INCLUDING EXAMINERS COMMENTS

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R3111

UNDERSTANDING GARDEN SURVEY TECHNIQUES & DESIGN PRINCIPLES

Level 3

Thursday 14 February 2019

09:30 – 10:55

Written Examination

Candidate Number:.....

Candidate Name:.....

Centre Number/Name:.....

IMPORTANT – Please read carefully before commencing:

i) The duration of this paper is **85** 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.

Ofqual Unit Code M/507/5862

Please turn over/…..

ANSWER ALL QUESTIONS

MARKS

Q1 A client wants to include a children's play area in their garden.

i) Identify **SIX** pieces of information that would be required to develop the design brief. **6**

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MARKS

ii) Describe **TWO** distinct design examples of how visual harmony could be achieved between the play area and the garden as a whole. **4**

Total Mark

Please turn over/…..

MARKS

Q2 By completing the table below:

i) state **FOUR** soil characteristics that could be recorded when carrying out a site appraisal; **2**

ii) for **EACH** characteristic, describe its influence on the design choices. **8**

Soil Characteristics	**Influence on design choices**
1.	
2.	
3.	
4.	

Total Mark

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Turn over for next question

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MARKS

Q3 a) Explain **THREE** benefits of creating a focal point within a garden design. **6**

Please see over/…..

MARKS

b) For a **NAMED** example of **EACH** of the following, describe its attributes for use as a focal point:

i) soft landscaping; **2**
ii) hard landscaping. **2**

Total Mark

Please turn over/…..

MARKS

Q4 Explain how **FIVE NAMED** features or characteristics as identified in a site appraisal could influence the design of a fruit and vegetable production area within a garden. **10**

(YOUR ANSWER MUST EXCLUDE SOIL CHARACTERISTICS)

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MARKS

Total Mark

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MARKS

Q5 a) State **TWO** uses of photography to record information for a site appraisal. **2**

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b) Complete the table on the page opposite to show:

i) **FOUR** possible limitations identified on a site appraisal for an outdoor entertaining area in a garden; **4**

ii) **ONE** example of how **EACH** could be offset by the use of soft landscaping. **4**

Please see over/…..

MARKS

Limitations	Soft landscaping design solution
1.	
2.	
3.	
4.	

Total Mark

Please turn over/…..

MARKS

Q6 a) Define the term ‘offsets’ as used in linear surveying; **2**

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b) Illustrate, using a diagram, a method for recording offsets in a field book. **5**

Please see over/…..

MARKS

c) Define **THREE** types of readings that are taken from a staff in the rise and fall method of level surveying using a levelling instrument. **3**

Total Mark

Please turn over/…..

MARKS

Q7 a) Explain what is meant by unity in garden design. **2**

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b) Describe **FOUR** distinct ways in which unity can be achieved in a garden design. **8**

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MARKS

Total Mark

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MARKS

Q8 a) Identify **SIX** characteristics of the Moorish garden design style. **6**

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MARKS

b) Review the factors that have introduced a Moorish influence to domestic gardens. **4**

Total Mark

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R3111

UNDERSTANDING GARDEN SURVEY TECHNIQUES & DESIGN PRINCIPLES

Level 3
Thursday 14 February 2019

Candidates Registered	**174**	**Total Candidates Passed**	**92%**
Candidates Entered	**143**	Passed with Commendation	52%
Candidates Absent/Withdrawn	27	Passed	40%
Candidates Deferred	4	Failed	8%

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 client wants to include a children's play area in their garden.

i) Identify **SIX** pieces of information that would be required to develop the design brief. **6**

ii) Describe **TWO** distinct design examples of how visual harmony could be achieved between the play area and the garden as a whole. **4**

Q1 i) Candidates were generally able to identify six pieces of information required to develop a design brief for inclusion of a play area in a garden. Suitable answers were:

-The number of children.

-The ages of the children.

- Do the children have special needs.

-The types of play required (e.g. climbing, swinging, sport).

-The need, or not, for the play area to be visible from the house or an adult seating area.

-Preferred materials for equipment (steel, timber, plastic).

- What maintenance/inspection the client is able to do.

- Flexibility of the area to adapt as the children grow older.

ii) For the two distinct examples of how visual harmony could be achieved between the play area and the garden as a whole, it was important that the examples given were sufficiently distinct from each other. This was not always the case, with a number of candidates describing two examples of how matching materials could be used. Such answers typically described the use of the same (or similar) hard landscape material in the play area and the garden, and the same (or similar) plants used in both situations. In these cases, only one of the examples would have been awarded full marks.

It was also important, for full marks, that the examples included reference to actual features as well as a description of how they could be arranged to achieve the desired effect. Suitable answers were:

-Shape of play area congruous with lines of garden layout, for example a square play area could be incorporated into a layout defined by interlocking squares.

- Play item used to achieve visual balance with another garden feature, e.g. a climbing structure used on one side of an axis to achieve asymmetrical balance with a tree on the other side.

MARKS

Q2 By completing the table below:

i) state **FOUR** soil characteristics that could be recorded when carrying out a site appraisal; **2**

ii) for **EACH** characteristic, describe its influence on the design choices. **8**

Soil Characteristics	**Influence on design choices**
1.	
2.	
3.	
4.	

Q2 i) Four soil characteristics that could be recorded at a site appraisal include drainage capacity, soil texture, soil pH and soil depth. These were generally stated quite clearly by candidates although in some cases, more ambiguous answers were given, where candidates did not name a clear characteristic e.g. 'waterlogged clay' leaving uncertainty over whether the characteristic was drainage or texture.

ii) In order to gain full marks for each, candidates needed to describe the variables associated with the characteristic and the possible influence on design choices. For drainage capacity, a suitable description could have been 'It may be free draining or poorly drained and this would influence plant selection, e.g. lavender should not be planted in a poorly drained soil'. An alternative influence might have been that 'a poorly drained soil would not be suitable for use as a recreational lawn'. For each characteristic there were a number of different influences that candidates could have described.

It is important to note that some descriptions given were not of influences on design choices, but rather influences on cultivation practices. For example, 'a sandy soil will need more fertiliser applications than a clay soil'. In such a case, full marks would not have been awarded.

MARKS

Q3 a) Explain **THREE** benefits of creating a focal point within a garden design. **6**

b) For a **NAMED** example of **EACH** of the following, describe its attributes for use as a focal point:

i) soft landscaping; **2**
ii) hard landscaping. **2**

Q3 a) Three benefits of creating a focal point would include:

-Creates a visual axis between the viewer and the focal point, around which visual balance can be achieved.

-Enables the eye to rest naturally on something, avoiding a sense of restlessness.

-Emphasises a destination towards which visitors can move, encouraging circulation/movement through the garden.

It can be seen that each of these answers comprises a statement of the role of the focal point in the garden (e.g. creates visual axis) and a further statement of the benefit this brings (e.g. achieving visual balance). Answers which didn't clearly state the benefit would not have been awarded full marks. This was the case, for example, with the answer 'focal points create a point of interest' which was not adequate because focal points are inherently intended to be points of interest.

b) A suitable example of a focal point of a soft landscape nature could have been *Cornus controversa* 'Variegata' and for hard landscaping, a suitable example could have been a decorative oak bench. It was necessary in each case, for full marks, to describe the attributes of each example given. For *Cornus controversa* 'Variegata' a suitable description could have been 'Striking appearance from layered branching pattern and variegated foliage'. For the bench, the description could have been 'attractive construction detail and an enticing destination for visitors'.

It should be noted that if the example given as a focal point was not considered to have sufficient attributes to warrant its selection, then full marks would not have been awarded. This was sometimes the case for deciduous trees with a short flowering period and few distinctive qualities in their form, branching pattern, leaf texture etc.

MARKS

Q4 Explain how **FIVE NAMED** features or characteristics as identified in a site appraisal could influence the design of a fruit and vegetable production area within a garden. **10**

(YOUR ANSWER MUST EXCLUDE SOIL CHARACTERISTICS)

Q4 Candidates generally answered this question confidently, providing detailed descriptions of how various site characteristics could influence the design of a fruit and vegetable production area.

Possible site characteristics that could have been selected are:

-Areas of hard surfacing on the site.

-Areas shaded by existing trees.

-Existing locations of water points.

-Severe exposure to prevailing winds.

-Topography of the garden.

For each feature or characteristic, at least one way in which it might influence design needed to be detailed. For example, for an 'area of hard standing' it would have been sufficient to explain that it could be used in the plot as a storage area'.

Often the influence on design was simply that the feature or characteristic affected siting of the fruit/veg plot. That was fully acceptable but if it was identified that the characteristic prohibited the siting of the plot in that situation, then an explanation for that would have been beneficial. For example, for 'areas shaded by existing trees' it could have explained that 'most vegetables don't grow well in shade' or that 'cultivations should not be carried out around tree roots'. Influences involving crop selection were accepted, e.g. 'soft fruits and lettuce could be grown in light shade'.

Many candidates cited aspect as a characteristic but generally didn't explain what they meant by it. Aspect is the compass direction that a slope faces or the direction in which one side of a building faces. It could have meant that the site was sloping in a particular direction or that the site was adjacent to a building and thereby shaded from a particular direction. Aspect was also conflated with orientation, which relates to points of the compass, that would be relevant in positioning permanent features such raised beds and greenhouses to make maximum use of sunlight.

MARKS

Q5 a) State **TWO** uses of photography to record information for a site appraisal. **2**

b) Complete the table on the page opposite to show:

i) **FOUR** possible limitations identified on a site appraisal for an outdoor entertaining area in a garden; **4**

ii) **ONE** example of how **EACH** could be offset by the use of soft landscaping. **4**

Q5 a) It was important that the two uses of photography stated, were clearly uses that brought distinct benefits to the process and purposes of site appraisal. Suitable uses would have been:

-For recording details of architecture.

-For recording zones of surface puddling after heavy rain.

-To show views in and out of the site.

-To locate vistas within a site.

Where the benefits gained from photographing did not clearly add value to those that would arise from other methods, then full marks would not have been awarded. For example, 'use of photograph to record the location of a tree to be retained' would not have been awarded full marks because really the location of that tree should be accurately plotted on a plan. If the answer had been 'to provide information on the condition of the tree' then that would have been fully acceptable.

b) Four possible limitations identified on a site appraisal for an outdoor entertaining area were generally stated clearly and accurately by candidates. Suitable answers were:

-Excessive exposure to sun.

-Lack of privacy from neighbouring property.

-Traffic noise from adjacent road.

-Proximity to hazardous feature, e.g. pond.

The most common problem seemingly encountered by candidates was that, having selected a limitation, it wasn't always easy to offer a soft landscape solution. Where, e.g. 'excessive exposure to sun' was selected, the solution would have been straightforward with 'plant a tree for shade', and for traffic noise this could be reduced by dense shrub planting. But with some selections it was more problematic, e.g. for the limitation of 'waterlogged ground', hard landscape solutions were sometimes offered and these would not have been acceptable. Moreover, solutions to 'waterlogged ground' such as 'planting bog plants' was also not accepted as it does not directly address the limitation in terms of the area's use for entertaining. Similar problems were encountered where 'sloping ground' was suggested as a limitation.

			MARKS
Q6	a)	Define the term ‘offsets’ as used in linear surveying;	**2**
	b)	Illustrate, using a diagram, a method for recording offsets in a field book.	**5**
	c)	Define **THREE** types of readings that are taken from a staff in the rise and fall method of level surveying using a levelling instrument.	**3**

Q6 a) An acceptable definition for ‘offsets’ would have been ‘Lateral measurements at right angles to a base line, made in order to plot positions of points on a line or individual objects’. There are different ways of expressing this but the key requirements were that the definition stated what was being measured and why.

b) For the diagram in part b), many candidates did not show an understanding of recording offsets using a field book or the technical process of measuring offsets. Very few candidates stated that the offset had to be measured from the feature to the base line at the shortest distance to obtain a right angle.

It was important, for full marks, that the diagram included the following:

-The base line drawn vertically on the page (represented as two parallel lines drawn with a space between for recording measurements). It should be labelled, e.g. A-B, at each end.

-Direction of work is clear, either from the labelling of the base line, e.g. line A-B with A at the bottom of the page, or progressive measurements (between the two drawn lines) from bottom to top.

-Examples of running measurements (e.g. 5.1m, 7.2m, 11.5m) showing distance along baseline where offset joins it.

-Offsets drawn from named points to base line from its left and/or right-hand side.

-Examples of measurement (e.g. 2.5m) representing the length of the offsets.

If examples of measurements weren’t given then reference to values for running measurements on the base line, and offset measurements, would have been sufficient.

Many candidates showed the base line measurements as predetermined, regularly spaced points along the line. This doesn’t represent the optimal way of carrying out a linear survey. If a single object is to be plotted, then that can only be done by measuring back from the point and recording the distance along the base line at which it is met by the offset at a right angle. Similarly, if an irregular or curving line is being plotted, then that is most effectively done by selecting the optimal points on that line by which it can be plotted. If predetermined offset measurements are taken, they may miss, for example, the apex of a curve in the line being plotted.

c) The three types of reading taken in a rise and fall level survey are backsight, intermediate sight and foresight. In defining these terms full marks would have been awarded where reference was made to the positioning of the levelling instrument, e.g. ‘Backsight; first reading after positioning the instrument’, intermediate sight, reading between backsight and foresight, and foresight, last reading before moving the instrument.

MARKS

Q7 a) Explain what is meant by unity in garden design. **2**

b) Describe **FOUR** distinct ways in which unity can be achieved in a garden design. **8**

Q7 a) Unity in garden design can be explained as a sense of cohesion between different components of the garden. Candidates awarded full marks would have included in their explanation that this cohesion applies also to the relationship the garden has with its surrounding environment and/or house.

b) Distinct ways in which unity can be achieved include the following:

-Colour combinations in plants or materials, using hues close to each other on the colour wheel.

-Repetition of form throughout an area, for example of trees/shrubs clipped to the same shape.

-Echoing style throughout a garden, for example, built structures in Japanese style garden in combination with plants associated with Japanese gardens.

-Ensuring that all elements are in proportion with each other, e.g. with regard to the width of borders and an adjacent lawn.

- Echoing local dominant ecology with types of planting within garden.

- Echoing a dominant structure e.g. a building both in colour and style of hard landscape features.

Most candidates answered this question well but there were some whose examples were not sufficiently distinct. For example, the idea of matching materials was often repeated with respect to building materials in the house construction and the garden, landscape components within the garden itself, and plants in the garden or the surrounding landscape. Successive repeats of the same idea were not awarded maximum marks.

MARKS

Q8 a) Identify **SIX** characteristics of the Moorish garden design style. **6**

b) Review the factors that have introduced a Moorish influence to domestic gardens. **4**

Q8 a) In order to gain full marks on this part of the question, six characteristics of the Moorish garden design style needed to be stated. These could include the following:

-Enclosed/courtyards.

-Geometric layouts with double axis symmetry.

-A central water feature.

-Water channels/rills with moving water.

-No idolatry, no statues.

- Use of verandas, loggias, open sided corridors.

-Rendered walls.

-Elevated paths.

-Ceramic tiles on pools/paving.

-Plants in pots.

-Citrus trees.

This part of the question was generally answered very well by candidates.

b) Candidates were asked to review factors that have introduced a Moorish influence to domestic gardens. Suitable answers were as follows:

-Foreign travel - to Spain / North Africa.

-TV/media programmes/articles about garden history.

-Influence of garden shows or individual designers.

-Suitability of geometric design to small home gardens.

-Popularity of water features.

There are various others that could have been selected but the important requirement was that each answer represented a factor (or condition) by which the influence has taken place. A number of candidates did misinterpret this part of the question and identified points of similarity between Moorish and domestic gardens or the incorporation of Moorish features into a domestic garden. To answer that both types of garden have plants in pots would not have earned a full mark.