

Monday 30 January 2012 – Afternoon

GCSE ENVIRONMENTAL AND LAND-BASED SCIENCE

B492/03 Amenity Horticulture (Foundation Tier)

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

Duration: 45 minutes

OCR supplied materials:
None

Other materials required:

- Pencil
- Ruler (cm/mm)



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 **16** pages. Any blank pages are indicated.

For Examiner's Use	
TOTAL	

Answer **all** the questions.

1 Commercial growers often use glasshouses to grow plants.



Which **one** of the following is the best reason for using a glasshouse?

- A Glasshouses are cheap to build.
- B Glasshouses look attractive.
- C Plants have better growing conditions.
- D Plants can get more light.

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

2 There are lots of different types of lawnmower available.

Each type is described by the way the blade cuts.



What is the name of this type of lawnmower?

- A battery
- B cylinder
- C hover
- D rotary

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

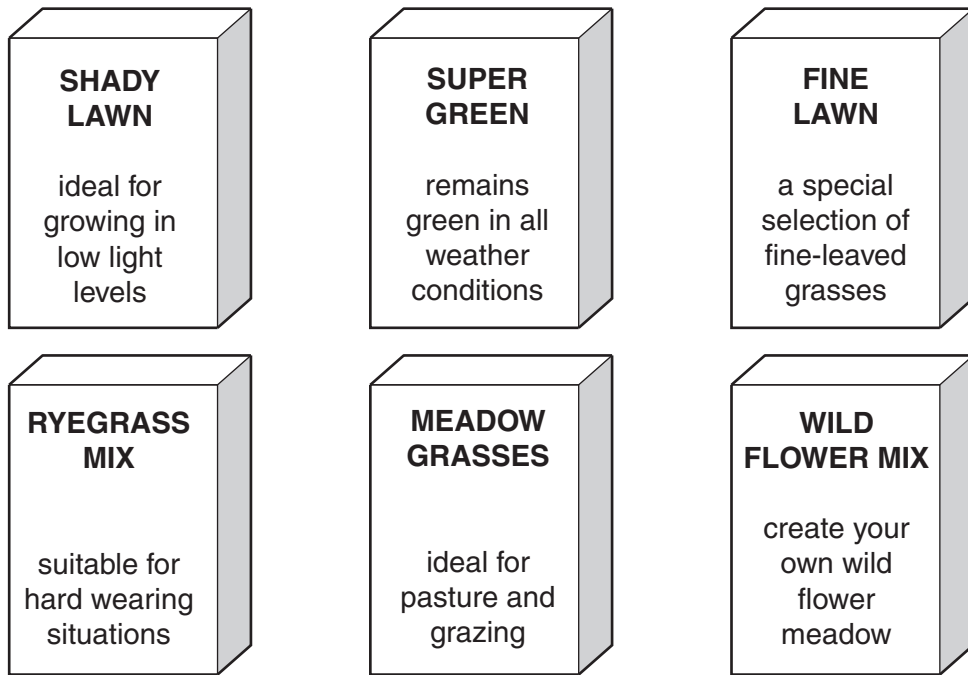
3 Electrical equipment, such as hedge clippers, needs to have a fuse.

Why is a fuse needed?

- A allows safe servicing of electrical equipment
- B prevents damage from excessive current flow
- C regulates the voltage in the equipment
- D stops broken equipment from working

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

4 A garden centre sells different grass seed mixtures.



Choose the **most** suitable grass seed mixture for each of the following situations.

(a) A back garden used by children for playing football.

..... [1]

(b) A lawn which needs to look in good condition in summer drought.

..... [1]

(c) A lawn growing at the base of trees.

..... [1]

5 Ali and Lee are growing herbs from seed.

They read in a book that there are four main stages of growing seeds.

potting on

pricking out

sowing

thinning

Put the four stages into the correct order.

One has been done for you.

1

2

3 pricking out

4

[2]

6 Potting composts have different properties.

Write each property into its correct place in the table.

property

the more difficult compost to wet when it is dry

the heavier compost when it is wet

the lighter compost to carry

the better compost for hanging baskets

soil-based potting compost	peat-based potting compost

[2]

7 Some plants are perennial.

Explain the term **perennial**.

.....

.....

..... [1]

8 Fran decides to build a glasshouse.

She looks at different materials to make the frame.

Give **two** advantages of a galvanised steel frame compared with a wooden one.

.....

.....

.....

..... [2]

9 In early spring, some students are planting hanging baskets.

The plants might be affected by frost.

The students keep the baskets in a glasshouse until the weather is warmer.



For each of the following conditions, suggest what the students should do to keep the plants healthy.

temperature

water

nutrients [3]

10 Some students are planting up a new shrub bed.



Apart from poor behaviour, briefly describe **three** hazards that they need to be aware of when carrying out this task.

.....

.....

..... [3]

11 Plant breeders wish to develop a new type of Dahlia.

They would use selective breeding to do this.

Suggest **three** features that plant breeders could try to change by selective breeding.

.....

.....

..... [3]

12 Simon grows Christmas trees.

He needs to control weeds in his plantation.

The table shows some different ways that he can do this.

treatment	cost of treatment per tree (p)	effectiveness (%)	risk of damage to tree
bark chippings	42	70	none
continuous plastic mulch	44	82	none
individual plastic mulch squares	37	78	none
mow	24	65	low
weedkiller	41	98	low

(a) Which **treatment** costs the least per tree?

..... [1]

(b) Simon decides to use **continuous plastic mulch**.

How much more does it cost per tree than using **individual plastic mulch squares**?

..... [1]

(c) Most growers use a weedkiller treatment.

Explain why they make this choice.

.....
 [1]

(d) Which **two** treatments give a risk of damage to the trees?

Describe the damage that could occur.

treatment

damage

treatment

damage [2]

(e) The planting density for Christmas trees is normally 2500 trees per hectare.

What would be the cost for weedkiller treatment on a 10 hectare plantation?

..... [1]

13 Supermarkets do not normally offer a wide range of gardening items all year round.

Garden centres and nurseries normally do.

Suggest **two** reasons for these differences.

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

14 David has been growing carnations in the same bed for over 20 years.

He sells the flowers at market.

In the last couple of years he has noticed that the plants have produced fewer flowers.

Suggest **three** reasons why the carnations are producing fewer flowers.

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

15 This is an established bed of shrubs at a school.



Write a list of instructions for the school gardener so that these shrubs can be maintained properly.

.....

.....

.....

.....

.....

..... [3]

END OF QUESTION PAPER

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