

GENERAL CERTIFICATE OF SECONDARY EDUCATION
ENVIRONMENTAL AND LAND-BASED SCIENCE
Amenity Horticulture (Foundation Tier)

B492/01

Candidates answer on the question paper.
A calculator may be used for this paper.

OCR supplied materials:
None

Other materials required:

- Pencil
- Ruler (cm/mm)

Wednesday 19 January 2011
Morning

Duration: 45 minutes



Candidate forename		Candidate surname	
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Centre number						Candidate number				
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INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. Additional paper may be used if necessary but you must clearly show your candidate number, centre number and question number(s).
- Answer **all** the questions.
- Do **not** write in the bar codes.

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets [] at the end of each question or part question.
- The total number of marks for this paper is **36**.
- This document consists of **16** pages. Any blank pages are indicated.

Answer **all** the questions.

1 This student is checking some seedlings for disease problems.



What is the most important reason to check for plant diseases?

- A Drains might get polluted.
- B Humans might catch them.
- C Other plants may get diseased.
- D Nutrients will be used up.

Answer **A, B, C or D** [1]

2 A garden centre has some planted tubs ready for sale.

Each tub has a care label.

The care label gives advice to the customer.



Which **two** of the following pieces of advice are likely to be found on the label?

- A Change the compost every month.
- B Keep the tub in a garden shed.
- C Make sure the plants are given plenty of light.
- D Move the pot regularly.
- E Water the tubs when the compost is dry.

Answer **A, B, C, D** or **E** and [2]

3 This student is sowing some seeds in a tray.



He is making sure the seeds are well spaced.

What is the best reason for doing this?

- A It takes up more room.
- B Seedlings will be easier to prick out later.
- C Trays will look neater.
- D Water will get to all seeds evenly.

Answer **A, B, C** or **D** [1]

4 Cosmos is a colourful garden plant.

This plant

- was sown outside in the spring
- flowered in the summer
- will die in the autumn.



What is the name for the life-cycle shown by Cosmos?

Put a **ring** around the correct answer.

annual

biennial

hardy

perennial

[1]

5 A large garden has lots of thickly planted flower beds.

Some annual weeds are also growing in the same beds.



Which would be the **best** way of getting rid of the annual weeds?

- A Chemical: put a general weedkiller over all the beds.
- B Cultural: hoe between the plants.
- C Mechanical: use a strimmer to cut down the weeds.
- D Physical: kill off weeds with a flamethrower.

Answer **A, B, C** or **D** [1]

6 A gardener is making a new lawn using turf.

Write the stages in the boxes so that they are in the correct order.

Choose from the list below.

One has been done for you.

apply a granular fertiliser

dig over soil

lay turf in a 'brickwork' pattern

rake the soil so it is level

water during dry spells

.....

remove perennial weeds

.....

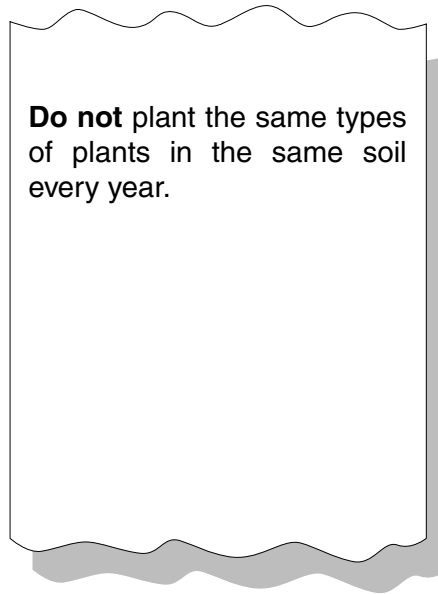
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.....

[3]

7 A book on greenhouse growing has the following advice:



Why is this good advice?

Planting the same types of plants in the same soil each year:

- A decreases the profit made from selling them
- B increases the risk of diseases in the soil
- C looks boring and uninteresting
- D reduces the competition for nutrients in the soil

Answer **A, B, C** or **D** [1]

8 Gardeners can choose electric-powered lawnmowers or petrol-powered lawnmowers.

Professional gardeners commonly choose petrol-powered ones.

Give one advantage and one disadvantage of choosing a petrol-powered mower when compared to a mains electric-powered mower.

advantage

.....

disadvantage

..... [2]

9 There are large trees near these greenhouses.



Suggest two reasons why having trees growing near the greenhouse is **not** a good idea.

1

.....

2

..... [2]

10 John has just planted a tree.

The soil was prepared well before planting.

He has added a stake, a tree tie and a tree guard.



John looks after the tree carefully for the first three months.

Suggest **two** things he needs to do.

1

2 [2]

11 Garden centres sell lots of houseplants in December.

These are often given as gifts at Christmas.

Name **two** houseplants which could be sold by a garden centre in December.

.....
.....

[2]

12 Students are moving some soil to prepare new beds.



The students must work safely.

Suggest **two** pieces of advice the teacher should give.

1

2 [2]

13 A newspaper survey asked gardeners their opinions on plants.

Here are the top results in order:

order	garden plants		fruit plants	
	favourite	most-hated	favourite	most-hated
1st	Rose	Rose	Strawberry	Gooseberry
2nd	Sweet pea	Ivy	Raspberry	Strawberry
3rd	Fuchsia	Hosta	Apple	Apple
4th	Clematis	Marigold	Plum	Raspberry
5th	Daffodil	Leylandii	Blueberry	Cherry

(a) Which **garden plant** appears in both the 'favourite' and 'most-hated' lists?

.....

[1]

(b) A garden centre manager has decided to sell fruit plants.

Which **two** should he concentrate on?

Use the information in the table.

..... and [2]

14 A grower needs to repair a large greenhouse.

She has carried out research on the internet and found the following prices for packs of different glazing materials.

glazing materials	thickness (mm)	price per pack	number of sheets in pack	expected life (years)
clear acrylic	3	£4.99	1	20–25
horticultural glass	3	£22.50	10	60
standard glass	4	£29.95	10	60
twin-walled polycarbonate	4	£25.00	10	15–20

(a) Which choice costs least per sheet to buy?

Put a **ring** around the correct answer.

clear acrylic

horticultural glass

standard glass

twin-walled polycarbonate

[1]

(b) The grower has calculated she needs 37 replacement glazing sheets.

How much would she pay for **twin-walled polycarbonate**?

Put a **ring** around the correct answer.

£2.95

£92.50

£100.00

£370.00

[1]

(c) Other than price, why might the grower choose **horticultural** glass and not **standard** glass?

.....
..... [1]

(d) The grower decides to choose twin-walled polycarbonate.

State **two additional** benefits this material offers over glass.

1
2 [2]

15 Supermarkets are increasingly asking growers to use biological control for pests and diseases on their crops.

Give **two** advantages that biological control methods have over the use of chemical pesticides.

1
.....
2
..... [2]

16 Growers are always keen to produce crops ahead of the normal season.

This means they can get higher prices for their crops.

Describe **three** ways a grower might produce crops earlier.

.....

.....

.....

.....

..... [3]

17 A gardening magazine did a risk assessment on garden tools.

Electric hedge cutters were identified as being one of the most dangerous pieces of equipment.

Describe **three** ways the risk of injury from these hedge cutters could be reduced.

.....

.....

.....

.....

..... [3]

END OF QUESTION PAPER



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