INCLUDING EXAMINERS COMMENTS

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R3114

UNDERSTANDING A RANGE OF SPECIALIST ELEMENTS IN THE ESTABLISHMENT OF GARDEN & URBAN PLANTINGS

Level 3

Thursday 21 June 2018

15:35 – 16:40

Written Examination

Candidate Number:……

Candidate Name:……

Centre Number/Name:……..

IMPORTANT – Please read carefully before commencing:

i) The duration of this paper is **65** 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 may be used for drawing purposes only;

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 small community garden is surrounded by tall buildings casting shade. Describe **FIVE** methods to reduce the effect of shade on the use of the garden by the community.	**10**

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MARKS

Total Mark

Q2 a) State **FOUR** characteristics of a living wall. **4**

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b) Name **TWO** plants suitable for growing in a living wall. **2**

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Please see over/…..

MARKS

c) Name **TWO** plants suitable for growing in a living wall. **4**

Total Mark

Please turn over/…..

MARKS

Q3 a) State **TWO** reasons for using mulches in the garden. **2**

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b) Identify **TWO** distinct mulching materials for use in a sensory garden, giving reasons for their suitability other than the reasons given in a), by completing the table below.

Mulching material	Reason for selection

2

2

Please see over/…..

MARKS

c) Identify **TWO** further mulching materials which are not suitable for use in a sensory garden by completing the table below.

Mulching material	Reason for unsuitability

2

2

Total Mark

Please turn over/…..

MARKS

Q4 a) State **FOUR** environmental conditions that street plantings must be able to tolerate. **4**

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b) Recommend **THREE NAMED** plants that would be suitable for use in street plantings, giving **ONE** distinct reason for each. **6**

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Please see over/……

MARKS

Total Mark

Please turn over/…..

MARKS

Q5 a) State **TWO** reasons for pollarding plants. **2**

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b) List the tools and equipment necessary to carry out pollarding. **2**

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Please see over/…..

	MARKS
c) Describe the pollarding of a **NAMED** plant under **EACH** of the following headings:	**1**
i) time of year;	**1**
ii) method (with the use of diagrams).	**4**

i) .....

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ii)

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Total Mark

Please turn over/…..

MARKS

Q6 a) Describe the characteristics of a plant suitable for cloud pruning. **3**

b) State **ONE** garden situation where a cloud pruned plant is effective. **1**

Please see over/…..

	MARKS
c) Describe for a **NAMED** plant, the formative pruning of a cloud pruned specimen, using labelled diagrams.	**6**

Total Mark

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UNDERSTANDING A RANGE OF SPECIALIST ELEMENTS IN THE ESTABLISHMENT OF GARDEN & URBAN PLANTINGS

Level 3

Thursday 21 June 2018

Candidates Registered	**145**	**Total Candidates Passed**	**96%**
Candidates Entered	**127**	Passed with Commendation	64%
Candidates Absent/Withdrawn	14	Passed	32%
Candidates Deferred	4	Failed	4%

Senior Examiner's Comments

On the whole this paper was well answered with the majority of candidates attempting and completing all the questions. The following guidelines should be of help to future candidates.

1. Where named plant examples are asked for, full botanical names (genus and species) are required to achieve full marks. Common names will not be given a mark.

2. Use the command statements e.g. list or name (single words only), state (a few sentences), describe or explain (a fuller answer) together with the mark allocation, to judge the depth of the answer. Half marks are often allocated where the basic information given is correct but needs further qualification to gain the full mark.

3. Where a number of answers are specified in the question, the examiner will not select correct answers from a list e.g. if the question states 'State' **TWO** plant names', only the first two names given will be marked.

4. Labels on diagrams should be correctly positioned to avoid ambiguity and diagrams should be clearly drawn and annotated. No marks will be awarded for artistic merit.

5. Candidates should use unambiguous plant examples as reference sources from, for example, the RHS Find a Plant Service available on the RHS Website.

ANSWER ALL QUESTIONS

MARKS

Q1 a) *A small community garden is surrounded by tall buildings casting shade. Describe* ***FIVE*** *methods to reduce the effect of shade on the use of the garden by the community.* **10**

Q1 a) This question on reducing the effect of shade in a community garden was generally well answered with candidates describing the use of mirrors, water features and white walls to reflect light; shade plantings and woodland borders with appropriate plants named; raising tree canopies; using gravel paths to avoid algal growth on hard paving; and the use of deeply shaded areas for sheds and storage. Some candidates lost marks by only stating the methods without reference to reducing the effects of shade.

			MARKS
Q2	a)	*State **FOUR** characteristics of a living wall.*	**4**
	b)	*Name **TWO** plants suitable for growing in a living wall.*	**2**
	c)	*Name **TWO** plants suitable for growing in a living wall.*	**4**

Q2 a) This part of the question on the characteristics of a living wall was reasonably well answered by most candidates, including points on the structural framework of a living wall such as pocketed systems with built in irrigation, fertigation systems, plant types such as restrained or fibrous root systems and growth habits etc., although some candidates wrote about climbers on trellis instead of a true living wall. Some candidates stated maintenance needs or explored applications, environmental benefits and even wildlife provision including nesting, insulation properties, deflection of rainfall, aesthetics etc., which did not address the question.

b) This was well answered with popular plants being named Heuchera cultivars such as *Heuchera* 'Purple Petticoats', named ferns, named *Sempervivum* spp. and *Sedum* spp. Some candidates named seasonal plants such as *Pelargonium spp.* and *Lobelia* cultivars which were also awarded marks. No marks were awarded for *Hedera helix* as it is too invasive to be used on a living wall.

c) While many candidates were able to identify four management issues relating to plant nutrition, many only focussed on irrigation without mention of nutrients. Of those that did identify issues with managing nutrition, many wrote about an integrated 'fertigation' system where drip apparatus may clog and monitoring systems may fail. Other associated issues were a possible build-up of salts in the substrate, and different plants having different nutrient requirements which may lead to plant failure due to competition. No marks were awarded for top dressing each pocket or module by means of long-ladders and manual application as this is not practical, nor application of granular feeds, or planning issues.

MARKS

Q3 a) *State **TWO** reasons for using mulches in the garden.* **2**

b) *Identify **TWO** distinct mulching materials for use in a sensory garden, giving reasons for their suitability other than the reasons given in a), by completing the table below.*

Mulching material	Reason for selection	
		2
		2

c) *Identify **TWO** further mulching materials which are not suitable for use in a sensory garden by completing the table below.*

Mulching material	Reason for unsuitability	
		2
		2

Q3 a) Candidates gained marks in part a) with the majority stating weed suppression and water retention. Of those who stated nutrient gain, marks were only awarded if they specifically stated when using ‘organic’ mulches.

b) Whilst many candidates were able to name two mulching materials they did not always give the reason for their selection for a sensory garden which was the main focus of the question. Those that did identified mulches such as gravel producing a crunching sound, bark being of interesting tactile texture, coloured glass beads/ pebbles producing light patterns etc.

c) The most common answer for an unsuitable mulching material was farmyard manure associated with unpleasant smells which would overpower other flower fragrances, but too often the mulch was listed as well-rotted which should not have a smell. Quite a few candidates stated bark chips as unsuitable as they might cause splinters but bark chips are generally splinter–free as opposed to wood chips that do have the potential for splinters. As with part b) many candidates did not relate the reason for unsuitability to a sensory garden.

Some mulching materials such as gravel or bark chippings were identified by some candidates as suitable and by others as unsuitable for use in a sensory garden. This was acceptable if a reasonable statement in relation to a sensory garden was made to justify inclusion into either category.

Part c) seemed to be harder for most candidates to answer than part b).

MARKS

Q4 a) *State **FOUR** environmental conditions that street plantings must be able to tolerate.* **4**

b) *Recommend **THREE NAMED** plants that would be suitable for use in street plantings, giving **ONE** distinct reason for each.* **6**

Q4 a) This part of the question on street plantings was answered well with candidates gaining high marks. Most candidates stated air pollution, soil compaction, drought, wind turbulence/tunnels, and extremes of temperature as the environmental conditions that street plantings must be able to tolerate.

b) Candidates also answered part b) well with the most popular plants being *Platanus x hispanica* or *Ginkgo biloba* for their ability to cope with atmospheric pollution; *Lavandula angustifolia* for drought tolerance, fragrance and silver foliage; *Aucuba japonica* for its shade tolerance and tough evergreen spotted foliage etc. No marks were awarded for *Cotoneaster horizontalis* as this is now on Schedule 9 of the UK Wildlife and Countryside Act as an invasive non-native species and not recommended to be planted.

			MARKS
Q5	a)	*State **TWO** reasons for pollarding plants.*	**2**
	b)	*List the tools and equipment necessary to carry out pollarding.*	**2**
	c)	*Describe the pollarding of a **NAMED** plant under **EACH** of the following headings:*	**1**
		i) time of year;	**1**
		ii) method (with the use of diagrams).	**4**

Q5 a) This part of the question was reasonably well answered with the most popular reasons for pollarding being to keep the trees to a reasonable size, reduce shade, production of coloured stems and/or large leaves.

b) Four tools/items of equipment used for pollarding were required for maximum marks. Many candidates did not mention any equipment, but only tools and mostly hand tools. Of those tools listed the most popular were secateurs, loppers and pruning saw. Chainsaw, PPE, ropes, ladders etc. also gained marks.

The marks awarded for this part of the question totalled two and many candidates named just two tools or items of equipment. The instruction 'List' usually refers to at least four items.

c) Popular named plants for pollarding were *Platanus x hispanica, Tilia x europaea, Salix alba, Paulownia tomentosa* all of which were credited. *Cornus alba* 'Sibirica' and *Cornus sanguineum* 'Midwinter Fire' were not awarded a mark as these shrubs are usually stooled and not pollarded.

i) The time of year required for pollarding was 'late winter/early spring'. The majority of candidates wrote 'in the dormant season' which was not awarded any marks.

ii) The methods described were variable with some candidates interpreting the question as formative pollarding, others interpreting it as maintenance pollarding and some describing both. The standard of diagrams was variable but marks were awarded if they were clearly labelled and helped with the overall description of the method. Expected answers were to cut back each extension growth made during the growing season to just above the previous pollarding cuts, to clear any lateral growth from the main stem, and remove weak branches and congested branches. Some candidates lost marks as they confused pollarding with coppicing or pleaching.

			MARKS
Q6	a)	*Describe the characteristics of a plant suitable for cloud pruning.*	**3**
	b)	*State **ONE** garden situation where a cloud pruned plant is effective.*	**1**
	c)	*Describe for a **NAMED** plant, the formative pruning of a cloud pruned specimen, using labelled diagrams.*	**6**

Q6 a) Most candidates were able to list three characteristics of a plant suitable for cloud pruning including evergreen, small leaves/foliage, multi-stemmed and ability to tolerate close pruning. Those candidates who omitted the word 'close' from 'close pruning' were only awarded a half mark.

b) 'Japanese-style garden' was by far the most popular answer for the garden situation where a cloud pruned plant is effective. A mark was also given for its use as a focal point in a garden. Points on aesthetics alone were not awarded marks if not given in context of a situation.

c) This part of the question on the description of formative pruning for creating a cloud pruned specimen proved difficult for many candidates.

Popular plants named were *Buxus sempervirens, Taxus baccata, Ilex crenata,* and *Ligustrum japonicum.* The descriptions and diagrams of formative pruning were mixed but candidates were awarded marks for annotations stating that appropriate branches were chosen for the final framework with unwanted branches and stems removed. Formative pruning also included clearing all growths to reveal bare stems with just the tips remaining to be clipped into cloud shapes, and stems could be trained at different angles with weights or tied to stakes.

Unfortunately, some candidates wrote about cloud pruning hedges instead of the cloud-pruned specimen required by the question. Some candidates covered routine maintenance pruning rather than formative pruning; there was also a lot of repetition of points.