



Including Examiner Comments

R3114

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

Level 3  
Thursday 20 June 2024

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 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)** State **TWO** reasons for pollarding plants.

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**b)** Describe the pollarding of a **NAMED** plant under **EACH** of the following headings:

- i) tools and equipment
- ii) time of year
- iii) method

**2**  
**1**  
**4**

Named Plant .....

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**Q2** a) Describe the characteristics of **TWO NAMED** plants which are suitable for a prairie style garden.

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b) Describe **THREE** benefits/contributions of a prairie style garden.

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**Q3**

Describe management issues to consider when establishing a roof garden under **EACH** of the following headings:

- i) micro-climate
- ii) irrigation
- iii) hazards

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



## R3114 Examiner's Report June 24

### General points:

Where a plant example is chosen, it is important to write the *FULL* botanic name and not just a partial name, following the correct naming protocols.

Where named plant examples are required, **common names are not credited** at level 3. Spellings of scientific terms and botanic plant names need to be full and accurate - poor spellings may be penalised.

Where a number of answers are asked for e.g. **THREE** environmental conditions, only the first three in a list will be marked.

In general terms, the candidates performed well, as can be expected from this particular paper.

<b>Q1</b>	a)	<p>State <b>TWO</b> reasons for pollarding plants.</p> <p>Most candidates identified the need for controlling the size of the tree or to produce juvenile growth. No marks were awarded where an answer clearly related to the stooling or coppicing of trees.</p>
	b)	<p>Describe the pollarding of a <b>NAMED</b> plant under <b>EACH</b> of the following headings: the named plants were often <i>Platanus x hispanica</i>, <i>Salix alba</i> or <i>Tilia x europaea</i>, no marks were awarded for <i>Quercus robur</i> or <i>Corylus avellana</i> – if the candidate named <i>Corylus avellana</i> this was usually accompanied by a description of coppicing and not pollarding.</p> <p>i) tools and equipment: were credited if described by the name of the tool/equipment and its use, e.g. ladder to reach the height where plant material is being removed, or secateurs to remove twigs/branches up to 3cm in diameter.</p> <p>ii) time of year: mostly correctly stated as late winter/early spring. Poor answers by candidates were often describing the removal of coloured willow growth in the autumn or winter.</p> <p>iii) method: candidates' descriptions of the method often lacked detail and so did not gain full marks; key points were the cutting back of the previous season's growth almost to the point of origin; removal of suckers and stem growth, cutting out weak growth and thinning the branch framework if becoming congested.</p>

<b>Q2</b>	a)	<p>Describe the characteristics of <b>TWO NAMED</b> plants which are suitable for a prairie style garden.</p> <p>This was generally well answered; most candidates opted for large grasses such as <i>Stipa gigantea</i> or drought tolerant herbaceous perennials like <i>Helenium</i> ‘Sahin’s Early Flowerer’ or <i>Solidago canadensis</i>. The characteristics described should be specific to the named plant, and could include height, time of interest, description of interest (seed head, flower, foliage), architectural structure, persistent aerial growth, drought tolerant. Some candidates gave detailed descriptions of the characteristics, others were lacking in detail. E.g. “a tall perennial with pinky-purple flowers” is not an adequate description of the characteristics of <i>Lythrum salicaria</i> which is “A robust herbaceous perennial with upright stems to 1.2m tall, clad in narrow, willowy leaves, and small vivid purplish-pink flowers 2cm wide in dense terminal spikes over a long period in summer, will grow in poorly draining soil”. – at least two of those key descriptive points were expected for full marks.</p>
	b)	<p>Describe <b>THREE</b> benefits/contributions of a prairie style garden.</p> <p>Many different benefits were described and popular answers were:</p> <ul style="list-style-type: none"> <li>• lower maintenance input once the prairie style garden is established because it only needs cutting back/mowing off in the spring,</li> <li>• less watering required due to the drought tolerance of the plants</li> <li>• good for biodiversity – food, shelter, hibernation, long season of interest due to persistent seed heads.</li> </ul> <p>Other credited answers included:</p> <ul style="list-style-type: none"> <li>• Plant choice can be adapted to most soil types and conditions and microclimates etc., including poorly drained soils</li> <li>• Cost effectiveness, many herbaceous perennials spread vegetatively and by seed therefore readily colonise areas and regenerate, can also be lifted, divided and replanted</li> <li>• Aesthetics, wide range of architectural and textural features and forms for visual impact</li> </ul>

<b>Q3</b>		<p>Describe management issues to consider when establishing a roof garden under <b>EACH</b> of the following headings:</p> <p>(i) micro-climate most candidates were aware of the increased exposure to weather elements, wind tunnelling, desiccation, temperature fluctuations having an effect on establishment and suggested ways of mitigating the problems such as using temporary or permanent shelter or a windbreak to aid establishment</p> <p>(ii) irrigation most candidates concentrated on the potential lack of water</p>
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		<p>during establishment and how to get it to the plants – by installation of various water sources and irrigation systems, such as drip systems, self-watering containers. A few candidates mentioned water butts and rain collection, and the use of drought-resistant plants which would reduce the need for irrigation, but hardly anyone mentioned what to do about too much water, whether from rainfall or leaks.</p> <p>(iii) Hazards  candidates were able to give descriptions of the various potential hazards in establishing a roof garden including people and materials falling off/getting blown off the roof, exposure of workers to weather and pollution, problems in lifting, carrying materials and plants up to the roof, so trips, falls etc., security of fixing for structures plus the ability of the roof to bear weight of the established garden.</p>
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<b>Q4</b>		<p>Describe <b>FIVE</b> distinct ways of preventing water run-off in a garden</p> <p>As candidates were being asked about the <b>prevention</b> of water-run off, not harvesting for later use, marks were only awarded for valid answers which included:</p> <ul style="list-style-type: none"> <li>• ensuring the soil has plenty of organic matter in it to absorb water,</li> <li>• using permeable hard surfaces to allow water to percolate in to the soil,</li> <li>• avoiding leaving bare soil in the rainy season as this could cause capping and subsequent run-off,</li> <li>• using rain butts to collect roof water from sheds and greenhouses.</li> <li>• use of intercept drains to collect water from hard surfaces to take to an underground attenuation tank</li> <li>• a few candidates also correctly described the use of green roofs to attenuate water.</li> </ul> <p>Some of the given answers were not distinct from each other, such as having a lawn to absorb water AND having a flower border to do the same thing so marks were not awarded for the second example.</p>
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<b>Q5</b>		<p>Describe <b>FIVE</b> distinct benefits of utilising containers in a community garden for planting</p> <p>This question was answered well.  The most popular answers were:</p> <ul style="list-style-type: none"> <li>• being able to have soil to grow plants where there is none, or where the soil on site is unsuitable.</li> <li>• can grow a range of plants and provide different soil conditions for individual containers, such as ericaceous compost with low pH for acid loving plants</li> <li>• being able to move the container when the display is over or relocating it to sheltered protection over the winter,</li> <li>• can enhance community involvement by groups/individuals having their own pot project, 'adopt a pot', 'design a planter'</li> <li>• can utilise recycled items as containers for planting</li> <li>• also, other benefits included that specific sized containers were</li> </ul>
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		suitable for people with restricted mobility, or small children, or could be decorated and designed by specific groups and for specialist crops.
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<b>Q6</b>	a)	<p>Describe <b>THREE</b> key characteristics for an established woodland garden.</p> <p>Most candidates adequately described the concept of ground cover, understorey and canopy, although not necessarily using those exact terms. The ground cover and understorey providing flowering interest in the spring in a deciduous woodland garden, with spring flowerers becoming dormant once tree leaf cover is full.</p> <p>Light levels would decrease in summer when the tree canopy would provide shelter and shade.</p> <p>There was an emphasis on biodiversity being encouraged across the three levels, with a range of plants attracting insects which would be a food source for birds.</p> <p>An established woodland garden would also be a source of leaf mould and potential log piles, again providing food source and habitat for a range of invertebrates and small mammals.</p>
	b)	<p>Describe <b>TWO</b> maintenance tasks to be carried out in an established woodland garden.</p> <p>This was well described by most candidates and included monitoring trees for unsafe limbs, removal of dangerous branches, crown lifting, crown thinning in dormant season, mulching beds with leaf litter, path clearance, weed control, and the creation of hibernacula from maintenance arisings.</p>