

**OXFORD CAMBRIDGE AND RSA EXAMINATIONS
GCSE**

B682/01

**ENVIRONMENTAL AND LAND-BASED
SCIENCE**

**Plant Cultivation and Small Animal Care
(Foundation Tier)**

MONDAY 16 JUNE 2014: Morning

**DURATION: 1 hour
plus your additional time allowance**

MODIFIED ENLARGED

Candidate forename		Candidate surname	
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Centre number						Candidate number				
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**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)**

READ INSTRUCTIONS OVERLEAF

INSTRUCTIONS TO CANDIDATES

Write your name, centre number and candidate number in the boxes on the first page. 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).

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.

Any blank pages are indicated.

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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 Rebecca added 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 the plants in the pictures above, 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
Toxic to the insect pest (how well it kills insects) (+++++ very toxic)	++	+	++++	+	+++++
Toxic to pollinating insects (+++++ very toxic)	+++++	+	++++	+++	++
Cost (££££ very expensive)	£	££££	£££	£	££
How quickly it breaks down (+++++ 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.**

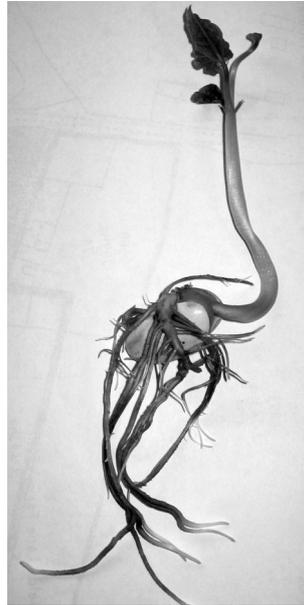
Name of crop _____

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

A caecum

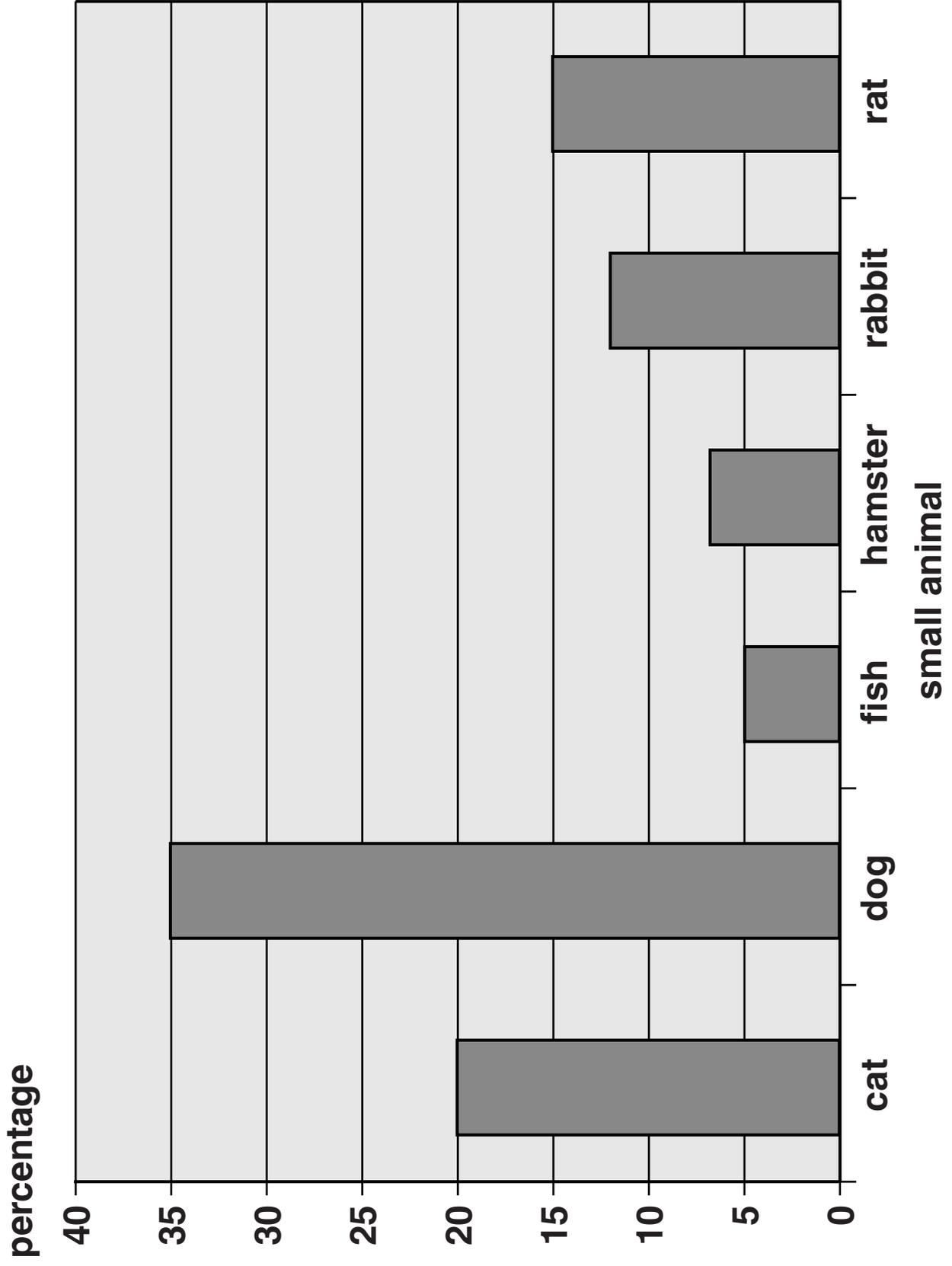
B cloaca

C crop

D gizzard

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

[TOTAL: 1]



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		Prime ↓
5	25			
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]

(b) Between which years do different sized dogs move from middle age to old age?

Use data from the chart.

Small dogs between _____

and _____ years

Medium dogs between _____

and _____ years

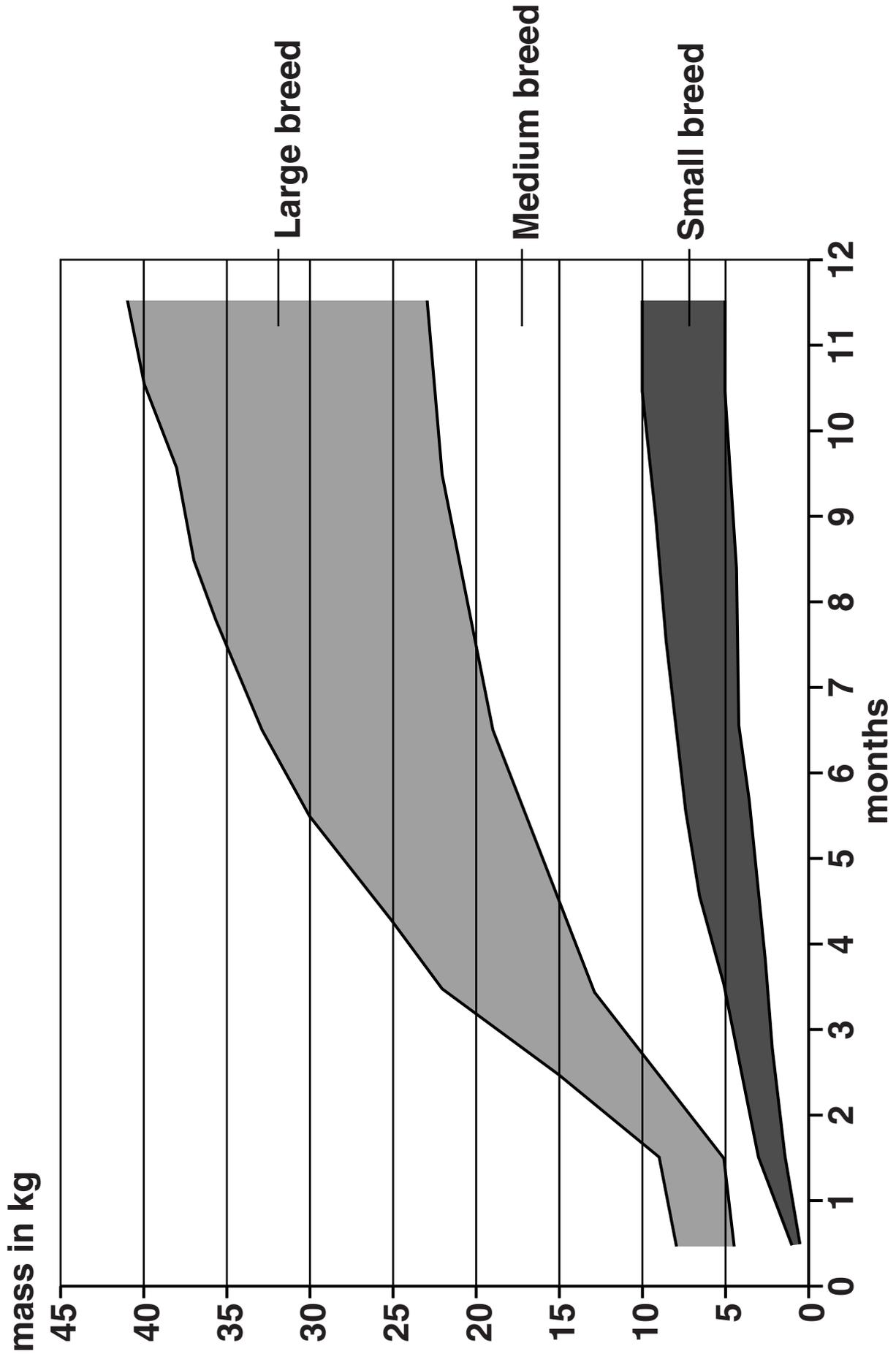
Large dogs between _____

and _____ years

[2]

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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]

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