



Excluding Examiners Comments

RHS use only			
A	B	C	Total

RHS Level 2 Certificate in Plant Growth and Development

UNIT 2

Tuesday 25 June 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
<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.

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RHS Level 2 Certificate in Plant Growth and Development - UNIT 1

Candidate Name:

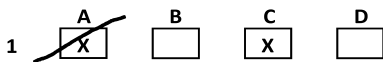
Centre Name:

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"/>		
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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



The leaves of succulent plants carry out which function?

- a) Reflection of light
- b) Cooling of the leaf
- c) Storage of starch
- d) Retention of water.

Question 2

Recalcitrant seeds can be stored for several years.

Is this statement:

- a. True
- b. False.

please turn over.....

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Question 3

Which of the following terms gives the precise definition of a plant that has separate male and female flowers on the same plant:

- a) Eudicotyledonous
- b) Dioecious
- c) Monocotyledonous
- d) Monoecious.

Question 4

Which tissue aids buoyancy in aquatic plants?

- a) Aerenchyma
- b) Collenchyma
- c) Parenchyma
- d) Sclerenchyma.

Question 5

Which stem adaptation is used for overwintering?

- a) Stolon
- b) Runner
- c) Tendril
- d) Corm.

Question 6

The Human Rights Act 1988 makes it illegal to discriminate against somebody on the grounds of their political beliefs. Is this statement:

- a) True
- b) False.

please see over.....

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Question 7



This safety instruction asks that people:

- a) research plants affected by horticultural practices
- b) take notes before and after horticultural operations
- c) write a risk assessment prior to undertaking activities
- d) read the instruction manual prior to using machinery.

Question 8

If a plant is described as 'fastigate', which growth habit would it show?

- a) Spreading
- b) Weeping
- c) Vertical
- d) Horizontal.

Question 9

Bulbs are often used in seasonal bedding displays because they:

- a) provide long flowering periods and need little maintenance
- b) have a strong floral impact and need minimal feeding
- c) require no soil preparation and are highly sustainable
- d) attract many pollinators and are produced at low cost.

please turn over.....

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Question 10



British Gardens with features, such as the one shown above, are typical of which period?

- a) 19th Century
- b) 18th Century
- c) 17th Century
- d) 16th Century.

Question 11

Which of the following horticultural activities would help mitigate climate change?

- a) Growing plants in peat based growing media
- b) Planting and training climbers on a house
- c) Using inorganic fertilisers to grow hardy plants
- d) Planting drought tolerant, Mediterranean plants.

Question 12

Which of the following is not a contribution of ornamental horticulture to the UK economy?

- a) Heritage horticulture
- b) Landscape gardening
- c) Garden centre sales
- d) Edible crop production.

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please see over.....
Centre name

Question 13

There is a growing trend to install living or green walls on buildings.

This practice is considered an example of:

- a) viticulture
- b) permaculture
- c) hard landscaping
- d) urban greening.

Question 14

Hedges as garden features can be a useful habitat for wildlife. To achieve their maximum potential as a garden habitat hedges should be:

- a) planted in a circular pattern with a minimum 10m radius
- b) pruned hard every Spring to encourage biodiverse flora
- c) maintained at a range of heights from 1m to over 4m
- d) reduced by a third annually to encourage strong post growth.

Question 15

Which of the following statements **most** accurately describes a tertiary consumer?

- a) Animals or organisms that eat primary consumers
- b) A carnivore that eats both plants and animals
- c) Animals that are prey for top predators
- d) Organisms that prey on secondary consumers.

please turn over.....

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Question 16

A website has the following information:

'An event that had the potential to cause injury, ill health or death to a person(s) or damage to property, plant or equipment, but no actual harm or damage occurred.'

Which of the following scenarios is the website referring to?

- a) An unplanned event
- b) A near hit
- c) A near miss
- d) A reportable accident.

Question 17

What is the main reason for identifying and recording wildlife in a horticultural situation?

- a) To exclude the impact of climate change from records
- b) To monitor change in distribution/abundance of species
- c) To maintain and share up-to-date plant records/information
- d) To identify and maximise the key drivers of biodiversity gain.

Question 18

A horticultural textbook contains the following statement:

'They focus on habitats and species that are considered to be priorities due to their vulnerability or the essential ecosystem services that they provide.'

What is being described?

- a) Conservation Management Plans
- b) Garden Health Plans
- c) Biodiversity Action Plans
- d) Garden Management Plans.

please see over.....

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Question 19

Studies have shown that the provision of tended green spaces reduces:

- a) littering and anti-social behaviour
- b) speeding and road traffic incidents
- c) local rent and house prices
- d) demand for community allotments.

Question 20

The branch of horticulture that focuses on the management of trees is called:

- a) Aquaculture
- b) Pomology
- c) Arboriculture
- d) Entomology.

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)

This question relates to dormancy in seeds, and how horticulturists overcome different dormancy mechanisms.

a)

i) Name **ONE** dormancy mechanism found in seeds.

1

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ii) State **ONE NAMED** plant example for this dormancy mechanism.

1

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iii) State **ONE** method for overcoming this dormancy mechanism.

1

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b)

i) Name **ONE** further, distinctly different dormancy mechanism found in seeds.

1

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ii) State **ONE NAMED** plant example for this dormancy mechanism.

1

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iii) State **ONE** method for overcoming this dormancy mechanism.

1

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Question 2 (6 marks)

MARKS

a) Name **ONE** thorned plant.

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1

b) State **TWO** advantages that thorns provide to plants.

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2

c) State **TWO NAMED** pieces of Personal Protective Equipment (PPE) which reduce the risk of injury from thorns:

Example 1

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1

Example 2

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.....

1

d) State **ONE** benefit thorned plants can provide within a wildlife garden.

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1

Total Mark

Candidate name

Candidate number

Centre name

Question 3 (7 marks)

MARKS

Sustainability is of great importance for any community growing project for their stakeholders.

3

- a) List **THREE** types of stakeholders that could be involved with a community growing project.

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- b) Suggest **FOUR** ways a community growing project could become environmentally sustainable.

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Total Mark

Candidate name

Candidate number

Centre name

Question 4 (8 marks)

A local town has developed a community wildlife garden.

a) State **THREE** environmental benefits a wildlife garden can offer.

i)
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1

ii)
.....

1

iii)
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1

b) Name **ONE** species on the UK Biodiversity Plan.

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1

c) Describe **ONE** habitat that could be created within a wildlife garden that meets the requirement of this species.

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2

d) Describe how the presence of the species named in b) could affect the garden food web?

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2

Total Mark

Question 5 (6 marks)

The image below shows visitors enjoying a meadow of annual plants at RHS Garden Harlow Carr.



a) Define the term 'ecosystem service'.

2

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b) State **FOUR** formal ecosystem services the planting in the image above can provide.

4

i)

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ii)

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iii)

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iv)

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Total Mark

Question 6 (8 marks)

This question relates to the ways that wildflowers and other spontaneous plants (weeds) provide sources of food to wildlife.

Name **ONE** weed or wildflower and name **ONE** beneficiary.

We have provided this example, to help you develop your answer.

Name: *Cardamine pratensis*

Beneficiary: The foliage is fodder for caterpillars of the orange tip butterfly.

You are now being asked to name **FOUR** further plants and **FOUR** beneficiaries.

Weed/Wildflower 1

Name

1

Beneficiary:

.....

1

Weed/Wildflower 2

Name

1

Beneficiary:

.....

1

Weed/Wildflower 3

Name

1

Beneficiary:

.....

1

Weed/Wildflower 4

Name

1

Beneficiary:

.....

1

Total Mark

Question 7 (4 marks)

MARKS

This question relates to crop support systems that are used within edible landscapes.

- a) Gardeners who are adopting sustainable growing techniques have moved away from using garden canes.



State **ONE** benefit of making this change.

1

- b) A garden is growing their fruit trees using a range of traditional training systems.



What is the name of this training system?

1

Candidate name

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Question 7 (cont.d)



What is the name of this training system?

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1



What is the name of this training system?

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1

Total Mark

Candidate name

Candidate number

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Question 8 (5 marks)



Image credit: J Bates

a) Name the horticultural technique that has been applied to the cultivation of the conifers in this image:

1

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b) In which century was this technique introduced into British gardens?

1

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c) Name **THREE** plants which can be effectively used to demonstrate this technique.

3

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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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Centre name

Question C1

Discuss the suitability of formal planting in domestic garden situations. Your answer should make reference to:

- appropriate features and plants
- planting styles
- maintenance
- environmental considerations.

15 marks

Total Mark

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Candidate name

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Candidate name

Candidate number

Centre name

Question C2

Explain how plant adaptations allow plants to colonise garden areas.

Discuss the impact of plant colonisation on garden maintenance and biodiversity.

15 marks

Total Mark

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Candidate name

Candidate number

Centre name

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Candidate number

Centre name

Question C3



Image credit: Reproduced with kind permission of Incredible Edible Brighthouse.

Incredible Edible Brighthouse is an example of a community project growing food in urban spaces.

Explain the range of benefits associated with this type of community based green enterprise.

15 marks

Total Mark

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Candidate name

Candidate number

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Question C4

A friend has asked you: 'I know that climate crisis is affecting weather patterns. What can I do to make my garden more climate resilient?'

How would you respond to this question?

Justify your key arguments.

15 marks

Total Mark

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