

Friday 22 June 2012 – Afternoon

GCSE ENVIRONMENTAL AND LAND-BASED SCIENCE

B494/04 Care of Animals (Higher 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 | |
|--------------------|--|-------------------|--|

| | | | | | | | | | | |
|---------------|--|--|--|--|--|------------------|--|--|--|--|
| Centre number | | | | | | Candidate number | | | | |
|---------------|--|--|--|--|--|------------------|--|--|--|--|

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 **20** pages. Any blank pages are indicated.

| | |
|--------------------|--|
| For Examiner's Use | |
| TOTAL | |

Answer **all** the questions.

1 The pictures show guinea pigs feeding on three different types of food.

concentrate

roughage

succulent



.....

Types of food can be described by their contents.

Descriptions:

high fibre

high moisture

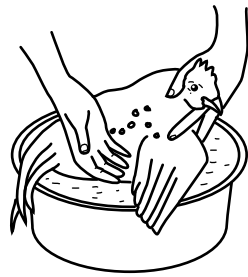
high nutrient

Label each picture with the correct description of its contents.

[2]

2 Insecticides can be used to control lice in birds.

The diagrams show four ways of treating a bird with insecticide.



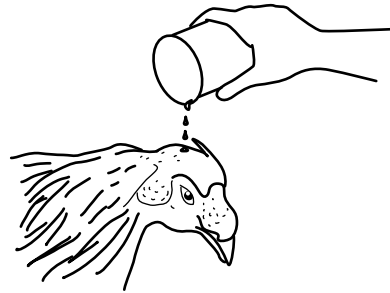
A bathing



B dusting



D spraying



C pouring on

(a) Which of these methods is the **least** effective?

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

(b) Identify **two** hazards to a handler that might arise from the control methods shown.

In each case state how the risk could be reduced.

hazard 1

how risk reduced

hazard 2

how risk reduced.....

[2]

3 Healthy animals need a balanced diet.

This includes minerals.

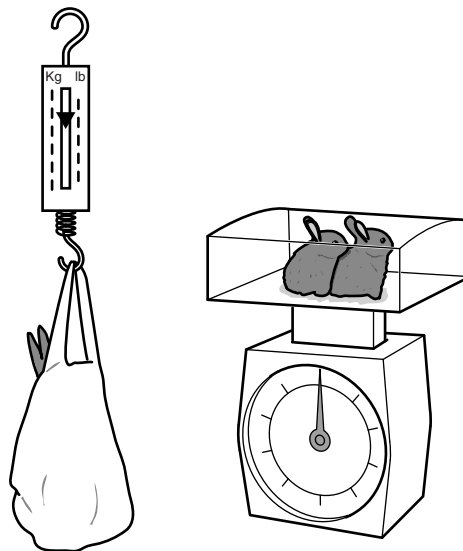
Iron is an essential mineral.

Which condition results from a lack of iron?

- A anaemia
- B poor bone growth
- C poor eyesight
- D scurvy

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

4 The drawings show young rabbits being weighed in a canvas bag and in a top pan balance.



spring balance

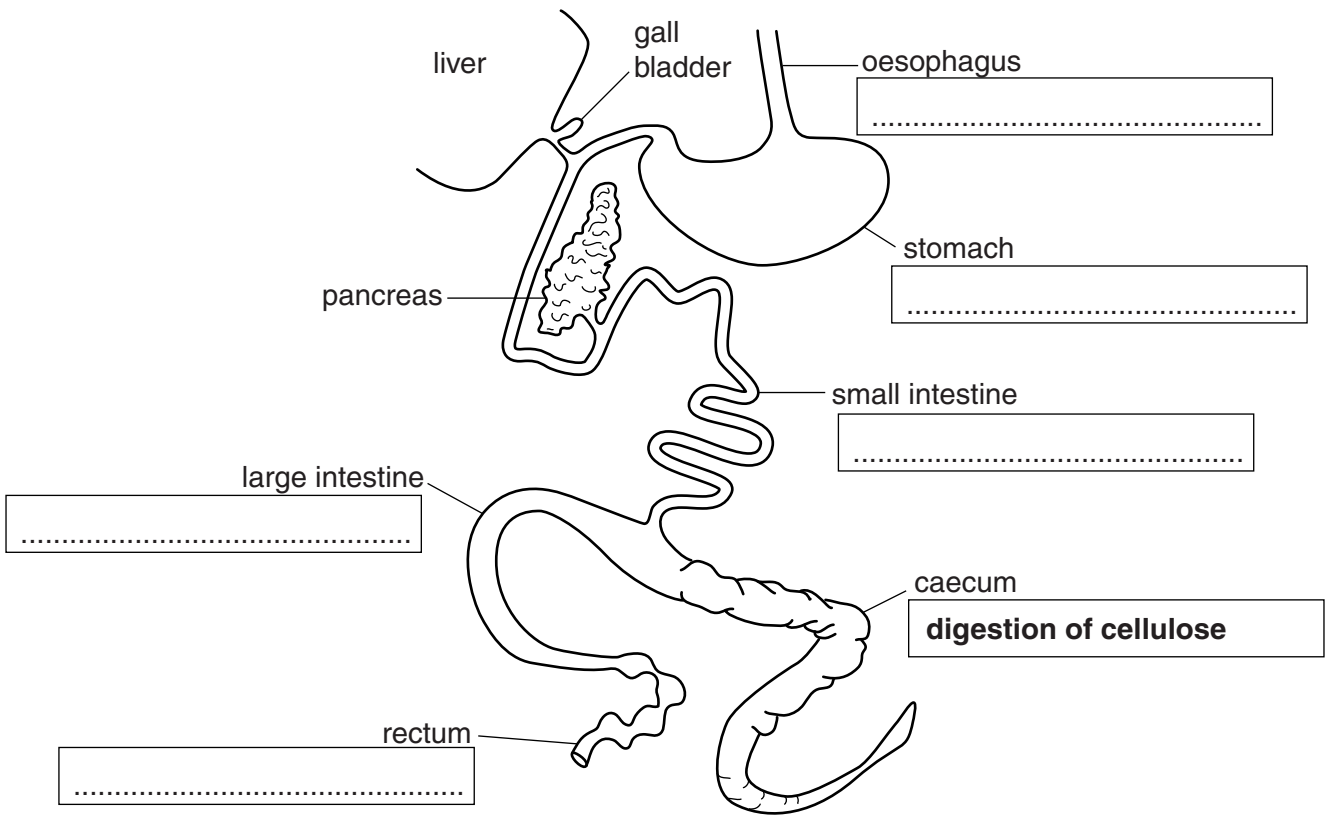
top pan balance

What is the advantage of using the spring balance and canvas bag?

- A to absorb any rabbits' urine
- B to allow average weights to be calculated
- C to keep the rabbits still and secure
- D to keep the rabbits warm and comfortable

[1]

5 The diagram shows the digestive system of a rabbit.



(a) **Digestion of fats** and **water absorption** are two functions of the digestive system.

Write these **functions** in the correct boxes on the diagram.

digestion of fats

water absorption

[2]

(b) The digestion of cellulose occurs in the caecum.

Complete the sentences by putting a **ring** around the correct words.

The breakdown of cellulose is aided by microorganisms during the process of

decomposition **fermentation** **metabolism** **aerobic respiration**

A by-product of this process is

ethane **methane** **nitrogen** **oxygen**

[2]

6 Enzymes break down food during digestion.

The enzymes in the mouth **cannot** work in the stomach.

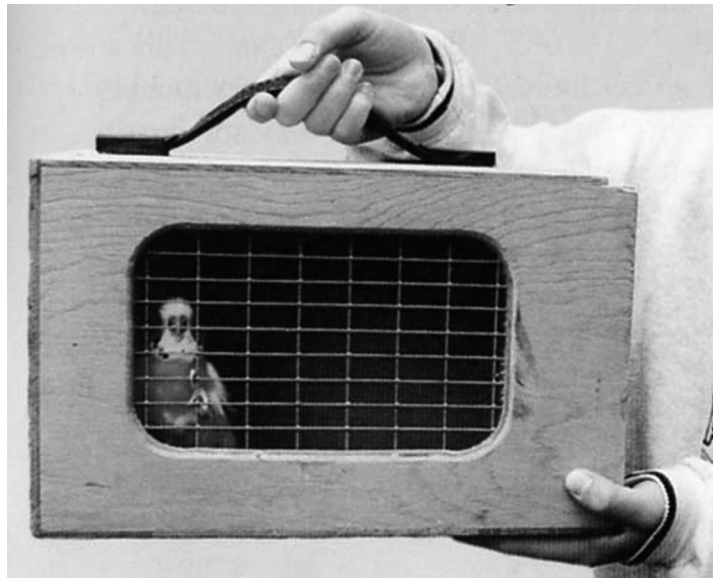
The enzymes in the stomach **cannot** work in the small intestine.

The explanation for this is that the parts of the digestive system ...

- A ... are of different sizes.
- B ... are at different temperatures.
- C ... have different concentrations of food.
- D ... have different pH values.

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

7 The picture shows a box for transporting small animals.



The box is made of wood so it cannot be crushed.

State and explain **two other** ways this box is fit for purpose.

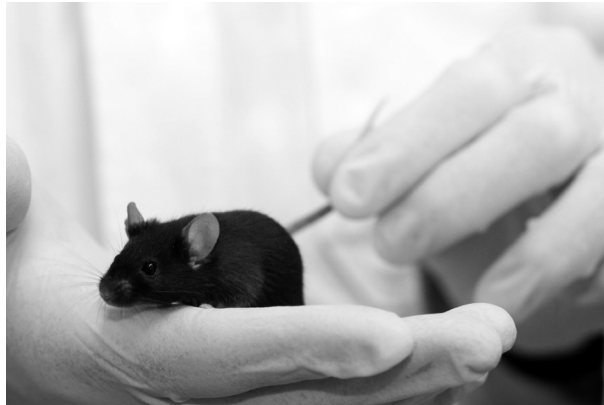
.....

.....

.....

..... [2]

8 Practical work with small animals can be hazardous **to the handler**.



Complete the table explaining possible hazards and their prevention.

| hazard | method of prevention |
|---|--------------------------|
| being infected with tetanus by getting bitten | |
| | wear thin plastic gloves |

[2]

9 Rabbits can be kept indoors in a controlled environment.

They are housed in metal cages with wire floors that allow the urine and droppings to escape.



Suggest **two** possible risks to the rabbits from keeping them in these cages.

1

.....

2

.....

[2]

10 Small mammals can be fed rations or given food ad lib.

Explain **two** reasons why feeding ad lib is not recommended for pregnant females.

.....

.....

.....

.....

[2]

11 The chicks of some species of bird hatch out in an undeveloped state.

Others are more independent.

Each has advantages and disadvantages.

The photographs show two newly hatched chicks.



budgerigar chick



hen chick

Suggest **two** ways the care given to newly hatched budgerigars and hens differ.

- 1
-
- 2
-

[2]

12 Some people keep tropical fish.

They must be careful not to put too many fish in a tank.

The table gives some data about the maximum stocking rates for different sized fish.

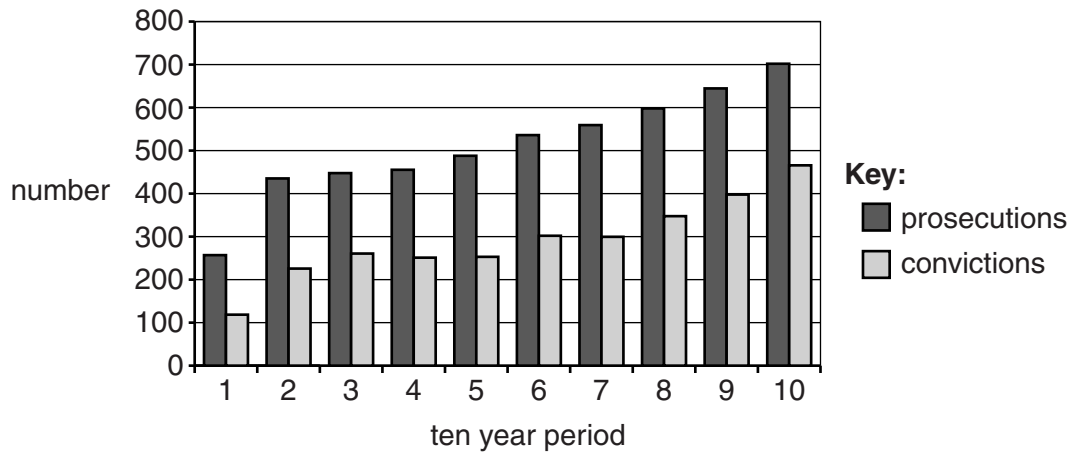
| | stocking rates | | |
|----------------------------|-------------------------------|-------------------------------|-------------------------------|
| capacity of tank in litres | number of fish of 1 cm length | number of fish of 2 cm length | number of fish of 4 cm length |
| 50 | 16 | 8 | 4 |
| | | | 10 |

What size tank would be needed for ten fish of 4 cm length?

Show your working.

Answer [2]

13 The bar chart compares the number of **prosecutions** with actual **convictions** for not controlling a dog in public places.



Estimate the average percentage of prosecutions resulting in convictions over the ten year period.

- A 30 to 40%
- B 40 to 50%
- C 50 to 60%
- D 60 to 70%

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

14 Owners can be prosecuted if they do not control their dogs in public.

Sometimes these dogs cause injuries.

The table shows, over a ten year period, the prosecutions where the dogs:

- caused injuries
- did not cause injuries.

| prosecution for having a fighting dog in a public place | ten year period | | | | | | | | | |
|---|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| injury caused | 259 | 434 | 449 | 458 | 490 | 537 | 560 | 597 | 645 | 703 |
| no injury | 175 | 248 | 254 | 266 | 278 | 284 | 329 | 290 | 278 | 278 |

Identify **two** trends shown by this data.

.....

.....

.....

..... [2]

15 The photograph is of a fighting dog.



The law lists four designated fighting breeds.

- Pit Bull Terrier
- Japanese Tosa
- Dogo Argentino
- Fila Brasileiro

In the years 2006–2010 there were 90 prosecutions for having a designated breed of fighting dog but only 43 resulted in convictions.

The prosecutions failed because they could not prove the dogs were one of the four designated breeds.

Use your knowledge of animal breeding to explain why there are difficulties in identifying these designated breeds.

.....

.....

.....

..... [2]

16 The table gives information about the number of pets kept between 2006 and 2010 in the UK.

| pet | average number of pets (per house) | | number of houses with pets (thousands) | |
|------------|---------------------------------------|------|---|------|
| | 2006 | 2010 | 2006 | 2010 |
| gerbil | 2.18 | 2.76 | 284 | 277 |
| guinea pig | 1.77 | 1.87 | 473 | 583 |
| rabbit | 3.22 | 2.63 | 1420 | 1878 |
| snake | 3.88 | 4.14 | 189 | 217 |

Refer to the table of data.

Which of the following statements is correct?

- A Fewer gerbils were kept in 2010.
- B The average number of guinea pigs kept per house showed an increase of 10% between 2006 and 2010.
- C The number of houses with pet rabbits showed the greatest percentage increase between 2006 and 2010.
- D The total number of snakes kept in 2010 is 4.14×217 .

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

17 The photograph shows a student recording data about a pet rabbit.



Computers are a very good way of keeping records when looking after animals.

(a) State **two** types of record that should be kept when looking after animals.

- 1
- 2 [1]

(b) Explain how using ICT makes record keeping more efficient.

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

18 Housing for pets must be kept clean at all times.

Choose an animal you have studied.

Describe **in detail** the routine cleaning of the animal's housing.

Animal

.....

.....

.....

.....

.....

..... [3]

END OF QUESTION PAPER

18
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