



Excluding examiner comments

RHS Level 2 Certificate in Plant Growth and Development

UNIT 2

Friday 2 February 2024

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
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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.

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RHS Level 2 Certificate in Plant Growth and Development - UNIT 2

Candidate Name:

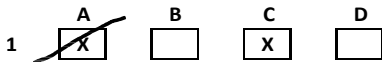
Centre Name:

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
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16	<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"/>

Candidate name

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Centre name

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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

The formal process of testing the performance, qualities, or suitability of plants within a garden setting is known as:

- a) Plant trial
- b) Plant health
- c) Plant selection
- d) Plant specification.

Question 2

The garden feature illustrated below is a:



RHS / Nicola Stocken

- a) Canal
- b) Pond
- c) Swale
- d) Rill

please turn over.....

Candidate name

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Question 3

The garden designer Gertrude Jekyll is associated with which garden style?

- a) Arts and Crafts
- b) Picturesque
- c) Impressionist
- d) Art Nouveau.

Question 4

Why do horticulturists use fastigate trees when developing gardens?

- a) To create vertical lines
- b) To create horizontal planes
- c) To create uniform hedges
- d) To create native woodlands.

Question 5

Which of the following weed control strategies can enhance habitat creation in a garden setting?

- a) The use of the stale seedbed technique, as an organic control measure
- b) Allow weeds to grow at the base of hedges and along garden boundaries
- c) Apply natural weed control products e.g. acetic acid to control all weeds
- d) The use of crop rotation to control a wide range of garden weeds.

Question 6

Which of the following is a stem adaptation that has the primary purpose of allowing plants to climb in order to reach light for photosynthesis?

- a) Peduncle
- b) Tendril
- c) Pedicel
- d) Thorn.

please see over.....

Candidate name

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Question 7

Which of the following is a characteristic of the pollen of insect-pollinated flowers?

- a) Pollen is sticky
- b) Pollen is small
- c) Pollen is light
- d) Pollen is round.

Question 8

When selecting herbaceous plant material to be resilient to climate change, it is most important that it is tolerant of:

- a) high summer temperatures and low winter rainfall
- b) high levels of atmospheric pollution and particulates
- c) high summer temperatures and high winter rainfall
- d) high levels of soil degradation and eutrophication.

Question 9

A garden maintenance plan has the following statements. Which of these statements relates to the preservation of hibernation sites?

- a) Chop and drop the stems of herbaceous perennials into short sections in spring
- b) Carefully dredge and remove silt from garden ponds over the winter period
- c) Turn compost heaps regularly throughout the coldest month of the year
- d) Remove fallen leaves and twigs from borders throughout the autumn and winter.

Question 10

A gardener notices a tiny vole eating the seeds under their bird table. In this scenario the vole is the:

- a) primary consumer
- b) secondary consumer
- c) primary producer
- d) secondary producer.

please turn over.....

Candidate name

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Question 11

Standing deadwood in a garden is important in habitat creation because it provides:

- a) natural play resources for children, to climb and explore
- b) provision of natural focal points as a cultural ecosystem service
- c) space for fungi and insects, and cavities for birds and bats
- d) shelter for ground nesting birds, by acting as a windbreak.

Question 12

Approximately how many paid jobs are there in the UK ornamental horticulture and landscaping sector?

- a) 7,000
- b) 70,000
- c) 700,000
- d) 7,000,000

Question 13

Which of the following would be a product of the UK Hardy Ornamental Nursery Stock sector?

- a) Cut flowers for use in floristry
- b) Native shrubs for planting
- c) Vegetables for food production
- d) Houseplants for decorative display.

Question 14

Plant leaves can produce oils, sometimes referred to as aromatics. Which **TWO** of the following statements correctly describe the advantages that aromatic oils can offer to the plant.

- i) They relieve the symptoms of disease, e.g. leaf spot
- ii) They improve fruit set and increase yield in orchards
- iii) They reduce biotic stress, e.g. reduction of water stress
- iv) They offer defence against herbivory/inhibition of feeding.

a)	i) and iii)	b)	ii) and iv)
c)	iii) and iv)	d)	i) and ii)

please see over.....

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Question 15

Mindful gardening could be described as:

- a) Looking forward to your gardening experience moment by moment
- b) Increasing your gardening experience moment by moment
- c) Recording your gardening experience moment by moment
- d) Paying attention to your gardening experience moment by moment.

Question 16

A community woodland would be regarded as Natural Capital because:

- a) It occupies space that could be used for housing development
- b) A local conservation group is campaigning to protect it
- c) A tree consultant has identified a hazardous tree within it
- d) It is valuable to the community for outdoor recreation purposes.

Question 17

A greenkeeper at a private golf club has been discriminated against by their employer because their partner has undergone gender reassignment.

Which of the following statements is true in terms of their legal protection?

- a) They are protected under the Sex Discrimination Act 1975
- b) They are protected under the Equality Act 2010
- c) They have no protected characteristic, hence no legal protection
- d) They are protected under the Human Rights Act 1988.

Question 18

The correct botanical definition of a bulb is:

- a) a thickened branch of an underground stem for overwintering
- b) a desiccated, modified underground root structure for overwintering
- c) a short stem surrounded by fleshy scale leaves or leaf bases
- d) a swollen root or branch of a root adapted to store starch.

please turn over.....

Candidate name

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Question 19

Which historic garden style makes use of bosquets?

- a) Landscape
- b) Gardenesque
- c) Renaissance
- d) Victorian.

Question 20

Dr Rudolf Steiner developed which growing system?

- a) Organic
- b) Biodynamic
- c) Permaculture
- d) Hydroponic.

End of section A.

Please continue to Section B.

Section B

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

Question 1 (4 marks)

State **FOUR** specific health benefits of regular gardening activity.

MARKS

4

Total Mark

Candidate name

Candidate number

Centre name

Question 2 (8 marks)**MARKS**

This question explores the negative environmental impacts of horticultural practices, suggesting sustainable solutions.

Complete the table below:

Horticultural practice	Purpose of horticultural practice	Negative environmental impact	Sustainable solution
Heating a glasshouse		The release of carbon into the atmosphere	Selecting hardy plants
The use of plastic pots	The cultivation of container-grown plants		
The use of peat-based growing media	The cultivation of container-grown plants		
The irrigation of newly planted garden areas			

1**2****2****3**

Total Mark

Candidate name

Candidate number

Centre name

Question 3 (5 marks)

MARKS

You have been asked to recommend plants for a border to support insect pollinators.

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a) State **THREE** factors that will inform your choice of flowering plants for this border.

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b) Name **TWO** of the flowering plants you would select to include in the bed.

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Total Mark

MARKS

Question 4 (5 marks)

a) Name **ONE** plant species that can be used to plant a hedge that is 1m in height. The hedge should also provide a habitat for wildlife.

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b) Explain **TWO** distinct ways that the plant specified in a) creates a habitat for wildlife.

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Total Mark

MARKS

Question 5 (4 marks)

a) Explain what is meant by the term 'totipotency'.

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b) How might the totipotency of root fragments of some plants make weed control difficult?

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Total Mark

MARKS

Question 6 (9 marks)

a) State **TWO** functions of a ha-ha in an English Landscape style garden.

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b) A Renaissance garden has a formal, low-growing hedge within it. This hedge has been badly damaged by heavy snowfall and strong winds and needs to be replaced.

i) Identify **FIVE** factors to be considered when selecting a woody plant species to replace this hedge.

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ii) Name **TWO** distinct woody perennials suitable for use in this situation.

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Question 7 (7 marks)

MARKS

a) State **TWO** potential purposes of Citizen Science projects.

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b) How can Citizen Science projects inform the development of gardens?

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c) How can Citizen Science projects impact on the maintenance of gardens?

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Total Mark

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Question 8 (8 marks)

MARKS

A community centre has asked for assistance in developing a Biodiversity Action Plan for a garden which they have taken over.

- a) State **FOUR** stages that should be followed when developing the Community Centre Biodiversity Action Plan.

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- b) Name **TWO** priority habitats, and **TWO** priority species specified in the UK Biodiversity Action Plan by completing the table below:

4

Priority habitat 1	
Priority habitat 2	
Priority species 1	
Priority species 2	

End of section B.

Please continue to Section C.

Total Mark

Candidate name

Candidate number

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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.....

Candidate name

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Question C1

Explain how **NAMED** sustainable garden practices can increase biodiversity and lead to the development of food chains / webs.

15 marks

Total Mark

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Question C2

A Local Authority Parks Department has become aware of increasing vandalism in one of its urban green spaces. A survey of local residents has identified that many of them are frightened to use the green space.

Describe a range of measures the Parks Department could take to address these problems.

15 marks

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Candidate number

Centre name

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Candidate name

Candidate number

Centre name

Question C3

Discuss a range of seed dispersal mechanisms used by plants. How does the release of seed through these mechanisms impact on garden maintenance?

Your answer should make reference to **NAMED** plant examples.

15 marks

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Question C4

The RHS Britain in Bloom judging criteria includes the following statement:

“Excellent evidence of sustainable gardening practices, including the conservation of resources and minimising negative impacts.”

Evaluate the advantages and disadvantages of traditional seasonal bedding displays with specific reference to the above judging criteria. With reference to specific examples, explain how to meet the sustainable gardening principles set out in the judging criteria.

Your answer should make reference to **NAMED** plant examples.

15 marks

Total Mark

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