

**GENERAL CERTIFICATE OF SECONDARY EDUCATION**  
**ENVIRONMENTAL AND LAND-BASED SCIENCE**  
Care of Animals (Higher Tier)

**B494/02**

Candidates answer on the question paper.

**OCR supplied materials:**  
None

**Other materials required:**

- Electronic calculator
- Pencil
- Ruler (cm/mm)

**Friday 24 June 2011**  
**Afternoon**

**Duration: 45 minutes**



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. Pencil may be used for graphs and diagrams only.
- 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).
- Answer **all** the questions.
- 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.

Answer **all** the questions.

- 1 The photograph shows pygmy goats ready for a journey in a car.



Safety and animal welfare organisations advise that small animals are transported in carrying boxes or cages.

Which are the **two** most important reasons for using a cage to transport animals in a car?

- A Drivers of other cars are not distracted.
- B The cage allows animals to stand up.
- C It is the law.
- D There is no damage to the car interior.
- E A cage stops animals excreting.
- F The animals cannot disturb the driver.
- G The animals are secure.
- H There is more room for passengers.

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

- 2 It is important that routine health checks are carried out so that sick animals can be noticed quickly.



What should the owner do **first** when a sick animal is noticed?

- A consult an expert or veterinary surgeon
- B isolate the sick animal from the others
- C provide fresh food and clean water
- D move the animals into clean cages or houses

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

3 The boxes below list parts of the digestive system of a bird.

Draw a straight line to match each **part of the digestive system** with its **function**.

**part of the digestive system**

**function**

crop

absorbs nutrients

gizzard

absorbs water

fermentation

mouth

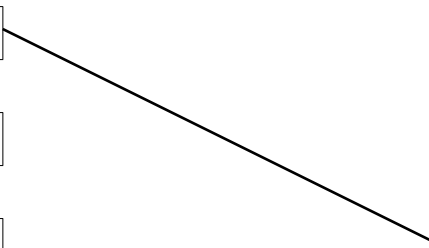
grinds food

large intestine

stores food

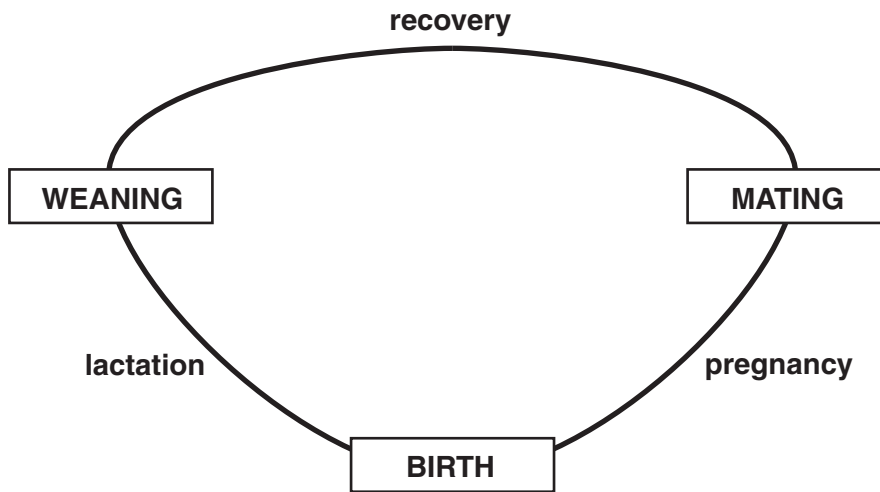
small intestine

point of food entry



[3]

4 The diagram shows the breeding cycle of a mammal.



Write **C** on the diagram to show when colostrum is produced.

Make sure the **C** can be clearly seen.

[1]

5 The photograph shows a budgerigar feeding on a cuttlefish bone.



Which mineral does the cuttlefish bone provide for the budgerigar?

- A calcium
- B iron
- C potassium
- D sodium

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

6 The photograph shows a vivarium for housing amphibians and reptiles.



ICT can be used to maintain a controlled environment in a vivarium.

Which of the following is **not** controlled by ICT in the vivarium?

- A humidity
- B light intensity
- C oxygen level
- D temperature

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

7 There are two ways of breeding small animals, **cross breeding** and **line breeding**.

Tick (✓) the correct definition of cross breeding in the table below.

Tick (✓) the correct definition of line breeding in the table below.

definitions	cross breeding	line breeding
The mating of animals of the same breed but of different strains.		
The mating of animals of the same breed that are not closely related.		
The mating of animals of the same breed that are closely related.		
The mating of animals of two different breeds of the same species.		
The mating of animals of two different species.		

[1]

8 There was a recent outbreak of salmonella in humans living in the United States.

The outbreak was traced to African Dwarf Frogs which were kept as pets.



**African Dwarf Frog**

(a) What type of organism is salmonella? ..... [1]

(b) Suggest another way people can be infected with salmonella.  
 ..... [1]

(c) How could people working with small animals reduce their risk of getting salmonella?  
 ..... [1]

9 Routine health care can involve taking animals to a vet.

The photograph shows a rabbit being given an injection.



Suggest what type of substance might be given as an injection.

..... [1]

10 The photograph is of an Ancona bantam.

For successful showing the Ancona must have a white V on the tip of every feather.



Explain how this show feature was obtained by breeding.

.....

.....

.....

..... [2]



11 Animals can be fed *ad lib* or fed a ration.

State **one** disadvantage to the animal of feeding it *ad lib*.

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

12 Describe the type of food that could be used for:

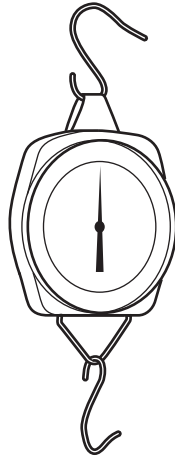
a maintenance ration .....

.....

a production ration .....

..... [3]

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



Weighing an animal regularly is one way to check on its health.

To ensure accurate results it is important to always weigh the animal in a similar manner.

For example, the animal should be weighed at the same time of day.

When would it be best to weigh animals – 06.00 am (0600 hrs) or 06.00 pm (1800 hrs)?

Give a reason for your answer.

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

14 A dog can die of heat exhaustion quite quickly on a summer day if it is locked in a car.

Dogs can survive in very low temperatures, for example, Huskies in the Arctic.

When keeping mammals it is important not to allow them to **overheat**.

Using your understanding of enzymes, suggest why high temperatures are more critical than low temperatures.

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

**15** Loud noises produce different behaviour in dogs.

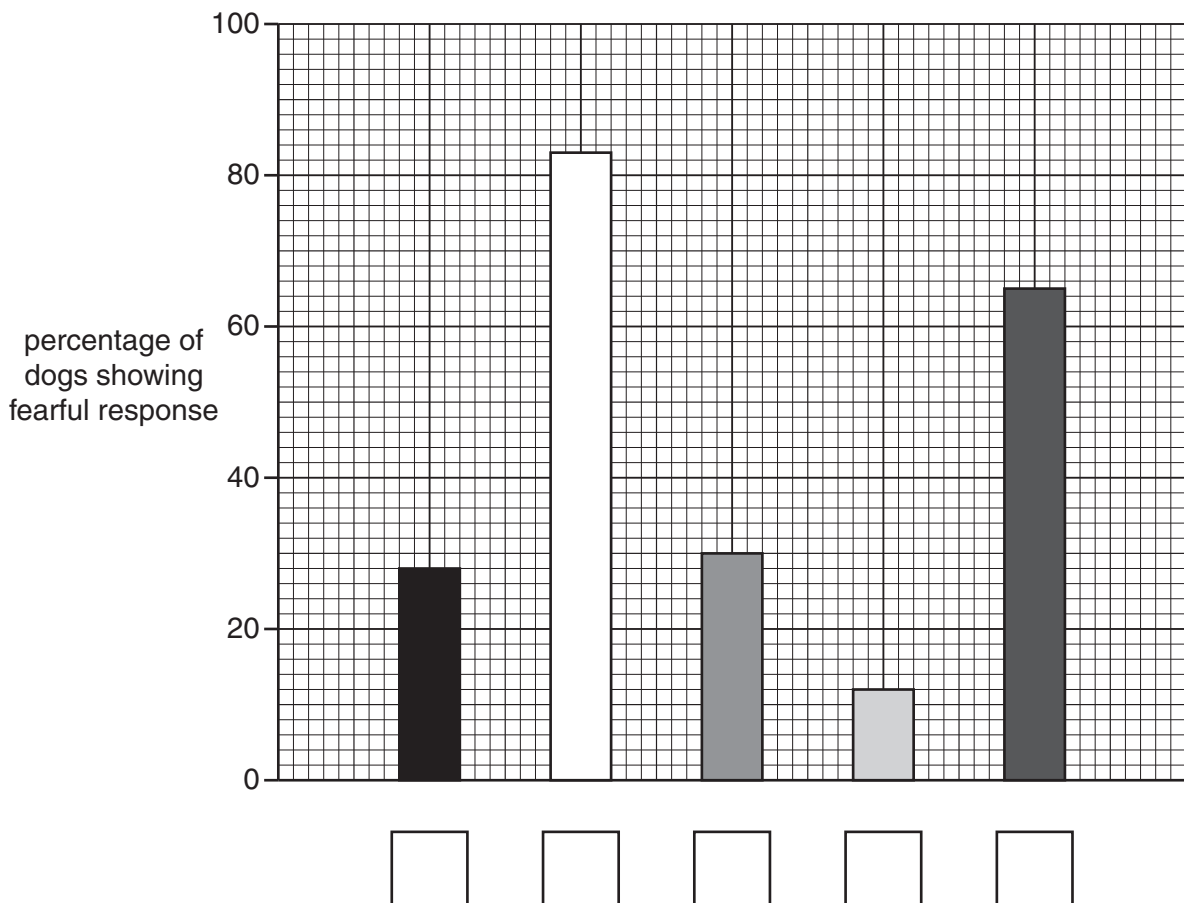
An experiment was done to investigate this different behaviour.

The table shows the percentage of dogs that showed a fearful response to different types of loud noise.

	type of loud noise	percentage of dogs showing fearful response
<b>A</b>	fireworks	83
<b>B</b>	thunderstorms	65
<b>C</b>	gunshots	30
<b>D</b>	cars backfiring	28
<b>E</b>	sound from TV	12

These figures are represented by the bar chart below.

- (a) Use the table to complete the bar chart by writing the letters **A**, **B**, **C**, **D** and **E** in the boxes below the correct bar.



[1]

(b) A student made the following conclusion from these results.

'The types of loud noise produce a clear difference in the number of dogs responding'.

How valid is this statement?

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

(c) The results show that noise from fireworks cause the greatest stress in dogs.

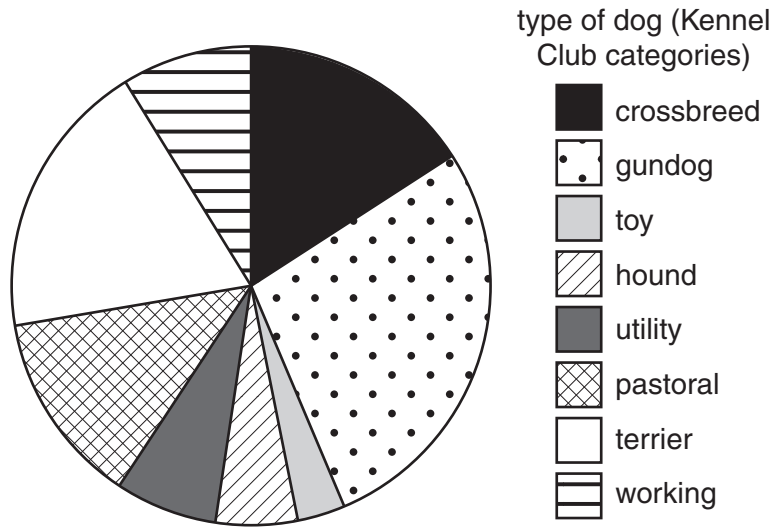
A firework manufacturer wants to show that fireworks are not so stressful.

How could he present the bar chart without changing the figures to achieve this?

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

16 An experiment was carried out to investigate the response of dogs to loud noises.

The pie chart shows the percentage (%) of dog types used in the experiment.



(a) Which dog type used was in excess of 25% in the experiment?

..... [1]

(b) How would you carry out this experiment to ensure it is a fair test?

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

17 Many types and breeds of animal are kept as pets.

They all have very different needs.

Most pets are bought from shops.



The pet shop is producing a leaflet for new pet owners.

What type of information should be included in the leaflet?

Explain why this information is important.

.....

.....

.....

.....

.....

..... [3]

18 The photograph shows newly born mice with their mother.



Select a small mammal or bird.

Animal chosen .....

For the animal that you have chosen explain how you would care for the mother and her new born young.

.....

.....

.....

..... [2]



19 Below is a newspaper headline.

**Inbreeding of pedigree dogs ‘to be outlawed’**



Discuss the **dangers** of inbreeding.

.....

.....

.....

.....

.....

.....

..... [3]

**END OF QUESTION PAPER**

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**19**  
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