surface.

Candidates who described station sowing of seed also achieved marks.

Q1b) The best candidates were able to describe the symptoms and control of specific pests that affect hardy annuals and gained full marks. Acceptable answers included:

Slugs/snails

The symptoms of slugs/snails are the slime trails that are left and the distinctive irregular, ragged holes or tattered foliage.

Slugs/snails can be controlled with the use of nematodes e.g. *Phasmarhabditis hermaphrodita*, ferrous phosphate pellets, beer traps or hand picking.

Aphids

The symptoms of aphids are the presence of sticky honeydew and sooty mould on the leaves and weakened/distorted growth.

Aphids can be controlled by the use of fatty acid sprays, jets of water and hand squashing.

Candidates who described the symptoms and control of caterpillars also achieved marks.

Q2

- a) Describe **THREE** maintenance tasks for an established herbaceous border.
- b) Name **FOUR** distinct plants suitable for planting in an herbaceous border.

Q2a) A range of maintenance tasks for an established herbaceous border were described by candidates who were awarded full marks. Suitable answers included:

Mulching

Mulching can be carried out during early spring or autumn using well-rotted garden compost, farm yard manure, leaf mould to a depth of 50-100mm.

Staking

Staking is carried out as growth is being produced in spring and before the plants are too large. Metal hoops, nets, hazel or birch twigs/pea sticks, bamboo canes are positioned to ensure that the plant is effectively supported but is discrete.

Trimming/cutting back

Trimming/cutting back is carried out at the end of the growing season or preferably at the end of the winter. Old growth should be cut to the base of the plant or ground level. Weak or excess growth can be thinned out.

Irrigation and feeding

Irrigation can be applied using seep hose, leaky pipes or sprinklers early or late in the day. Fertiliser e.g. Blood Fish & Bone or Growmore can be applied at a rate of 75g/m² if required.

Q2b) Most candidates were able to name suitable plants for planting in an herbaceous border and achieved full marks. These included:

Acanthus spinosus, Ajuga reptans, Anemone x hybrida, Symphyotrichum novi-belgii, Bergenia cordifolia, Echinacea purpurea, Echinops ritro, Hemerocallis fulva, Papaver orientale, Rudbeckia fulgida.

Q3

Describe how to prune **EACH** of the following **giving ONE NAMED** example for **EACH**:

- i) large-flowered (hybrid tea) rose
- ii) shrub grown for winter stems

Q3) Good descriptions of how to prune specific plants were provided by candidates who were awarded full marks. Acceptable answers included:

i) **Large-flowered (hybrid tea) rose**

Pruning of *Rosa* 'Peace', *Rosa* 'Ena Harkness' etc. is carried out in late winter/early spring using clean sharp secateurs by removing dead, diseased, damaged material, crossing/rubbing branches and pulling off suckers.

Pruning is always carried out to an outward facing bud making a (slanting) cut away from the bud and approximately 5mm above the bud to create an open centre or goblet shape.

Deadheading is carried out during the summer by removing the complete flower stem. Roses are also reduced in height by a third in October/November to prevent wind rock during the winter.

ii) **Shrub grown for winter stems**

Pruning of *Cornus alba* 'Sibirica', *Cornus sanguinea* 'Midwinter Fire', *Salix alba* etc. is carried out at the end of winter/early spring either annually or biennially. All stems are pruned to 50-100mm above the ground i.e. stooling, cutting just above a pair of buds.

Q4

- a) State what is meant by the term scree bed for growing alpiners.
- b) Describe the maintenance task of Mulching a rock garden
- c) Name FIVE distinct alpine or rock garden plants.

Q4a) The majority of candidates were able to state that a scree bed for growing alpiners is a bed covered with a mass of small stones/chippings to imitate the slope of a mountain. It is devoid of larger rocks and is very free draining.

Q4b) The maintenance task of mulching a rock garden was described well by many candidates who gained maximum marks. Suitable answers included:

Stone chippings e.g. limestone/sandstone/granite or fragmented slate is placed under the spreading foliage or up to the collar of the plant to a depth of 20-50mm.

Q4c) Suitable alpine or rock garden plants were named by many candidates who were awarded full marks. These included:

Androsace lanuginosa, Draba aizoides, Dryas octopetala, Lewisia cotyledon, Raoulia hookeri, Sempervivum arachnoideum, Pulsatilla vulgaris, Dionysia aretioides.

Q5

Describe how to plant a **ONE NAMED** deep water aquatic plant into a container, under EACH of the following headings:

- i) **NAMED** plant
- ii) suitable container
- iii) growing media
- iv) planting into container

Q5) Maximum marks were achieved by candidates who provided good descriptions of how to plant a named deep-water aquatic into a container. Suitable answers included:

i) **NAMED plant**

e.g. *Nymphaea alba*, *Nymphaea* 'Marliacea Chromatella', *Nymphoides peltata*, *Nuphar lutea*.

ii) **Suitable container**

A plastic container with mesh or lattice sides with a capacity of 5 litres or a diameter of 200mm.

iii) **Growing media**

The growing media for potting a deep-water aquatic plant needs to be heavy loam with a low nutrient content.

iv) **Planting into container**

The basket is lined with hessian and stones or gravel are placed in the bottom of the container before adding a layer of growing media. The plant is placed upright, centrally in the basket at the same depth as it was previously before backfilling with more growing media. The plant is firmed in and topped with a mulch of gravel.

Q6

Describe the process of establishing a lawn from turf under **EACH** of the following headings:

- i) soil preparation
- ii) turf laying
- iii) aftercare

Q6) A good knowledge of the process of establishing a lawn from turf was shown by most candidates who gained full marks. Acceptable answers included:

i) **Soil preparation**

Primary cultivation is carried out by single or double digging, ploughing, rotary cultivation or forking the soil. Secondary cultivation includes; weed control by either digging the weeds out or the use of an herbicide e.g. glyphosate. The area is levelled with the use of a landscape rake and stones larger than 25mm are removed. Consolidation is carried out by treading or rolling the area before a tilth is produced by raking with a garden rake.

ii) **Turf laying**

Working from boards the edges are laid first using whole/large sections of turf. The turf is laid in a brick bond/staggered arrangement systematically across the site, filling in smaller gaps with spare pieces of turf. The edges of turf are butted together by folding the edges into the previous turf without pulling or stretching it. Once the turf is laid the area is consolidated by tamping or rolling it to ensure that it is in close contact with the soil. A half-moon edging iron can be used to trim curves to shape. The turf can be top dressed with a mixture of loam and sand by brushing it into the joints with a besom broom.

iii) **Aftercare**

Irrigate the turf until established by thorough soaking during hot/dry weather. Mow the lawn with the blades raised to a height of 25-35mm until established. The lawn can be rolled to encourage tillering and top dressed with a mixture of loam and sand to even out any minor undulations.