



RHS use only			
A	B	C	Total

RHS Level 2 Certificate in Plant Growth and Development

UNIT 1

Monday 14 October 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:

- 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.

Excluding Examiners Comments

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

Candidate Name:

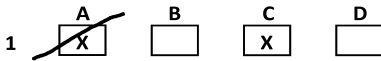
Centre Name:

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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12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 of the following is **NOT** one of the three pillars of sustainability?

- a) Economic viability
- b) Social equity
- c) Biodiversity
- d) Environmental protection

Question 2

In accordance with the Management of Health and Safety at Work Regulations 1999, is the following statement a definition of a Risk or a Hazard?

‘A potential source of harm or adverse health effect on a person or persons’

- a) Risk?
- b) Hazard?

Question 3

Which of the following is an example of Best Practice when sourcing plants for a new border?

- a) Growing seed donated by a neighbour
- b) Selecting plants which follow a colour scheme
- c) Using local names in your plant list
- d) Using scientific plant names when ordering from a supplier

Question 4

What term is used for the process by which plants lose water vapour through their leaves?

- a) Respiration
- b) Transpiration
- c) Capillary action
- d) Cohesion

Question 5

Which of the following is a characteristic of gymnosperms?

- a) Reproduction with spores
- b) Double fertilisation
- c) Production of naked seeds
- d) Scented flowers

Question 6

Which **ONE** of the following statements is true in respect of this plant?



- a) It has parallel venation
- b) It has sepals
- c) It has a woody stem
- d) It has flower parts in multiples of 4 or 5

Question 7

Which of the following statements is correct?

- a) Xylem transports sugars in solution
- b) Xylem transports water and nutrients
- c) Xylem vessels have a nucleus
- d) Xylem transports water in both directions.

Question 8

Which of these is the correct definition of an ecological niche?

- a) The specific location where an organism lives.
- b) The role and position of a species in an ecosystem.
- c) The total number of organisms in a particular area.
- d) The pattern of seasonal changes in an ecosystem.

Question 9

Which of the following includes only abiotic factors?

- a) Rainfall, wind, oxygen availability
- b) Light level, competition, wind
- c) Pathogens, iron availability, relative humidity
- d) Water availability, wind speed, herbivores

Question 10

A plant which is growing poorly has green young leaves but yellowing older leaves.

Which statement below best explains this?

- a) The older, yellowing leaves will be shed and the plant will recoup their nutrients when they decompose
- b) The yellowing leaves are showing symptoms of a pest infestation
- c) The older leaves are turning yellow because they're shaded by the younger leaves above
- d) Insufficient nutrients in the growing media means these are moved from old leaves to young leaves

Question 11

Which statement below is **NOT** a reason for removing weeds in a greenhouse?

- a) Weeds will remove carbon dioxide
- b) Weeds can shade crop plants
- c) Weeds remove nutrients from growing media
- d) Weeds can harbour natural predators of crop pests

Question 12

Selecting plant cultivars which are resistant to disease will have which impact in a garden?

- a) Pesticides will not need to be applied.
- b) The resistant cultivar is less likely to suffer from biotic stressors
- c) The resistant cultivar is less likely to suffer from abiotic stressors
- d) Resistant cultivars will not need to be staked because they resist wind damage

Question 13

Which of the following organic sources contains a balance of the three main nutrients?

- a) Dried blood
- b) Dolomite
- c) Bone meal
- d) Composted seaweed

Question 14

Which nutrient is an essential part of chlorophyll?

- a) Calcium
- b) Molybdenum
- c) Magnesium
- d) Boron

Question 15

A feature of compacted soils is:

- a) Shallow rooting of trees
- b) Sandy soil texture
- c) High pH
- d) Good soil structure

Question 16

Levels of soil nitrogen can be increased by:

- a) Spring cultivation
- b) Lowering the pH to 4.5
- c) Cultivating leguminous crops
- d) Regular watering of the soil

Question 17

Which of the following horticultural crops are the most sustainable to produce?

- a) Seasonal bedding plants
- b) Tropical houseplants
- c) Container-grown shrubs
- d) Bare root hedging plants

Question 18

What does the term 'hardiness' mean?

- a) The lowest temperature that the plant can tolerate
- b) The highest temperature that the plant can tolerate
- c) The minimum growth rate each season
- d) The ability to withstand periods of drought

Question 19

Which of the following is **NOT** mandatory on a plant passport?

- a) Country of origin
- b) Genus
- c) Cultivar
- d) Registration number

Question 20

What is the purpose of quarantining plants?

- a) To ensure conditions are right for planting
- b) To allow the plant to flower before planting
- c) To allow root development before planting
- d) To observe plants for pests and diseases

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 (6 marks)

MARKS

a) Name **TWO** types of plant root systems.

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b) State **ONE** distinct advantage of **EACH** of the root systems named in a).

2

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c) Name **ONE** plant example for **EACH** of the root systems named in a).

2

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Total Mark

Question 3 (7 marks)

MARKS

a) State **THREE** roles of a garden health plan.

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b) Explain how **TWO** different cultural practices help to promote plant health.

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Total Mark

MARKS

Question 4 (6 marks)

a) State what is meant by the term F1 hybrid

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b) State **TWO** benefits of F1 hybrids.

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c) State **TWO** disadvantages of F1 hybrids

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Total Mark

MARKS

Question 5 (8 marks)

- a) State **TWO** indicators that suggest a soil is affected by compaction.

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- b) Describe **THREE** ways in which compaction can be relieved for optimal plant growth.

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Total Mark

	MARKS
Question 6 (5 marks)	
a) State THREE reasons why a soil of pH 8 is not suitable for the growth of a wide range of plants. 	3
b) Name TWO plants suitable for growing in a soil with a pH of 8. 	2
	<div>Total Mark</div>

Question 7 (4 marks)

MARKS

a) Define the term 'fecundity' with regard to a **NAMED** garden pest

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b) Explain how temperature can influence fecundity.

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Total Mark

Question 8 (8 marks)

MARKS

a) What is meant by the term 'planting density'?

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b) State **TWO** effects that increased planting density can have on the immediate plant environment.

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c) Describe how the effects stated in b) will influence plant processes.

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Total Mark

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.....

Total Mark

Excluding Examiners Comments

Excluding Examiners Comments

Total Mark

Excluding Examiners Comments

Excluding Examiners Comments

Total Mark

Excluding Examiners Comments

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Excluding Examiners Comments

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