

**GENERAL CERTIFICATE OF SECONDARY EDUCATION  
ENVIRONMENTAL AND LAND-BASED SCIENCE**

**B494/02**

Care of Animals  
(Higher Tier)

**Friday 23 January 2009  
Morning**

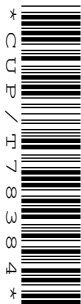
**Duration: 45 minutes**

Candidates answer on the question paper  
A calculator may be used for this paper

**OCR Supplied Materials:**  
None

**Other Materials Required:**

- Calculator
- 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 clearly in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure that you know what you have to do before starting your answer.
- Answer **all** the questions.
- Do **not** write in the bar codes.
- Write your answer to each question in the space provided, however additional paper may be used if necessary.

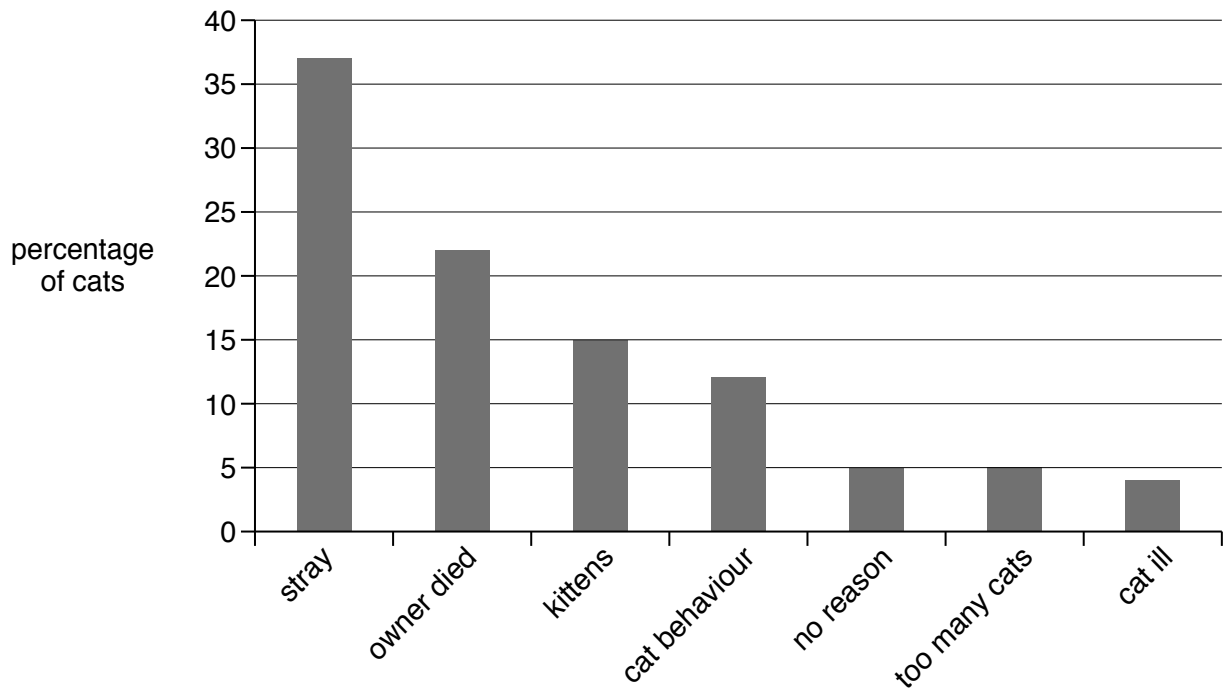
**INFORMATION FOR CANDIDATES**

- 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		
		Mark
<b>TOTAL</b>	<b>36</b>	

Answer **all** the questions.

- 1 The chart shows reasons given for cats to be taken into an animal shelter.



- (a) What percentage of cats were brought into the shelter because their owner had died?

- A 15
- B 20
- C 22
- D 25

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

- (b) 240 cats were brought into the shelter.

How many of these cats were brought in for no reason?

- A 6
- B 12
- C 18
- D 24

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

2 Misty, a female cat, started to have kittens when she was 1 year old.  
She produced a litter of kittens every four months until she was 10 years old.  
Each litter of kittens had two males and two females.

How many female kittens did Misty have?

- A 20
- B 54
- C 60
- D 120

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

**3** People working with animals need regular health checks and inoculations ('jabs').

This table shows some of these.

types of animals worked with	rabies	tetanus	TB skin test
pet rodents and rabbits		✓	
dogs and cats		✓	every 12 months
monkeys and chimpanzees		✓	every 6 months
wild rodents and rabbits	✓	✓	every 6 months
lions, tigers and bears	✓	✓	every 12 months
birds and poultry		✓	every 12 months
fish, reptiles and amphibians		✓	every 6 months

Which type of animal poses the greatest risk of disease?

- A** birds and poultry
- B** dogs and cats
- C** fish, reptiles and amphibians
- D** lions, tigers and bears
- E** monkeys and chimpanzees
- F** pet rodents and rabbits
- G** wild rodents and rabbits

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

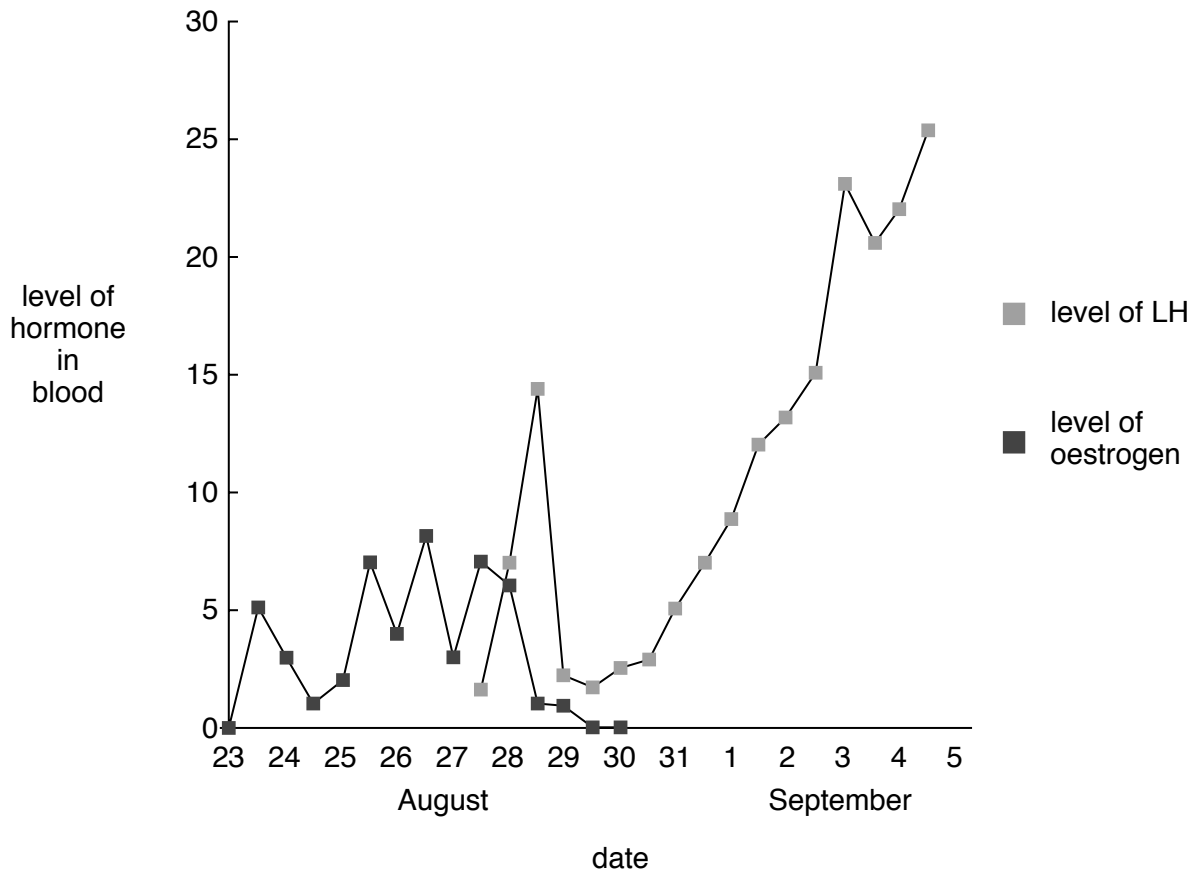
4 Enzymes are essential for the functioning of the body.

Which one of the following is **not** true about enzymes?

- A They are essential in the diet.
- B They convert insoluble molecules to soluble molecules.
- C They are biological catalysts.
- D They convert large molecules to small molecules.
- E They are pH specific.

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

5 The graph shows the level of hormones in the blood of a bitch.



What is the role of LH in the reproductive cycle?

- A causes ovulation
- B initiates uterine contractions
- C maintains uterus lining
- D stimulates milk production

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

6 This table shows some information about the caecum of three animals.

animal	% of total gut length	ratio of gut length to body length
cat	0	4:1
dog	2	6:1
rabbit	11	10:1

Why does the rabbit have a greater percentage of its gut as caecum?

- A It has a diet of cellulose.
- B It has teeth that continually grow.
- C It has the longest gut.
- D It never drinks water.

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

7 Abdul has a guinea pig and wants to buy an effective disinfectant to clean its cage.

He compares five different disinfectants and summarises the data in a table.

disinfectant	cost per bottle (0.5 litre)	method of use	effectiveness of 1 litre (when diluted)
<b>A</b>	£1.80	dilute to make 2 litres	✓
<b>B</b>	£2.50	dilute to make 5 litres	✓✓
<b>C</b>	£1.60	dilute to make 2 litres	✓
<b>D</b>	£2.40	dilute to make 4 litres	✓✓
<b>E</b>	£3.00	straight from bottle	✓✓✓

Which disinfectant is the best value?

**A**

**B**

**C**

**D**

**E**

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



Manx

© Dave King / Dorling Kindersley / Getty Images



Siamese

© iStockphoto.com / Vasilij Koval



Persian

© iStockphoto.com / Florea Marius Catalin

Explain how selective breeding could produce **one** of the features shown in **one** of the breeds.

breed .....

.....

.....

.....

.....

.....

.....

[3]



9 The Landa family has a cat.

They go on holiday for two weeks each year.

The table shows the costs involved in keeping their cat.

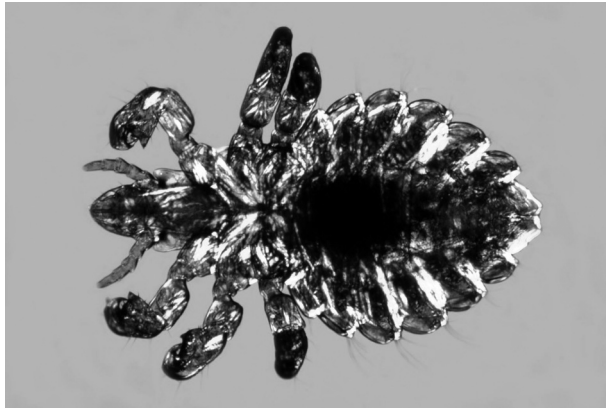
item	cost
cat food and cat litter	£20 for 1 month
vaccinations	£24 for 1 year
insurance	£86 for 1 year
toys, bowls, etc	£36 for 1 year
cattery for holiday care	£6 for 1 day

Calculate how much it costs the Landa family to keep their cat for 1 year.

Show your working.

Answer ..... [2]

10 The photograph shows a louse.



© M I (Spike) Walker / Alamy

Describe **three** signs a small animal would show if it had lice.

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

11 The table shows some data on breeds of rabbit.

breed	size	fur length	temperament
Angora	medium	long	calm
Flemish	giant	medium	calm
Himalayan	small	short	calm
Netherland	tiny	short	nervous

Which breed would be most suitable for a small child?

- A Angora
- B Flemish
- C Himalayan
- D Netherland

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

Explain **one** reason why you have selected the breed chosen.

.....

.....

..... [2]

12 The table shows some of the nutrients in adult dog food.

nutrient	amount (%)
protein	26.0
fat	15.0
carbohydrate	4.0
moisture	10.0
calcium	1.0

One reason why an animal needs calcium is for teeth development.

Give **three** other reasons why calcium is needed by an animal.

- 1 .....
- 2 .....
- 3 .....

[3]

13 Many small mammals can be fed on either succulent or concentrate food.

Name **one** small mammal that can be fed on both succulent and concentrate food.

.....

(a) Give **one** example of a succulent food you could feed this mammal.

.....

(b) Give **one** difference between a succulent food and a concentrate food.

..... [2]

14 The cartoon shows that working with animals carries some risks.



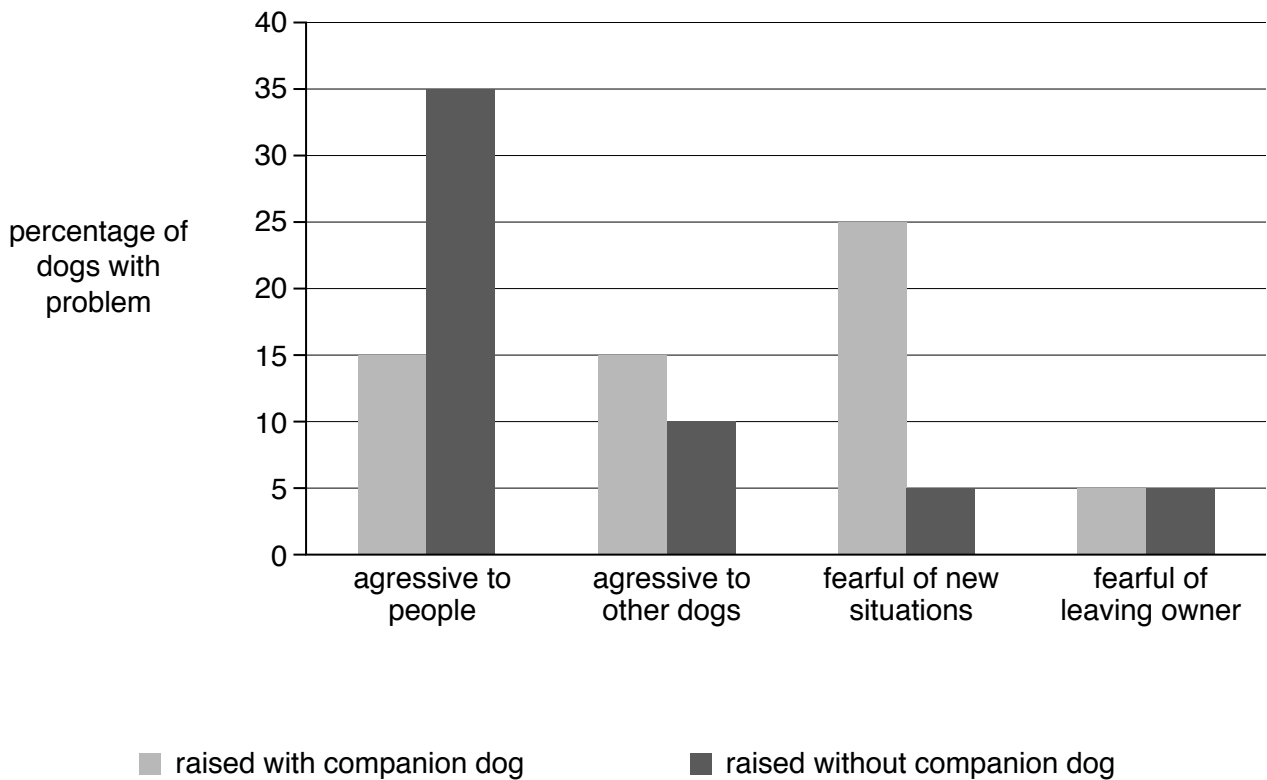
© cartoonstock.com / Mark Guthrie

List the stages in carrying out a risk assessment for working with a small animal.

- 1 .....
- 2 .....
- 3 .....

[3]

15 The chart shows problems of dogs raised with or without a companion dog.



Some blind people have guide dogs to help them lead normal lives. Guide Dogs for the Blind are considering whether it is better to raise puppies on their own or with a companion puppy. Using information in the chart and your own knowledge choose the main reason for raising the puppy alone.

- A being aggressive to people
- B being aggressive to other dogs
- C being fearful of new situations
- D being fearful of leaving owner

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

16 An animal's pedigree can often be maintained by 'line breeding'.

(a) What is 'line breeding'? Explain why it would be used as a breeding strategy.

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

(b) Give **two** disadvantages of 'line breeding'.

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

17 Two products which can be used to control fleas in dogs are Capstar® and Sentinel flavour tabs®.

Capstar® kills adult fleas and Sentinel flavour tabs® prevent flea eggs from developing.

A dog has fleas.

Why is it necessary to treat this dog with **both** these products?

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

18 Small mammal breeders use ICT for various types of record keeping.

Which **two** of the following is ICT **not** used to record?

- A breed characteristics
- B date of birth
- C date of heat
- D death
- E distinguishing features
- F handling
- G health record
- H litter record
- I name
- J parentage
- K prizes won at shows
- L sex
- M vaccination record
- N water consumption

Answer **A, B, C, D, E, F, G, H, I, J, K, L, M, or N**

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

**END OF QUESTION PAPER**



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