

Excluding Examiner Comments



RHS use only			
A	B	C	Total

RHS Level 2 Certificate in Plant Growth and Development

UNIT 1

Monday 23rd June 2025

09:30 - 11:30

Candidate Name:

Candidate Number:

Centre Name:

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.

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

Please note:

- The duration of this paper is **120** minutes.
- Write all answers legibly in the spaces provided and use black or blue ink only.
- Use **METRIC** measurements only.
- Where plant names are required, they should include genus, species and where appropriate, cultivar.
- Where a question requires a specific number of answers, only the first answers given will be marked regardless of the number of answers offered.
- 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 2 Certificate in Plant Growth and Development - UNIT 1

Candidate Name:

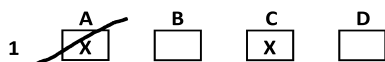
Centre Name:

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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13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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

Which abiotic factor can have an adverse effect on plant growth?

- a) Mosaic virus
- b) Bracket fungus
- c) Biting insects
- d) Relative humidity

Question 2

Plants are typically more resilient to pests and diseases if they:

- a) display vigorous growth
- b) are Mediterranean plants
- c) are propagated asexually
- d) have bacterial root nodules

Question 3

What might be the negative consequence of discrimination in the workplace (according to the Equality Act 2010)?

- a) Increased staff development
- b) High staff turnover
- c) Reduced workplace stress
- d) Less harassment

Question 4

Which would be an appropriate description for a cacti growing media?

- a) Moisture retaining, pH 8.0 - 9.0, high nutrient content
- b) Free draining, pH 8.0 - 9.0, low nutrient content
- c) Free draining, pH 5.5 - 6.5, low nutrient content
- d) Moisture retaining, pH 5.5 - 6.5, low nutrient content

Question 5

A pot-bound plant indicates that:

- a) it is old nursery stock so should be rejected
- b) its roots will establish and grow away quickly
- c) it is suitable for planting in a small container
- d) it has lots of roots so will be drought resistant

Question 6

The image shows plants in a bed mulched with gravel.



The purpose of the mulch is to:

- a) improve soil structure when it is eventually dug in
- b) reduce water evaporation from the soil surface
- c) prevent snail and slug damage to plant roots
- d) attract birds to the garden to control insect pests

Question 7

The concept of 'net-positive horticulture' means that:

- a) crop yields can be increased by adding the correct level of fertiliser
- b) plantings should aim, where possible, to sequester carbon
- c) horticulture should reduce emissions of greenhouse gases
- d) horticultural activities should provide more benefit than harm

Question 8

An herbaceous perennial is a plant which:

- a) lives for more than two years and is non-woody
- b) lives for less than two years and is woody
- c) lives for more than two years and is woody
- d) lives for less than two years and is non-woody

Question 9

Which of these statements explains the term 'Best Practice'?

- a) The repetition of an action until the person is highly proficient
- b) An activity that is usually or regularly done due to long-standing tradition
- c) The results of a trial have been considered, reviewed and evaluated
- d) A methodology approved by The British Standards Institution

Question 10

The image shows a young fruit tree with a tree guard.



What is the purpose of the tree guard?

- a) to provide a sheltered environment to encourage growth
- b) to prevent squirrels damaging the flowers and fruit
- c) to protect the tree bark from browsing by deer
- d) to reduce the impact of sap sucking insects on new leaves

Question 11

Which statement correctly describes a process involved in the uptake of water and/or minerals by the root:

- a) minerals dissolved in water are taken into the root hair cells by osmosis
- b) the Casparian strip prevents water moving between the cells of the endodermis
- c) phloem sieve tubes, which transport water through the root, have lignified cell walls
- d) root hairs which take up soil water are extensions of cells in the root cortex

Question 12

You have found Japanese knotweed in the garden of your new house which has spread from your neighbour's garden. Legally, you must:

- a) dispose of it as local authority green waste
- b) prevent it from spreading into the wild
- c) implement Defra approved biological control
- d) bury it at a depth no less than ten metres

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Question 13

What is the correct method to safely lift a heavy bag of growing media?

- a) Bend your knees and keep your back straight
- b) Bend at the waist and lift with your back
- c) Hold the bag away from your body while lifting
- d) Keep the lightest part of the load closest to your body

Question 14

Which of the following practices best promotes sustainability in horticulture?

- a) Remove all exotic plants to benefit native pollinating insects
- b) Use of organic fertilisers to maintain high nutrient content
- c) Reduce frequency of irrigation during plant establishment
- d) Stop using hardy annuals to reduce greenhouse heating

Question 15

Which statement would best define the soil horizon known as subsoil?

It consists predominantly of:

- a) minerals and air
- b) organic matter
- c) minerals, water, air and organic matter
- d) minerals, water and air

Question 16

Which nutrient promotes flowering and fruiting in plants?

- a) Magnesium
- b) Potassium
- c) Phosphate
- d) Nitrogen

Question 17

An employer is legally responsible for:

- a) ensuring that all PPE is reused when carrying out tasks
- b) undertaking weekly checks of employees' PPE
- c) cleaning employees' PPE once tasks are undertaken
- d) providing a clean and dry storage area for PPE

Question 18

In alkaline soil conditions iron becomes:

- a) soluble and therefore available
- b) insoluble and therefore available
- c) insoluble and therefore unavailable
- d) soluble and therefore unavailable

Question 19



What type of sign is this?

- a) Emergency sign
- b) Prohibition sign
- c) Hazard sign
- d) Mandatory sign

Question 20

Which of these methods of tree production is the most sustainable in terms of water usage and CO₂ emissions?

- a) Containerised
- b) Bare root
- c) Rootballed
- d) Container grown

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 (6 marks)

Define the term Plant Breeder's Rights (PBR):

1

State **TWO** benefits Plant Breeder's Rights provide to the breeder:

Benefit 1:

1

Benefit 2:

1

State **TWO** benefits Plant Breeder's Rights provide to the horticultural industry.

Benefit 1:

1

Benefit 2:

1

State **ONE** consequence of not complying with Plant Breeder's Rights.

1

Total Mark

Question 2 (5 marks)

State **ONE** advantage that the process of cross pollination provides to a plant:

.....

.....

1

This part of the question relates to the use of pollination tables when planning an orchard

a) What is meant by the term 'pollination table'?

.....

.....

.....

2

b) Explain the reasons why pollination tables are used when planning an orchard:

.....

.....

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2

Question 3 (6 marks)

Fill in the gaps to complete the following sentence which defines osmosis:

Osmosis is described as the movement of from an area of concentration to an area of concentration across a membrane

4

State **TWO** environmental factors which can reduce osmosis around plant roots.

Factor 1:

.....

.....

1

Factor 2:

.....

.....

1

Total Mark

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MARKS

Question 4 (8 marks)

Define the term 'green manure'

2

Explain **TWO** benefits of green manure:

Benefit 1:

2

Benefit 2:

2

Explain **ONE** limitation of growing green manures

2

Total Mark

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Question 5 (8 marks)

Weeds, or other spontaneous plants may require control when they detract from the design intent of an area.

Name **TWO** perennial weeds that spread through rhizomes and that may require control in an ornamental garden:

Weed 1:

.....
.....

1

Weed 2:

.....
.....

1

Excluding the use of cultural control methods, describe how **ONE** of the above weeds should be managed:

.....
.....

2

Explain **ONE** advantage to using this method of weed control:

.....
.....
.....

2

Explain **ONE** negative environmental impact of using this method of weed control:

.....
.....
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2

Total Mark

Question 6 (8 marks)

State **FOUR** ways in which plant diseases can be introduced to a horticultural site.

For each one suggest **ONE** preventative action to reduce the risk of plant diseases being introduced to the site.

Method of introduction 1.....

1

Preventative action 1.....

1

Method of introduction 2.....

1

Preventative action 2.....

1

Method of introduction 3.....

1

Preventative action 3.....

1

Method of introduction 4.....

1

Preventative action 4.....

1

MARKS

Total Mark

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Question 7 (9 marks)

Horticulturists use their knowledge of external plant structures to help them in identifying plants.

In this question you are to give an **example** of an external plant structure and then name **TWO** plants with this botanical feature.

We have completed the first one for you, as an example!

Root system: Tap root

Plant example 1: Taraxacum officinale

Plant example 2: Daucus carota

Leaf shape:

1

Plant example 1:

1

Plant example 2:

1

Leaf arrangement.....

1

Plant example 1

1

Plant example 2

1

Inflorescence structure:

1

Plant example 1:

1

Plant example 2:

1

Total Mark

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End of section B.

Please continue to Section C.

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.....

Candidate name

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Question C1

Discuss the key principles of Integrated Pest Management.
Evaluate how these principles can be applied effectively in a garden setting.

15 marks

Total Mark

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Question C2

One of the principles behind sustainable gardening practices is to work with the constraints of a site, rather than attempt to change the site to suit the desired planting plan.

How can the above principle be applied to the planting of a new garden, with specific reference to light, shade and water management.

15 marks

Total Mark

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Question C3

Explain how specific soil nutrient deficiencies impact on photosynthesis.
Explain how these deficiencies can be remedied, using sustainable horticultural practices.

15 marks

Total Mark

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Question C4

Discuss the environmental and plant health impacts of using peat-free growing media.

15 marks

Total Mark

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