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| A | B | C | Total |
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RHS Level 2 Certificate in Plant Growth and Development

UNIT 2

Tuesday 15 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:

- 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.

Excluding Examiners Comments

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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:

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| Question | Answer | | | |
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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 thick, waxy layer on the upper surface of leaves of some plants helps to reduce water loss.

This is called the:

- a) lamina
- b) suberin
- c) cuticle
- d) aerenchyma

Question 2

Hairy leaves are most likely to reduce:

- a) osmosis
- b) transpiration
- c) photosynthesis
- d) aerobic respiration

Question 3

Which of the following is an adaptation found in climbing plants?

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

Question 4

Which of these types of plants is suitable for use on a pergola within an Arts and Crafts garden?

- a) A flowering hedge plant.
- b) A plant with twining stems.
- c) A bulbous plant.
- d) A low climber.

Question 5

Plant growth that responds to an external stimulus is called:

- a) Totipotency
- b) Trichome
- c) Tropism
- d) Trigger

Question 6

Stem tubers can be defined as:

- a) swollen modified stems that typically grow above the ground
- b) fibrous modified stems that typically grow above the ground
- c) fibrous modified stems that typically grow underground
- d) swollen modified stems that typically grow underground

Question 7

Tap roots are only found in:

- a) eudicotyledonous plants
- b) monocotyledonous plants
- c) rhizomatous plants
- d) stoloniferous plants

Question 8

A plant with **ONLY** male flowers or **ONLY** female flowers is:

- a) hermaphrodite
- b) monoecious
- c) dioecious
- d) perfect

Question 9

Single flowers are more useful to pollinating insects than double flowers because they:

- a) are more colourful
- b) don't get in the way of the pollinator
- c) have stamens
- d) have more petals

Question 10

Botanical display glasshouses are linked to which historical garden style?

- a) Informal style.
- b) Landscape style.
- c) Picturesque style.
- d) Gardenesque style.

Question 11

Which of the following is a typical characteristic of formal planting?

- a) Planted ponds.
- b) Irregular shapes.
- c) Flowering hedges.
- d) Monochromatic planting.

Question 12

Colours that are directly opposite each other on the Colour Wheel are known as:

- a) analogous
- b) harmonious
- c) complimentary
- d) antagonistic

Question 13

Guerrilla gardening is defined as gardening done with permission on land which is not your own.

Is this statement:

- a) True
- b) False

Question 14

What is one of the **primary** goals of community gardens?

- a) Maximise profit from growing food crops.
- b) Educate people about growing food.
- c) Diversify crop production schedules.
- d) Improve packaging for food produce.

Question 15

Why are community gardens important for urban populations?

- a) To promote individual gardening practices.
- b) To increase opportunities of tax revenue.
- c) To provide a hub to build community cohesion.
- d) To provide private and secluded urban spaces.

Question 16

What is the primary educational benefit of school gardening clubs for children?

- a) To grow arable crops.
- b) To reduce school hours.
- c) To learn how to market produce.
- d) To understand the cultivation of plants.

Question 17

Which of the following words means treating someone 'less favourably' than someone else?

- a) Discrimination.
- b) Harassment.
- c) Victimisation.
- d) All of the above.

Question 18

Gardeners can help pollinators in several ways. Which of the following statements is **incorrect**?

Planting should include:

- a) woody plant cover to buffer high temperatures
- b) trees to provide environmental shade benefit
- c) winter and early spring flowering plants
- d) growing a range of native grasses

Question 19

Research has indicated that hairy leaves offer an advantage to plants.



Stachys byzantina, a plant with hairy leaves

Which of the following statements correctly describes this advantage?

- a) The hairs reflect solar radiation.
- b) The hairs absorb solar radiation.
- c) The hairs remove solar radiation.
- d) The hairs multiply solar radiation.

Question 20

The following image of a wildlife pond has a frog path. This is included to help increase biodiversity.



Which of the following wildlife species would also be likely to benefit from this frog path?

- a) Badgers
- b) Mallard ducks
- c) Hedgehog
- d) Water vole

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)

Describe **THREE** distinct leaf adaptations that protect a plant from herbivory.

MARKS

6

Total Mark

Question 2 (6 marks)

- a) Explain how limited oxygen availability in soil may affect the growth of the roots of some tree species.

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- b) Discuss **TWO** impacts this might have on a domestic garden.

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Total Mark

Question 3 (6 marks)

In addition to tubers, name **THREE** stem adaptations for perennation and provide a **NAMED** plant example for each.

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MARKS**6**

Total Mark

MARKS

Question 4 (5 marks)

- a) State **ONE** advantage to a plant of dispersing its seeds.

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- b) Name **TWO** distinctly different seed adaptations that favour wind dispersal, and provide a **NAMED** plant example for each adaptation.

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Question 5 (8 marks)

MARKS

a) Name **TWO** plants for each of the following categories:

i) Hardy (RHS Zone H4 and above) annuals for flower borders

2

ii) Half-hardy (RHS Zone 3) annuals for flower borders

2

iii) Bulbs for use in spring bedding

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b) List **TWO** benefits of seasonal displays in an urban community garden.

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Total Mark

| | MARKS |
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| Question 6 (7 marks) | |
| <p>You have been asked to advise on plants that are suitable for a small domestic garden with a sunny aspect.</p> | |
| <p>a) State TWO characteristics that make a plant suitable for this situation.</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> | <p>2</p> |
| <p>b) With reference to the scenario above, name THREE plants that can be used to form a harmonious planting scheme.</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> | <p>3</p> |
| <p>c) Describe ONE reason why the plants named in b) form a harmonious planting scheme.</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> | <p>2</p> |
| | <div>Total Mark</div> |

Question 7 (6 marks)

State **SIX** reasons, other than financial cost, why biodiversity should be restored and protected.

MARKS**6**

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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

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