

GENERAL CERTIFICATE OF SECONDARY EDUCATION
ENVIRONMENTAL AND LAND-BASED SCIENCE
Livestock Husbandry (Foundation Tier)

B495/01

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)

Monday 1 February 2010
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 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 **20** pages. Any blank pages are indicated.

Answer **all** the questions.

1 The photograph shows an animal house.



Which of the following animals would you **not** keep in this house?

- A cattle
- B pigs
- C poultry
- D sheep

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

2 Good housing is essential for animal health.



From the list choose **four** different features of good housing.

cold

damp

draughty

draught free

dry

expensive

good ventilation

holes in roof

soundproof

warm

feature 1

feature 2

feature 3

feature 4

[4]

3 The photograph shows an animal house.



On Intensive farms, animals are frequently housed inside all of their lives.

Which **two** of the following are advantages of keeping animals inside?

- A Animals behave in a natural way.
- B Animals eat less food.
- C Animals eat more food.
- D Animals get more exercise.
- E Animals have a more natural diet.
- F Disease is less likely to spread.
- G Less energy is used by the animals.
- H Less energy is used by the building.
- I More farmers are kept in work.

Answer **A, B, C, D, E, F, G, H** or **I**.

..... and [2]

4 Which **one** of the following is a part of the female reproductive system?

epididymus

fallopian tube

penis

scrotum

sperm duct

testes

answer [1]

5 The photograph shows a saddleback pig.



What is the phenotype of this animal?

- A B W
- B b w
- C black and white
- D dominant

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

- 6 The photograph shows piglets produced by crossing a pure Tamworth boar with a pure Saddleback sow.



Which genetic term describes these piglets?

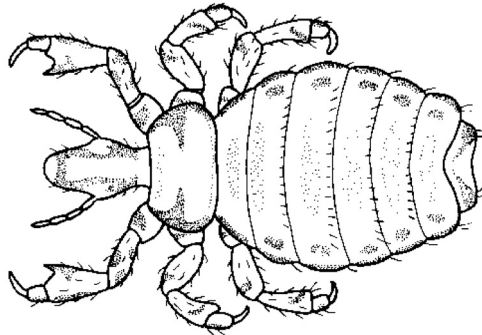
- A dominant
- B F1 hybrids
- C F2 hybrids
- D recessive

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

7 The diagram shows a louse.

The louse is a common parasite of farm animals.

Parasites can seriously affect animal health.



Suggest **three** ways a farmer could recognise there was a problem with parasites on the farm.

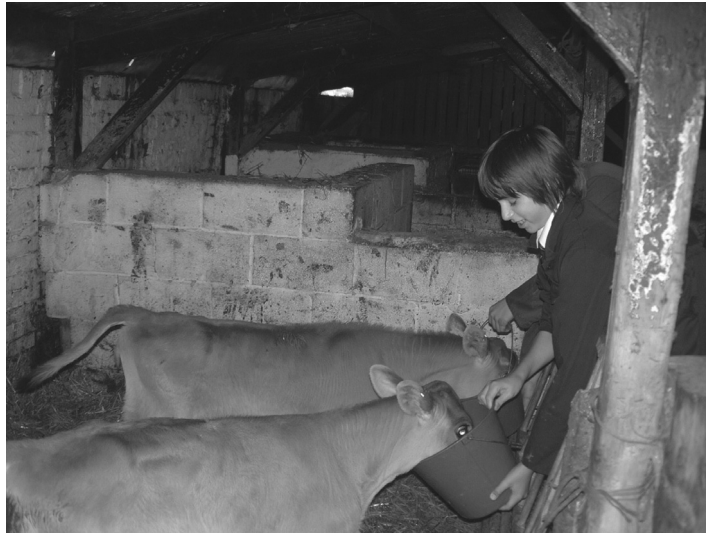
.....

.....

..... [3]

8 Animals are given a range of different foods.

This is to make sure they have a balanced diet.



(a) Name one food type that meets the following description.

The food has low water content, a high fibre content, low nutrient content and is often fed as part of the maintenance ration.

..... [1]

(b) A second feed has a low water content, low bulk, high nutrient content and is often fed as part of the production ration.

Name this second feed.

..... [1]

9 It is important that farmers know when their animals are on heat (ready to mate).

For a farm animal that you have studied suggest **two** signs that might tell the farmer that the animal was on heat.

type of animal

sign 1

.....

sign 2

..... [2]

10 The photograph shows a large Herdwick ram.



Produce a series of instructions to explain how to approach a farm animal safely.

.....

.....

.....

.....

.....

.....

..... [3]

11 The photograph shows a farmer working at the computer.

Modern farming requires dealing with a large volume of data.

The use of computers is a good way to keep this data.



(a) Suggest **three** pieces of data the farmer might record for individual farm animals.

1

.....

2

.....

3

..... [3]

(b) Suggest one **important** advantage of keeping this data on a computer rather than on paper.

.....

.....

..... [1]

12 Ivermectin[®] is an injection given to pigs to control a range of parasites.



(a) The dosage given is 1 ml per 33kg of body weight.

What would be the dosage given to a 53 kg pig?

..... ml [1]

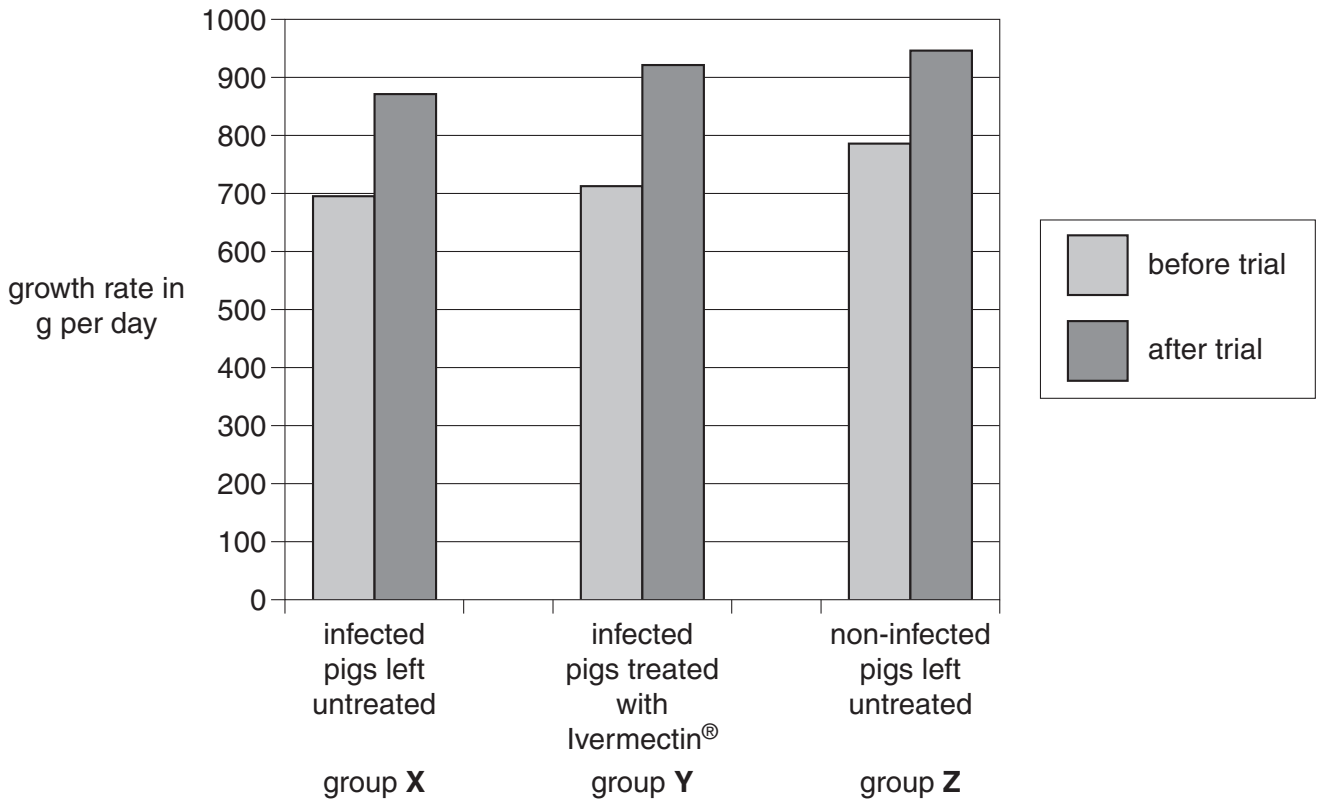
(b) Ivermectin[®] is sold in 50 ml, 200 ml, 500 ml and 1000 ml packs.

What size pack would be needed to treat a herd of 30 pigs whose average mass is 53 kg?

..... ml [1]

13 The graph shows the results of a trial on Ivermectin[®] with different populations of pigs.

growth rates of different pig populations



(a) Which group has the highest growth rate?

..... [1]

(b) Which group of pigs showed the greatest increase in growth rate?

..... [1]

(c) Why was group X left untreated?

.....
 [1]

- 14 The table shows the impact of parasites and treatment with Ivermectin[®] on the growth rate of pigs.

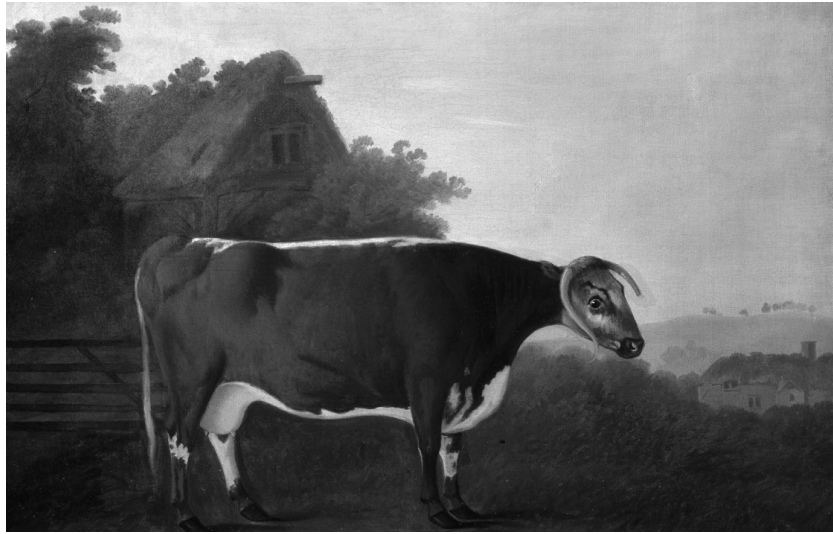
	infected pigs left untreated	infected pigs treated with Ivermectin[®]	non-infected pigs left untreated
weight at the start of the investigation (kg)	25	25	25
average growth rate over the investigation (g per day)	460	522	568

Each population of pigs had the same average weight at the start of the investigation.

Which pigs are likely to reach 100 kg first?

..... [1]

15 The painting shows a traditional breed of cattle.



Most modern breeds of livestock kept commercially have been selectively bred.

Selective breeding has led to improvements in modern livestock.

Describe these improvements.

.....

.....

.....

..... [3]

16 Working in the agricultural industry can be hazardous if people do not take care.



Describe some of the possible hazards you might find when working on a farm.

.....

.....

.....

.....

.....

.....

..... [3]

END OF QUESTION PAPER

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