

**Monday 16 June 2014 – Morning**

**GCSE ENVIRONMENTAL AND LAND-BASED SCIENCE**

**B682/01** Plant Cultivation and Small Animal Care (Foundation Tier)

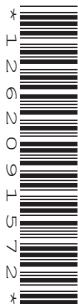
Candidates answer on the Question Paper.  
A calculator may be used for this paper.

**Duration:** 1 hour

**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**

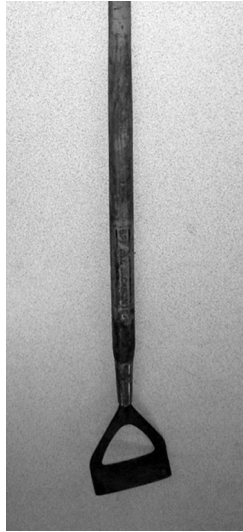
- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer **all** the questions.
- Read each question carefully. Make sure you know what you have to do before starting 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 quality of written communication is assessed in questions marked with a pencil (.
- 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 **50**.
- This document consists of **16** pages. Any blank pages are indicated.

Answer **all** the questions.

1 The photograph shows a tool used in the garden.



(a) This tool is a:

- A fork
- B hoe
- C rake
- D spade

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

(b) Give **one** use for this tool in the garden.

..... [1]

[Total: 2]

2 A student has grown 120 lettuce seedlings in tray A.  
He transfers them to new trays as shown in tray B.



Tray A



Tray B

(a) This process is called:

- A potting on
- B pricking out
- C sowing
- D thinning

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

(b) Why is this process done?

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

(c) He puts 24 seedlings in each new tray. How many trays will he need to transfer all of the seedlings?

Answer ..... [1]

[Total: 3]

- 3 The photograph shows Rebecca adding some dead plant material to her garden compost. Rebecca left the compost for 12 months to decay.



How do you suggest she uses the garden compost after it has decayed?

Give a reason for your answer.

.....

.....

..... [2]

[Total: 2]



5 It is estimated that there are 450 000 different species of flowering plant in the world today.



A



B

(a) 22% of flowering plant species are pollinated by wind.

How many species of flowering plant is this?

Answer ..... [1]

(b) Which of plants A or B is pollinated by wind?

Give reasons for your answer.

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

[Total: 3]

6 After crops have been harvested, they are stored.

Pests can sometimes destroy crops during storage.

A farmer has decided to spray a pesticide on his stored crops to stop this from happening.

The table shows information about 5 different pesticides, **A** to **E**.

	Pesticide				
	A	B	C	D	E
<b>Toxic to the insect pest (how well it kills insects)</b> (+++++ very toxic)	++	+	++++	+	+++++
<b>Toxic to pollinating insects</b> (+++++ very toxic)	+++++	+	++++	+++	++
<b>Cost</b> (££££ very expensive)	£	££££	£££	£	££
<b>How quickly it breaks down</b> (+++++ breaks down quickly)	+++++	+++	+++	++++	++

(a) Which of the pesticides **A**, **B**, **C**, **D** or **E** is the most effective at killing pests?

..... [1]

(b) A friend recommends that the farmer should spray **Pesticide A** because it is cheap. The farmer thinks that **Pesticide E** would be better.

Explain why.

Use information from the table in your answer.

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

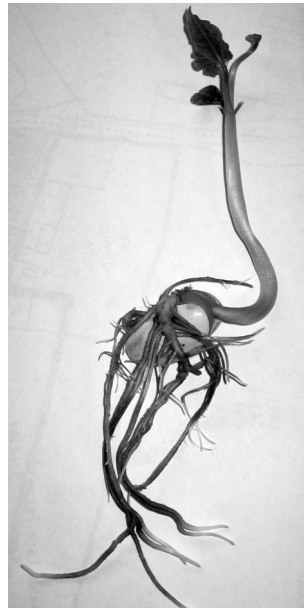
(c) Using a named example of a crop, suggest different ways the farmer could increase its storage life.

Name of crop .....  
 .....  
 .....  
 ..... [2]

[Total: 6]

7 Peter and Jane are having a competition.

They want to see who can grow the tallest runner bean plant from seedlings.



Suggest **two** things Peter might do to his bean seedling to help him to win the competition.

.....

.....

..... [2]

[Total: 2]



8 The photograph shows housing that is suitable for a small mammal.



Name a type of small mammal this housing would be suitable for.

Give **two** reasons to support your answer.

Small mammal: .....  
.....  
.....  
..... [3]

[Total: 3]

9 Colin is a leopard gecko.

Reptiles such as Colin need to be handled with care.



Colin's owner picks him up.

State **two** precautions she should take.

.....

.....

..... [2]

[Total: 2]

10 The photographs below show two types of rabbit food.



Food A



Food B

Selective feeding is when animals pick out the bits of food they prefer to eat.

(a) Which type of food would encourage **selective feeding**?

Give a reason for your answer.

Food: .....

Reason:

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

(b) Selective feeding can cause poor health in rabbits.

Suggest a reason why.

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

[Total: 2]

11 The photograph shows a rabbit.



Which one of the following is part of the digestive system of a rabbit?

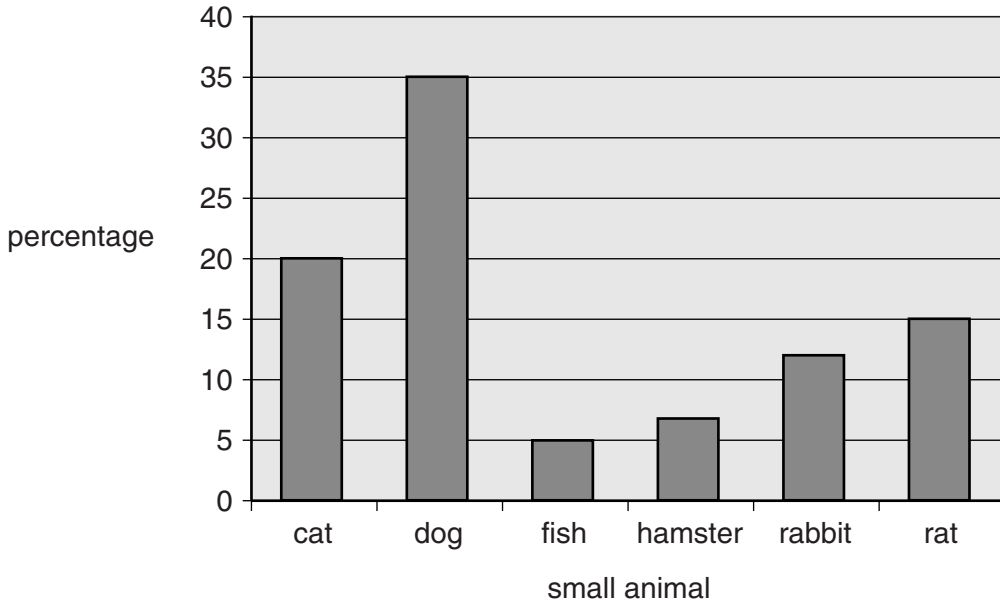
- A caecum
- B cloaca
- C crop
- D gizzard

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

[Total: 1]

**12** Small animals might be kept for many different reasons.

The chart shows the percentage of different types of small animals kept in the UK.



Using data from the chart, describe the different reasons for keeping small animals.

Explain how a range of small animals might be looked after differently for different purposes.



*The quality of written communication will be assessed in your answer.*

.....

.....

.....

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.....

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.....

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.....

.....

..... [6]

[Total: 6]

13 Owners need to check the health of their pets.

This needs to be done more often when the pets move from middle age to old age.

The chart below shows the stages in a dog's life.

Years	Equivalent dog age			Life stage
	Small breed	Medium breed	Large breed	
1	5	6	7	Puppy
2				Adolescence ↓
3			21	
4		24		
5	25			Prime ↓
6				
7			49	Middle Age ↓
8	40	48	56	
9	45	54	63	
10	50	60	70	
11	55	66	77	
12	60	72		Old Age ↓
13				
14			98	
15	75			
16				
17		102		
18				
19				
20	100			

(a) Different sized dogs age at different rates.

Describe how size affects the rate at which dogs age.

Use data from the chart to support your answer.

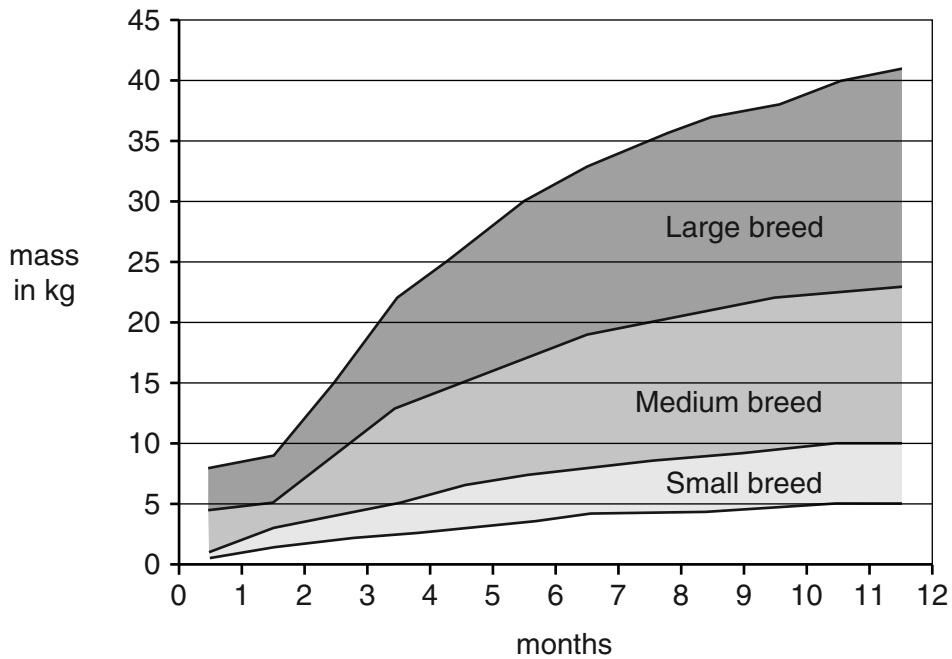
.....

.....

..... [2]



14 This body mass chart is for puppies up to 12 months old.



(a) What is the normal mass range for a large breed at 8 months old?

From ..... kg to ..... kg. [1]

(b) Why does the chart show a range of masses for each size of dog?

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

[Total: 2]

**END OF QUESTION PAPER**



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