



R2111

**UNDERSTANDING GARDEN FEATURES, PLANT SELECTION
& PLANNING**

Level 2

Tuesday 19 June 2018

09:30 – 10:50

Written Examination

Candidate Number:

Candidate Name:

Centre Number/Name:

IMPORTANT – Please read carefully before commencing:

- i) The duration of this paper is **80** minutes;
- ii) **ALL** questions should be attempted;
- iii) **EACH** question carries **10 marks**;
- iv) Write your answers legibly in the lined space 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;
- 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) Define **EACH** of the following terms that are used in risk assessments:

- i) hazard;
- ii) risk.

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i).....

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ii).....

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b) State **ONE** way that the topography of a garden may be hazardous to users.

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c) Describe **TWO** design solutions for the situation stated in b) which will minimise risks caused by site topography.

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Total Mark

Please see over/.....

Q2 a) State the meaning of the term focal point in garden design, giving **ONE** hard landscape example.

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b) State **FOUR** distinct ways where scale and proportion can help achieve a garden design that ‘works’, giving **ONE** example for each.

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MARKS

2

8

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MARKS

Q3 State the height and spread at maturity of **FIVE** deciduous shrubs from distinct genera by completing the table below.

Shrub	Height & spread at maturity
1.	
2.	
3.	
4.	
5.	

2**2****2****2****2**

Total Mark

Please see over/.....

MARKS

Q4 a) Name **THREE** factors relating to soil to be recorded when carrying out a site appraisal.

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b) State how **EACH** of the factors named in a) are assessed during a site appraisal.

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c) State **TWO** design choices which would be influenced by the results of the soil assessment.

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MARKS

Q6 a) Describe the decorative merits of **THREE** herbaceous perennial plants from distinct genera by completing the table below.

Plant Name	Decorative merits
1.	
2.	
3.	

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b) Name a specific garden situation suitable for a range of herbaceous plants, (excluding an herbaceous border).

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MARKS

Q7 a) Describe how **TWO** features of a house could help a designer achieve a cohesive garden design.

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b) State **TWO** factors other than the house which a designer can use to achieve cohesion in a garden design.

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Total Mark

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MARKS

6

Q8 a) Describe **TWO** distinct situations where the location of existing electrical supplies can be hazardous in a domestic garden.

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b) State **TWO** distinct ways for a designer to minimise the risks associated with **ONE** of the electrical supplies described in a).

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MARKS

Q9 Compare the elements of formal and informal garden designs by completing the table below.

Design Element	Formal	Informal
Trees		
Moving water		
Seating		
Separation of areas in a garden		
Paths		

2**2****2****2****2**

Total Mark

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Q10a Explain the importance of using sustainable practices in the planning, design and maintenance of gardens.

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b) List **SIX** sustainable practices that can be integrated into the maintenance of a garden at the planning and design stage.

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Royal
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R2111

**UNDERSTANDING GARDEN FEATURES, PLANT SELECTION
& PLANNING**

Level 2

Tuesday 19 June 2018

Candidates Registered	672		Total Candidates Passed	486	85%
Candidates Entered	574	85%	Passed with Commendation	198	35%
Candidates Absent/Withdrawn	90	14%	Passed	288	50%
Candidates Deferred	8	1%	Failed	88	15%

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) Define **EACH** of the following terms that are used in risk assessments:

- | | | |
|-----|---------|---|
| i) | hazard; | 2 |
| ii) | risk. | 2 |

b) State **ONE** way that the topography of a garden may be hazardous to users. **2**

c) Describe **TWO** design solutions for the situation stated in b) which will minimise risks caused by site topography. **4**

Q1a) Many candidates had a good understanding of the definitions of hazard and risk and were awarded full marks. Acceptable answers included:

- i) **Hazard** is a potential source of harm or adverse health effect on a person.
- ii) **Risk** is the likelihood that a person may be harmed or suffer adverse health effects if exposed to a hazard.

Q1b) A range of ways that the topography of a garden may be hazardous to users were given by the best candidates who gained maximum marks. These included:

- Wet and slippery slopes
- Undulations (bumps and hollows) may present trip hazards
- Low lying areas may be boggy

Q1c) Candidates provided many suitable design solutions and achieved full marks. These included:

- Suitably designed steps with handrails and treads with non-slip materials for slippery slopes
- Serpentine paths with low gradients for slippery slopes
- Levelling out undulations
- Draining low lying boggy areas

Q2 a) State the meaning of the term focal point in garden design, giving **ONE** hard landscape example.

2

b) State **FOUR** distinct ways where scale and proportion can help achieve a garden design that 'works', giving **ONE** example for each.

8

Q2a) The majority of candidates understood that the term focal point in garden design refers to a physical object which draws the viewer's eye, catches their attention and invites exploration. Suitable examples which gained full marks included; statues or sculptures, follies, temples and fountains.

Candidates who gave examples of lakes, ponds or trees and shrubs could not be awarded any marks.

Q2b) To gain full marks for this section of the question it was important that candidates provided distinct examples. The best answers included:

- Scaling features e.g. patios and formal ponds in proportion to features on the house e.g. bay windows
- Selecting the unit size of hard landscape materials e.g. paving slabs which are appropriate to the space available
- Selecting feature plants e.g. trees and large shrubs which have an ultimate growth size proportionate to the size of the site and their proximity to the house
- Selecting or designing garden buildings e.g. a summer house so that their size is appropriate to the space available

Q3 State the height and spread at maturity of **FIVE** deciduous shrubs from distinct genera by completing the table below.

Shrub	Height & spread at maturity
1.	
2.	
3.	
4.	
5.	

2
2
2
2
2

Q3a) Candidates who clearly knew a range of deciduous shrubs well achieved full marks. Suitable answers included:

- *Cotinus coggygria* ‘Royal Purple’ – Ht: 5m Spr: 5m
- *Cotoneaster horizontalis* – Ht: 1m Spr: 1.5m
- *Forsythia x intermedia* ‘Lynwood Variety’ – Ht: 3m Spr: 3m
- *Hamamelis mollis* – Ht: 4m Spr: 4m
- *Kerria japonica* ‘Pleniflora’ – Ht: 3m Spr: 3m

	MARKS
Q4 a) Name THREE factors relating to soil to be recorded when carrying out a site appraisal.	3
b) State how EACH of the factors named in a) are assessed during a site appraisal.	3
c) State TWO design choices which would be influenced by the results of the soil assessment.	4

Q4a) Most candidates were able to name three factors relating to soil when carrying out a site appraisal and were awarded full marks. Suitable answers included: Soil pH, soil texture, soil colour, soil profile/depth and soil drainage.

Q4b) The best candidates were able to state how the factors relating to soil are assessed during a site appraisal and gained maximum marks.

Soil pH

Using a soil testing kit, soil samples are taken from several inches deep at various points across the site to test for the degree of alkalinity or acidity of the soil.

Soil Texture

Hand tests can be used to assess the texture of the soil i.e. taking a soil sample, moistening it and rolling it between the finger and thumb to make a ball and feel how smooth or gritty it is.

Soil Drainage

Soil drainage can be assessed by digging a hole which is then filled with water to see how long it takes to drain. Alternatively the site can be observed to locate any damp patches, waterlogging or 'indicator' plants.

Q4c) Candidates who correctly related their answers to design choices achieved full marks. Acceptable answers included:

- Establish a bog garden in damp patches
- Plant ericaceous plants in acid soils
- Plant lime tolerant plants in chalk soils
- Include areas of hard landscape e.g. patio on poor or stony soil

Q5 a) State **TWO** distinct materials suitable for building a garden wall (excluding the bonding media).

4

b) Describe **TWO** problems associated with using walls in garden design.

6

Q5a) The majority of candidates were able to provide suitable examples of materials for building a garden wall and gained full marks. These included: concrete blocks, engineering bricks, London clay bricks, sandstone or limestone blocks, Cotswold limestone and rough, but selected stone pieces of varying size e.g. limestone or granite for dry-stone walling.

Q5b) Good descriptions of problems associated with using walls in garden design were awarded full marks. Suitable answers included:

- Walls are impervious to wind and create turbulence by diverting the wind up and over the wall which then circulates back towards the wall as a vortex, damaging plants etc.
- Walls are expensive to build due to the cost of materials and the skilled labour required to build them
- Walls are not very wildlife friendly (except for dry-stone walls)
- The materials that are used for walls are not sustainable or environmentally friendly as natural rock is extracted from land and man-made bricks and blocks require high levels of energy in their production. Transportation costs are also high
- Walls create frost pockets and rain shadows

Q6 a) Describe the decorative merits of **THREE** herbaceous perennial plants from distinct genera by completing the table below.

Plant Name	Decorative merits
1.	
2.	
3.	

3
3
3

b) Name a specific garden situation suitable for a range of herbaceous plants, (excluding an herbaceous border).

1

Q6a) Many candidates gave good descriptions of the decorative merits of a range of herbaceous perennials and gained maximum marks. The best answers included:

Alchemilla mollis has soft, hairy leaves with toothed edges. It is a clump forming plant with small, bright yellow flowers which are borne in sprays.

Acanthus spinosus has large, glossy green leaves which are lobed and spine tipped. The flowers are white with purple bracts.

Verbena bonariensis has rough, branching stems with few lance-shaped, wrinkled leaves with toothed margins and hairs on the underside. The flowers are small and lilac in colour.

Q6b) Candidates named a range of garden situations suitable for herbaceous plants including; mixed borders, island beds in lawns, containers and woodland areas and were awarded full marks.

MARKS

- Q7 a)** Describe how **TWO** features of a house could help a designer achieve a cohesive garden design. **6**
- b)** State **TWO** factors other than the house which a designer can use to achieve cohesion in a garden design. **4**

Q7a) Candidates were able to describe a range of features of a house that could help achieve a cohesive garden design and gained full marks. These included:

- The size of windows and bays, doors etc. which face the garden could be used to provide proportions for patios, planting areas, paths and other garden features
- The colour of paint used for doors, windows, woodwork etc. could be repeated in the colour of paths, terraces, walls and the colour of foliage and flowers of plants
- The colour of materials from which the house has been built e.g. bricks, stone, timber may be repeated in garden features e.g. walls, patios, steps

Q7b) The best candidates provided a range of factors that can be used to achieve cohesion in a garden design and were awarded maximum marks. Suitable answers included; borrowed views, churches, mountains, use of local hard landscape materials e.g. Cotswold stone, flint and cobbles.

- Q8 a)** Describe **TWO** distinct situations where the location of existing electrical supplies can be hazardous in a domestic garden. **6**
- b)** State **TWO** distinct ways for a designer to minimise the risks associated with **ONE** of the electrical supplies described in a). **4**

Q8a) The majority of candidates provided good descriptions where the location of existing electrical supplies can be hazardous in a domestic garden. Suitable answers which were awarded full marks included:

- Unmarked underground cables may be buried in areas which require cultivation. These may be severed or damaged by a spade used when digging
- Overhead cables may be fouled by tall machinery or accidentally cut with long handled pruning equipment
- Electrical sockets near water or accessible to children near play areas can be hazardous

Q8b) Most candidates provided suitable methods that are used to minimise the risks associated with electrical supplies and achieved full marks. These included:

- Underground cables must be buried deeply and overlaid with hazard tape or tiles. The position of the cables must be clearly marked on plans or route the cables under paths or patios
- Overhead cables should be at a height above any normal access or working requirements. Ensure that the cables are clearly visible and not obscured or fouled by trees
- Ensure all sockets near water are waterproof and enclose any near children's play areas in a secure unit

Q9 Compare the elements of formal and informal garden designs by completing the table below.

Design Element	Formal	Informal
Trees		
Moving water		
Seating		
Separation of areas in a garden		
Paths		

2
2
2
2
2

Q9 Good comparisons of formal and informal garden designs for specific design elements were provided by candidates who gained maximum marks. Acceptable answers included:

Design Element	Formal	Informal
Trees	Topiarised trees in geometric designs; Planting in straight lines with mirror images along axis	Natural growth habits allowed to develop; Use of native species planted at random
Moving water	Classical statuary spouting water; Fountains of jet or complex form	Winding streams of varying width; Naturalistic cascades
Seating	Classic limestone or concrete benches of geometric shape; Lutyen style benches	Use of rough-hewn timber with bark retained; Living willow seating
Separation of areas in a garden	<i>Taxus baccata</i> hedges cut vertically with 'sharp' profiles; Brick or stone walls with copings	Loose planting e.g. <i>Rosa rugosa</i> ; Rustic trellis e.g. <i>Corylus avellana</i> with bark retained
Paths	Straight wide paths with right angle turns; Precisely cut and dressed stone units	Meandering grass paths; Loose gravel or bark; Winding paths of reclaimed brick

Q10a) *Explain the importance of using sustainable practices in the planning, design and maintenance of gardens.*

4

*b) List **SIX** sustainable practices that can be integrated into the maintenance of a garden at the planning and design stage.*

6

Q10a) Candidates who explained that garden designers must contribute to the conservation of scarce natural resources on this planet which will have a positive impact on sensitive environments and wildlife were awarded full marks.

Candidates who also named sustainable practices e.g. reclaim, recycle, reuse reduce, and using local suppliers were also awarded marks.

Q10b) Candidates listed a wide range of sustainable practices that can be integrated into the maintenance of a garden and gained full marks. Suitable answers included:

- Harvesting rain water
- Harvesting grey water
- Installing compost areas
- Mulching planted beds to conserve moisture
- Employ a 'no-dig' system of soil management
- Using drought tolerant plants
- Allowing areas of grass to grow long
- Create wildlife habitats/use of insect hotels and bird boxes
- Encourage beneficial wildlife