



RHS use only			
A	B	C	Total

**RHS Level 3 Certificate in Plant Growth, Garden Planning  
and Applied Propagation**

**UNIT 1**

**Wednesday 16 October 2024**

**09:30 - 11:30**

**Candidate Name:** .....

**Candidate Number:** .....

**Centre Name:** .....

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**Instructions**

This paper contains three sections which may be answered in any order. Candidates should answer:

- **Section A** – all questions (20 marks)
- **Section B** – all questions (50 marks)
- **Section C** – only **TWO** from **FOUR** questions (30 marks).

**Place a cross (X) in the box identifying the two Section C questions you have answered.**

<b>C 1</b>	<b>C 2</b>	<b>C 3</b>	<b>C 4</b>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Please note:**

- i) The duration of this paper is **120** minutes.
- ii) Write all answers legibly in the spaces provided and use black or blue ink only.
- iii) Use **METRIC** measurements only.
- iv) Where plant names are required, they should include genus, species and where appropriate, cultivar.
- v) Where a question requires a specific number of answers, only the first answers given will be marked regardless of the number of answers offered.
- vi) Please note, when the word '**distinct**' is used within a question, it means that the items have different characteristics or features.

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**RHS Level 3 Certificate  
UNIT 1**

Candidate Name: .....

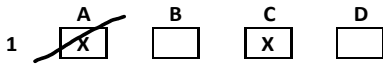
Centre Name: .....

Candidate Number: .....

**SECTION A  
RESPONSE GRID**

**Instructions**

Place a cross (X) in the box you believe is the correct answer. If you make a mistake, score through the box and place a cross in the correct box as follows:



Question	Answer			
	A	B	C	D
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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18	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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# Section A

**Answer all questions in this section.  
This section is worth 20 marks and each question is worth 1 mark.**

## Question 1

This question relates to the Working at Height Regulations 2005.

How does a supervisor decide if someone is competent to work at height?

1. Check they have sufficient knowledge.
2. Check they have sufficient skills.
3. Check they have sufficient experience.
4. Check if they have sufficient insurance.

- a) 1, 2, and 4
- b) 2, 3, and 4
- c) 1, 2, and 3
- d) all of the above

## Question 2

Which of the following statements about the storage and care of Respiratory Protective Equipment (RPE) is **incorrect**.

RPE must always be correctly stored because:

- a) the inside of the RPE can be contaminated by dust, increasing the risk of exposure
- b) it is important that the RPE is kept with the member of staff's gloves, overalls and safety boots
- c) the RPE can be damaged, leading to a poor fit and the ingress of dirty air
- d) the RPE can be degraded by exposure to ultraviolet light or sunlight.

please turn over.....

### Question 3



Deborah Meaden presents the RHS Sustainable Product of the Year to representatives from Dobbies for their Peat Free John Innes at the 2022 RHS Chelsea Flower Show.

**Image credit: RHS/Suzanne Plunkett**

This growing media was assessed under the Responsible Sourcing Scheme for growing media and was rated 'A'.

- a) This means it is considered to have the lowest impact on the environment.
- b) This means it is considered to be free of all traces of fertiliser or lime.
- c) This means it is considered to be 100% recycled, including the packaging.
- d) This means it is considered to be appropriate for use in certified organic settings.

### Question 4

Horticultural practices can impact on climate change.

To reduce their carbon footprint some producers of glasshouse grown bedding plants are now using solar panels and air source heat pumps to reduce their carbon footprint.

- a) True.
- b) False.

### Question 5

What function does this piece of equipment perform in propagation/production glasshouses?



- a) To measure temperature and relative humidity.
- b) To measure relative humidity and wind speed.
- c) To measure irrigation and temperature.
- d) To measure light levels and wind direction.

### Question 6

A propagation textbook states:

*This important technique subjects moistened seeds to cold temperatures to stimulate germination.*

*It is often used when growers want to sow seed in the spring. It imitates winter conditions to cause seed germination.*

This technique is:

- a) Stratification
- b) Thermal
- c) Umbelliferous
- d) Scarification.

### Question 7

*“In this period there was an explosion of innovation and interest in gardening and plants. Brightly coloured exotic plants were grown in technologically advanced greenhouses, Italian style balustrades and terraces were installed and plantings were created with new introductions from all over the world.”*

English Heritage

In which century did this style of gardening develop?

- a) 15th Century.
- b) 17th Century.
- c) 19th Century.
- d) 21st Century.

### Question 8

Which of the following is a characteristic of a Medieval garden?

- a) A ha ha to reveal a view.
- b) An enclosed garden within a wall.
- c) A Greek temple within a vista.
- d) An elaborate Italian pavilion.

### Question 9

In 1875 William Hindshaw described the lake at RHS Garden Bridgewater as:

*“a beautiful sheet of water, with a pretty little island connected by an elegant bridge with the near bank, having fantastic grottoes, rock work, with drooping willows dipping into the pool and affording shelter to the varied waterfowl.”*

This quote could be used to develop an understanding of:

- a) Spirit of the age
- b) Spirit of heritage
- c) Spirit of place
- d) Spirit of the garden.

### Question 10

Which of the following pieces of legislation requires ‘reasonable adjustments’ to be made by employers for individuals with disabilities?

- a) Equality Act 2010.
- b) The Human Rights Act 1988.
- c) Employment Rights Act 1996.
- d) The Health and Safety at Work Act 1974.



### Question 11

You have been instructed to purchase a standard tree that has been grown to British Standards.

When receiving delivery of the tree, what should be the expected girth?

- Girth (cm)
- a) 8 – 10
  - b) 14 – 16
  - c) 18 – 20
  - d) 22 – 24

### Question 12

Crassulacean Acid Metabolism (CAM) is an adaptation that increases terrestrial plants resilience to:

- a) salt inundation
- b) excessive airborne sulphur
- c) drought conditions
- d) herbivory from molluscs.

### Question 13

The principle of scale in design can be defined as:

- a) the distribution and visual weight of elements
- b) the overall physical size of a given area
- c) the difference in height between garden areas
- d) the proportion of the garden that is lawn.

### Question 14

What is the difference between harassment and discrimination?

- a) Discrimination is not against the law, harassment is against the law.
- b) Discrimination is against the law, harassment is not against the law.
- c) Discrimination is treating someone unfairly, harassment is unwelcome conduct.
- d) Discrimination is unwelcome conduct, harassment is treating someone unfairly.

### Question 15

Stumperies, fern houses and even the pattern on custard cream biscuits all developed in the late 19th century due to which horticultural phenomenon?

- a) Giardinomania.
- b) Abreuvour.
- c) Labyrinth.
- d) Pteridomania.

## Question 16

What do the RHS hardiness ratings tell us?

- a) The absolute minimum winter temperature tolerated.
- b) 10-year average annual minimum temperature.
- c) Lowest winter/maximum summer temperatures.
- d) Average annual temperature at 50% relative humidity.

## Question 17

Climate change is resulting in periods of extreme weather.

Periods of extreme weather:

- a) strengthen the internal structure of trees. this in turn can result in more valuable, stronger timber.
- b) damage the internal structure of trees. this in turn can result in earlier leaf fall.
- c) weaken trees and other plants. this in turn can make them more susceptible to pests and diseases.
- d) strengthen trees and other plants. this in turn increases the potential to flower and produce fruit.

## Question 18

The image below is an herbarium record from RHS Garden Wisley.



The description states 'and its broad bracts developing a pink flush'

A bract is:

- a) a modified or specialised leaf in the inflorescence
- b) a dry, one seeded indehiscent fruit
- c) a leaf-like appendage at the base of the petiole
- d) a bundle or structure of stamens in adelphous flowers.

**Question 19**

Annual propagation plans often refer to the care and management of stock plants.

Stock plants are:

- a) plants that are in high demand and kept in stock
- b) plants that are used to produce material for cuttings
- c) rooted cuttings that are ready for sale to the public
- d) herb cuttings, grown to make stocks for restaurants.

**Question 20**

*'The propagation of Salvia confertiflora has been a huge success. We were able to collect and sow 873 seeds, with 763 germinating.'*

What is the percentage germination rate?

- a) 81.80%
- b) 82.60%
- c) 87.40%
- d) 114.00%

**End of section A.**

**Please continue to Section B.**

# Section B

Answer all questions in this section.  
This section is worth 50 marks.

**MARKS**

**Question 1** (5 marks)

This question relates to advanced propagation techniques.

The definition of an advanced propagation technique is one that goes beyond the basic techniques, for example the taking of softwood, semi-ripe, leaf or hardwood cuttings.

a) **NAME** a specialist vegetative propagation technique.

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**1**

b) **NAME** a suitable plant that is professionally propagated using this technique.

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**1**

c) State **THREE** reasons why this is the preferred technique for propagating this plant.

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**3**

Total Mark
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**Question 3 (7 marks)**

**MARKS**

a) What does the acronym CITES stand for?

**1**

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b) Name **TWO** distinct plants that are covered by CITES?

**2**

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c) Explain **TWO** distinct impacts that CITES has had on horticulture in the UK.

**4**

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please see over...

Total Mark

**Excluding Examiners Comments**

**MARKS**

**Question 4** (8 marks)

Public gardens are often required to justify their staffing levels.

Discuss the impact of cultivation requirements on staff resources using the following headings for a **NAMED** garden area.

You should include **NAMED** plant examples in your answer.

a) Cultivation requirements in the spring/summer.

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b) Cultivation requirements in the autumn/winter.

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**4**

Total Mark

**Excluding Examiners Comments**

**MARKS**

**Question 5 (4 marks)**

A heritage garden is reviewing its Equality, Diversity and Inclusion guidelines.

While the Equalities Act 2010 provides legal protection for nine protected characteristics (age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex and sexual orientation), many organisations are seeking to move beyond these legal requirements to bring about the maximum benefits of inclusive cultures.

- a) List **TWO** other things that gardens could include that would add value to their Equality Diversity and Inclusion offer.

**2**

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- b) Explain how **ONE** of your answers to a) could make the garden a better place to work and visit.

**2**

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Total Mark



**MARKS**

**Question 6** (8 marks)

a) State **TWO** advantages of using scientific names for plants.

**2**

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b) The specific epithet 'sylvestris' indicates that a plant comes from a woodland habitat.  
State **THREE** further distinct specific epithets that indicate a habitat and identify the correct habitat.

**6**

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Total Mark
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## Section C

There are FOUR questions in this Section. You must only answer TWO questions.

Please write your answers on the following pages.

Each question is worth 15 marks. This section is worth 30 marks.

**NOTE:**

You **MUST** indicate which question you are answering by placing a cross in the appropriate box on the **FRONT** of this exam paper.

please turn over.....



