

**Wednesday 1 February 2012 – Afternoon**

**GCSE ENVIRONMENTAL AND LAND-BASED SCIENCE**

**B494/04** Care of Animals (Higher 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	
<b>TOTAL</b>	

Answer **all** the questions.

1 Animals can bite if not handled correctly.



Which condition could be transferred to humans by an animal bite?

- A influenza (flu)
- B rickets
- C salmonella
- D tetanus

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

2 Concentrates and succulents are two types of animal food.

Look at the table.

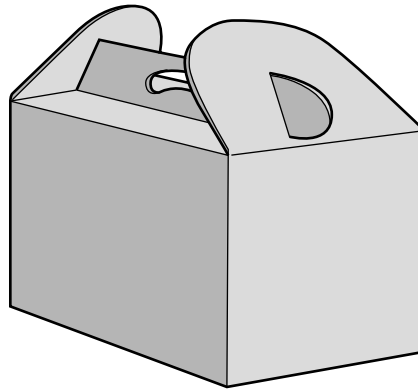
	<b>concentrates</b>	<b>succulents</b>
<b>A</b>	balanced ration	low water content
<b>B</b>	high in protein content	high water content
<b>C</b>	moist food	low carbohydrate content
<b>D</b>	soft food	mainly plant matter

Which pair of descriptions of concentrates and succulents is correct?

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

3 Fiona is going to take her pet rabbit to a show.

The picture shows the cardboard box she is going to use.



Which one must she also provide?

- A** air holes in the lid
- B** an identification label
- C** another rabbit for company
- D** a water bowl

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

4 Goldfish are a common pet.



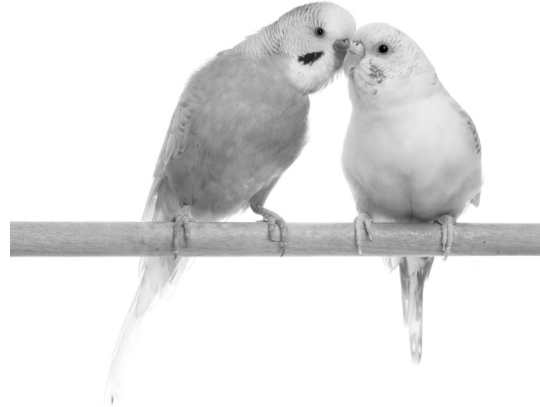
What temperature should the water in their fish tank be kept at?

- A 5°C to 10°C
- B 20°C to 25°C
- C 30°C to 35°C
- D 40°C to 45°C

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

5 The following statements are about reproduction.

Choose **two** statements that are true for both small mammals and birds.



- A courtship stimulates mating
- B females lay eggs
- C females make a nest
- D males have a penis
- E males help look after the young
- F fertilisation is internal
- G young are fed with milk
- H young develop in the mother
- I young are born naked and helpless

Answer **A, B, C, D, E, F, G, H** or **I** ..... and .....[2]

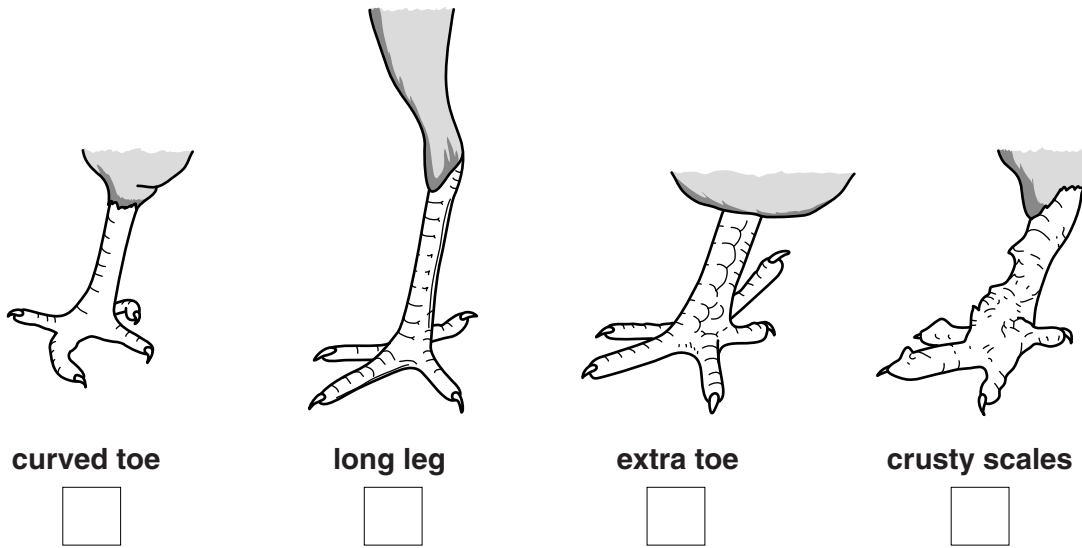
6 Vitamins are important in the diet of all animals.

What condition results from a lack of vitamin A?

- A anaemia
- B night blindness
- C rickets
- D scurvy

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

7 The drawings show the legs of different birds.



The features of each leg are the result of different causes.

Possible causes are listed below.

Write the letters **A**, **B**, **C**, **D** or **E** in the boxes above to show what could possibly be the cause of the features of each leg.

**A** a genetic mutation

**B** a growth fault (injury)

**C** a parasitic mite

**D** selective breeding

**E** vitamin deficiency

[3]

8 Dogs have been bred for different activities over the years.

Two such activities are shooting and hunting.

Name **two** breeds that have been developed for **hunting**.

1 .....

2 ..... [1]

9 The photograph shows a degu feeding.



The mouth has an important function in digestion.

State **three** functions of the mouth in small animals.

- 1 .....
- 2 .....
- 3 ..... [3]

10 Breeders of small animals should keep records.

(a) In the table below, enter **four** types of record that should be kept by breeders.

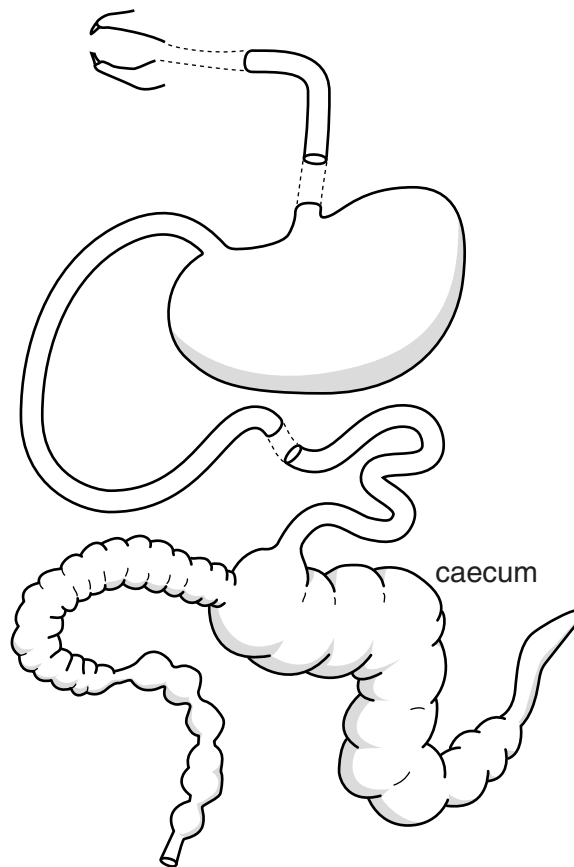
RECORD CARD		
SPECIES	Cat	
Name: Skippy	Sex: M	Birth Date: 10.01.2011
1	.....	
2	.....	
3	.....	
4	.....	
Information entered by: H Chalton		on: 15.01.2012

[2]

(b) Explain why it is an advantage to use ICT for record keeping.

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

11 The diagram shows the position of the caecum in the digestive system of the rabbit.



The rabbit and hamster produce soft faeces during the night.

They eat these directly from their anus.

They then pass them through the digestive system in the normal manner.

Explain in detail why these animals need to do this.

.....

.....

.....

..... [2]



12 The picture shows a parrot.

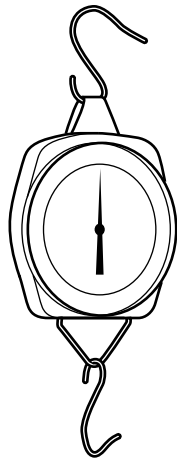


The parrot has started to lay eggs with soft shells.

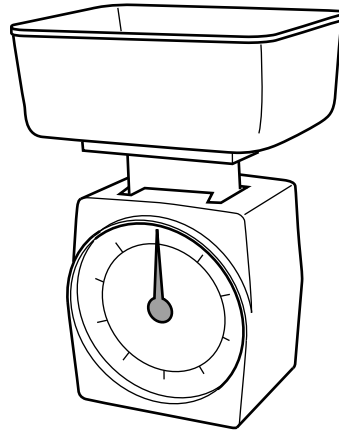
Suggest a reason for this.

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

13 The diagram shows two types of balance that could be used to find the mass of a small animal.



**A**



**B**

When using **A** the animal is suspended in a cloth bag.

When using **B** the animal is placed in the container on the top of the balance.

(a) Explain why using balance **A** to find the mass of the animal is more accurate than using balance **B**.

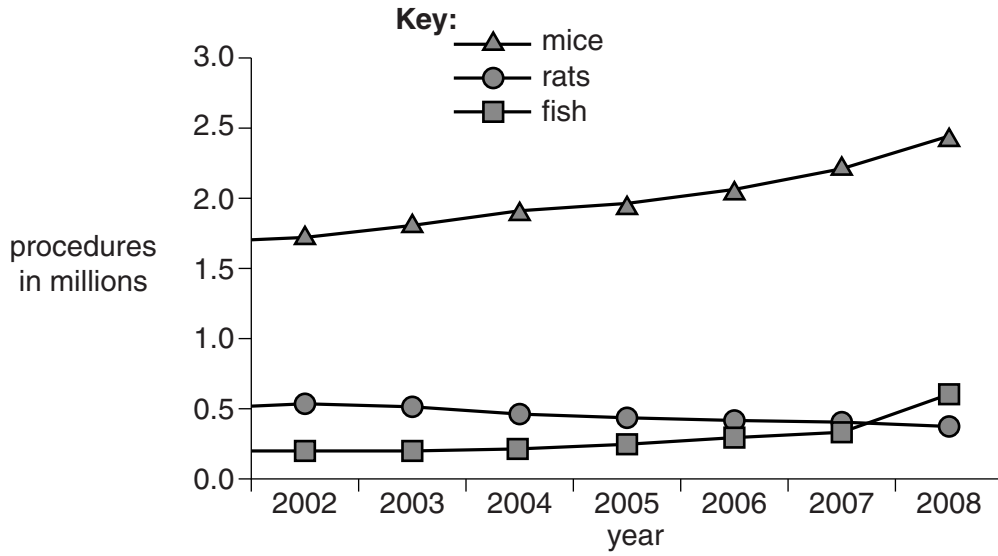
.....  
..... [1]

(b) Suggest how the results from using balance **A** could be made more accurate **and** more reliable.

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

14 An animal experiment can involve many procedures (tests).

The graph shows the number of procedures carried out from 2002 to 2008.



(a) State **one** trend that is shown in the data.

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

(b) Comment on the pattern shown by the data for rats **and** fish.

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

15 Many different types of research use animals for testing.

Look at the table.

species of animal	type of research					total
	biological	medical	veterinary	environmental	educational	
cat	61	–	299	–	–	360
dog	5	5499	130	403	–	6017
gerbil	515	542	27	–	–	1084
guinea pig	1753	25921	1333	–	118	29 125
hamster	1283	1439	576	–	–	3298
mouse	775 746	355 728	17 365	17 545	841	149 225
rabbit	1157	11 232	1954	1632	16	15 991
rat	96 415	216 653	75	26 275	609	340 727

(a) Look at the column for medical research.

Name the **two** animals for which medical research is **not** the highest user of that species.

.....  
 .....

[1]

(b) The percentage of gerbils used in the experiments is approximately:

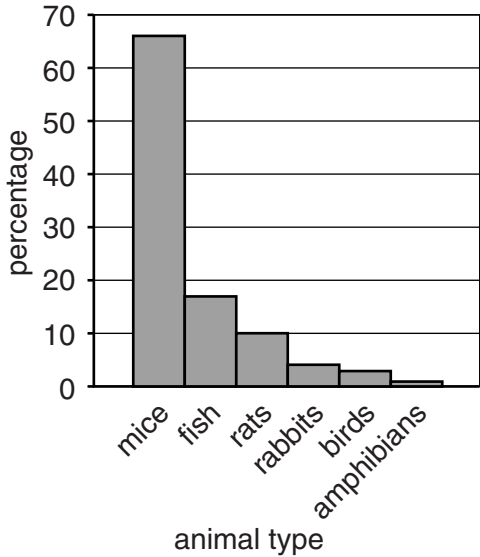
- A 0.02%
- B 0.20%
- C 1.00%
- D 2.00%

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

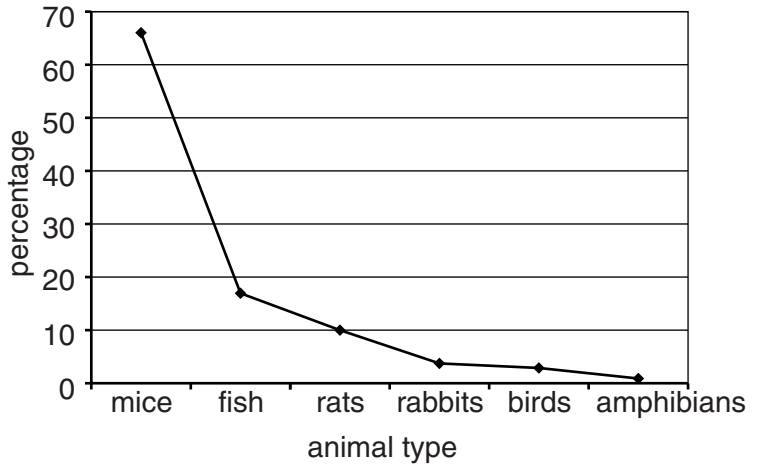
16 The table lists the percentage of different animals used in research (rounded to the nearest percent).

animal type	mice	fish	rats	rabbits	birds	amphibians
% used	66	17	10	4	3	1

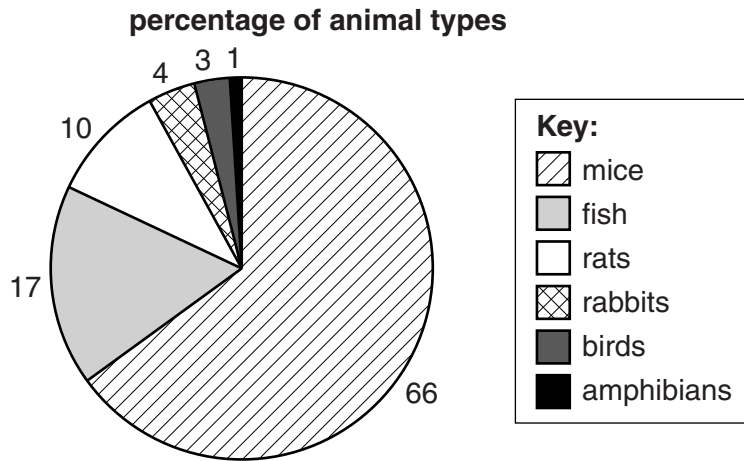
This data can be presented visually as a histogram, line graph or pie chart.



histogram



line graph



pie chart

Which visual presentation should be used for this data? .....

Give a reason for your answer.

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

17 The photograph shows an overweight dog.

Over-feeding can cause pets to become overweight.



Suggest other possible causes of pets being overweight.

.....

.....

.....

.....

..... [3]

18 The photograph is of an animal house.



Poor ventilation in animal houses can lead to an increase in disease.

Explain why.

.....

.....

.....

.....

..... [3]

19 Animals can be changed over generations by selective breeding.



Explain the difference between line breeding and inbreeding.

.....

.....

.....

..... [2]

**END OF QUESTION PAPER**

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