

Wednesday 20 June 2012 – Morning

GCSE ENVIRONMENTAL AND LAND-BASED SCIENCE

B492/03 Amenity Horticulture (Foundation Tier)

Candidates answer on the Question Paper.

OCR supplied materials:

None

Other materials required:

- Electronic calculator
- Pencil
- Ruler (cm/mm)

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. HB pencil may be used for graphs and diagrams only.
- Answer **all** the questions.
- 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).
- 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 **12** pages. Any blank pages are indicated.

For Examiner's Use	
TOTAL	

Answer **all** the questions.

1 These plants are on display in a garden centre.

They are not selling very well.



Which **one** of these ideas is most likely to sell more plants?

- A Add extra lights above the plants.
- B Place the plants on the floor.
- C Put up information signs.
- D Take some of the plants away.

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

2 This garden centre has some hanging basket plants for sale.

The plants have been grown from seed this spring.

They will flower in the summer and then die in the autumn.



(a) Plants with a life cycle which lasts only one year are called:

- A annuals
- B biennials
- C herbaceous
- D perennials

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

(b) Plants chosen for summer hanging baskets must have good properties.

Which **one** of the following is a good property for a plant in a summer hanging basket?

- A expensive to buy
- B repeat flowering
- C tall growing
- D slow to flower

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

3 Plant breeders have worked for many years to produce a black tulip.



This process is known as:

- A asexual reproduction
- B improving appearance
- C natural selection
- D selective breeding

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

- 4 The owner of a commercial greenhouse is able to monitor a range of growing conditions.

She uses special equipment to do this.

Draw a straight line to join the correct piece of **equipment** to the **growing condition** it is used to monitor.

equipment	growing condition
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">hygrometer</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">pH meter</div> <div style="border: 1px solid black; padding: 5px;">thermometer</div>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">acidity</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">humidity</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">light</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">nutrients</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">temperature</div> <div style="border: 1px solid black; padding: 5px;">water</div>

[3]

- 5 A grower is planning to build a large new greenhouse.

Where would be a suitable place to build it?

Put ticks (✓) in the boxes next to the **two** places which would be good choices.

in deep shade and near a road	<input type="checkbox"/>
in full sun near a water supply	<input type="checkbox"/>
in a deep valley with trees nearby	<input type="checkbox"/>
in a sheltered site with good light	<input type="checkbox"/>
on a steep slope facing north	<input type="checkbox"/>

[2]

6 A gardener wants to buy some turf to grow a lawn.

The supplier states that the grass mixture contains ryegrass.

Turf containing ryegrass is most likely to be:

- A drought resistant
- B hard wearing
- C inexpensive
- D shade tolerant

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

7 A garden centre assistant is helping a customer choose a lawn mower.

The assistant explains the differences between a mower powered by mains electricity and one with a petrol engine.

Give **one** advantage and **one** disadvantage of choosing a mower which uses mains electricity.

advantage

.....
.....

disadvantage

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

8 A gardening magazine has this headline about the use of peat.

**The use of peat in gardens is
damaging the environment**

Alternatives to peat are being investigated for
use in potting composts.

Suggest **two** materials that could be used as a replacement for peat in a potting compost.

- 1
- 2 [2]

9 Sam grows plants in a glasshouse.

He grows the same type of plant each year.

He grows them in the same soil each time.

Sam notices that in recent years the plants are no longer growing as well.

Suggest **two** reasons for this poor growth.

- 1
- 2 [2]

10 Growers often rely on the use of insecticides and fungicides.

The photograph shows houseplants being grown for sale.



Suggest **two** benefits of controlling pests and diseases on these houseplants.

- 1
 - 2
- [2]

11 Some students want to grow some plants from seeds.

They have sown them in a seed tray and the seeds have germinated.

A gardening book tells the students that they need to

- **thin out** the seedlings
- **prick** them out
- **pot** them on.

The students are unsure what these terms mean.

Explain what these terms mean.

thin out

.....
.....

prick out

.....
.....

pot on

.....
.....

[3]

12 Summer bedding plants are very popular for providing lots of colour in the garden.

Name **one** plant that would be suitable for use as a summer bedding plant.

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

13 The table shows the mean prices of bunches of daffodils sold at market.

mean prices of bunches of daffodils (p) in each month

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	57.1	57.9	43.5	28.4	30.5					50.0	48.7	55.1
2009	58.6	57.0	48.9	40.3						52.1	60.5	58.1
2008	50.7	46.9	39.2	36.3					54.5	49.1	52.7	56.8

(a) In which month **and** year did daffodils sell for the highest price?

Answer [1]

(b) What is the mean market price for bunches of daffodils in April?

Answer [1]

(c) Suggest **two** reasons for the reduction in prices in April.

.....

 [2]

(d) Suggest **one** reason for the gaps in the data.

.....
 [1]

(e) A florist normally adds 100% to the **market price** to make their selling price.

What would the florist need to charge in October 2010 to make this profit margin?

Circle the correct answer.

- 25p 50p £1.00 £1.52**

[1]

14 Describe the care needed to keep a summer hanging basket in good condition right through the summer.

.....
.....
.....
..... [3]

15 Statistics show that a lawn is the most common garden feature.

Suggest **two** reasons why lawns are so popular.

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

Please turn over for question 16.

16 Some students are about to start planting work in the school garden.



What advice would you give the students to help keep them safe while working in the school garden?

.....

.....

.....

..... [3]

END OF QUESTION PAPER



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