

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.

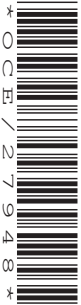
OCR supplied materials:
None

Other materials required:

- Pencil
- Ruler (cm/mm)

Monday 31 January 2011
Afternoon

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. 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 **16** pages. Any blank pages are indicated.

Answer **all** the questions.

1 A



B



D



C



Which one of the cattle shown in the photographs is **male**?

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

2 A



3

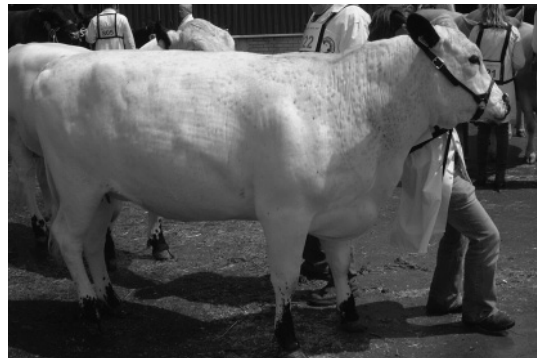
B



D



C



Which one of the cattle shown is best adapted to life in an upland area?

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

4

3 Male and female animals have different sex organs.

Complete the table by writing the correct sex organs in the correct column.

- ovary
- oviduct
- penis
- scrotum
- sperm duct
- testis
- uterus
- vagina

| male | female |
|-------|--------|
| | |
| | |
| | |
| | |
| | |

[4]

4 The photographs show different breeds of cattle.

A



B



D



C



Which one of the cattle shown in the photographs is a **beef** breed?

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

5 A Hereford bull has a white face.

It was crossed with a number of black-faced cows.

All the calves produced had white faces.



Put a **(ring)** around the word that completes the sentence.

dominant

genotype

hybrid

recessive

The white face is an example of a characteristic.

[1]

6 A Hereford bull was crossed with a number of Friesian cows.

The photograph shows one of the calves.



(a) Which of the following terms **cannot** be used to describe this generation of calves?

- A cross-breeds
- B F1
- C F2
- D hybrids

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

(b) Which of the following would **not** be a possible reason for the farmer using this cross with his cows?

- A To improve disease resistance.
- B To improve growth rate.
- C To improve hardiness.
- D To improve conformation.

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

(c) What term is used to describe the result of crossing two different breeds that produce offspring which perform better than either of their parents?

.....
 [1]

7 This is a photograph of a Blue-faced Leicester sheep.



Describe the phenotype of this animal.

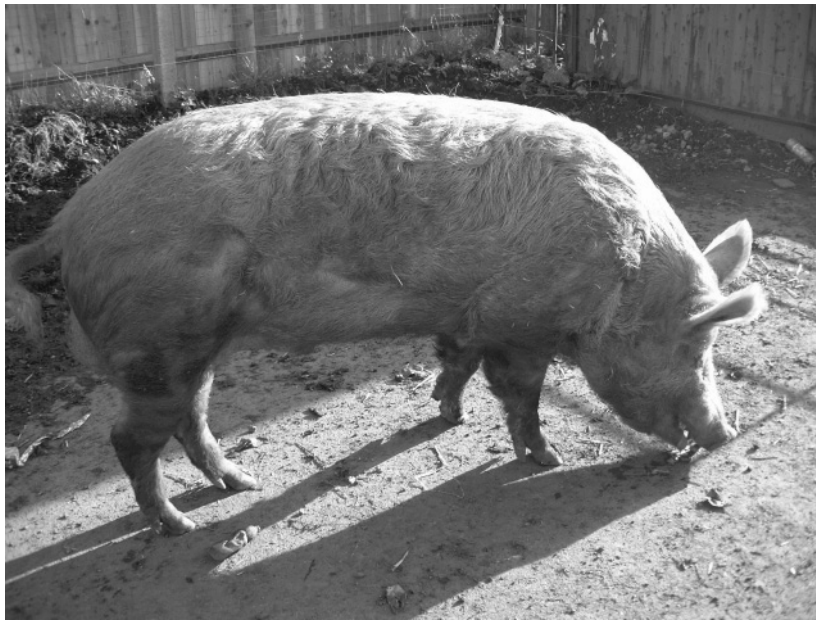
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.....

.....

..... [2]

8 This is a photograph of a Tamworth boar.



(a) Many school farms keep pigs.

Few school farms keep a boar. They prefer to use Artificial Insemination (AI).

Suggest **two** reasons why the school chooses to use AI rather than a boar.

1

.....

2

..... [2]

(b) The Tamworth is a rare breed of pig.

Suggest **two** ways that the use of Artificial Insemination (AI) may help protect this breed from extinction.

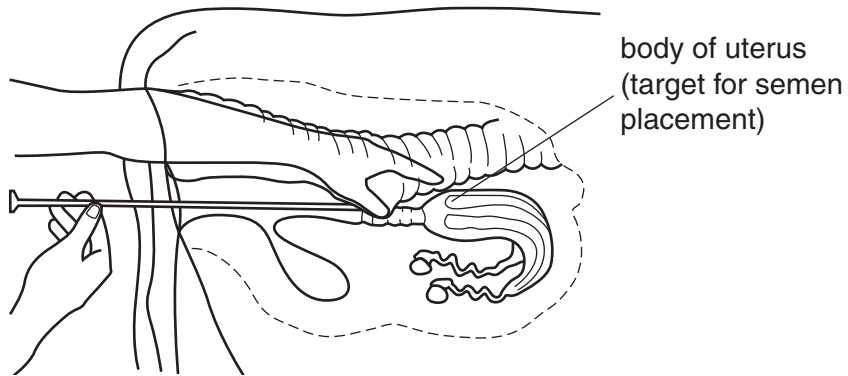
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..... [2]

9 The diagram shows artificial insemination being carried out on a cow.



Sperm for artificial insemination (AI) is frozen soon after collection.

Suggest why.

..... [1]

10 The photograph shows a Herdwick Ram.



Suggest **three** rules for approaching this animal safely.

1

2

3 [3]

11 The photograph shows a cow and two calves she is rearing.



The farmer needs to examine one of the calves.

Suggest **two** reasons why this might be dangerous for the farmer.

.....

.....

..... [2]

12 The photograph shows a healthy farm animal.



(a) What signs are there in the photograph that this animal is in good condition?

.....
.....
.....
..... [3]

(b) This calf has had its horns removed.

Suggest why.

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

13 The table shows the number of livestock in the UK.

| | England | Wales | Scotland | N Ireland | UK total |
|---------------|------------|-----------------|-----------|-----------|------------|
| cattle | 600 000 | 1 200 000 | 1 900 000 | 1 600 000 | 5 300 000 |
| sheep | 15 400 000 | 9 000 000 | 7 500 000 | 2 000 000 | 33 900 000 |
| pigs | 3 800 000 | 20 000 | 400 000 | 300 000 | 4 520 000 |
| total | 19 800 000 | (a)(iii) | 9 800 000 | 3 900 000 | 43 720 000 |

(a) (i) Which country in the UK has the greatest number of cattle?

..... [1]

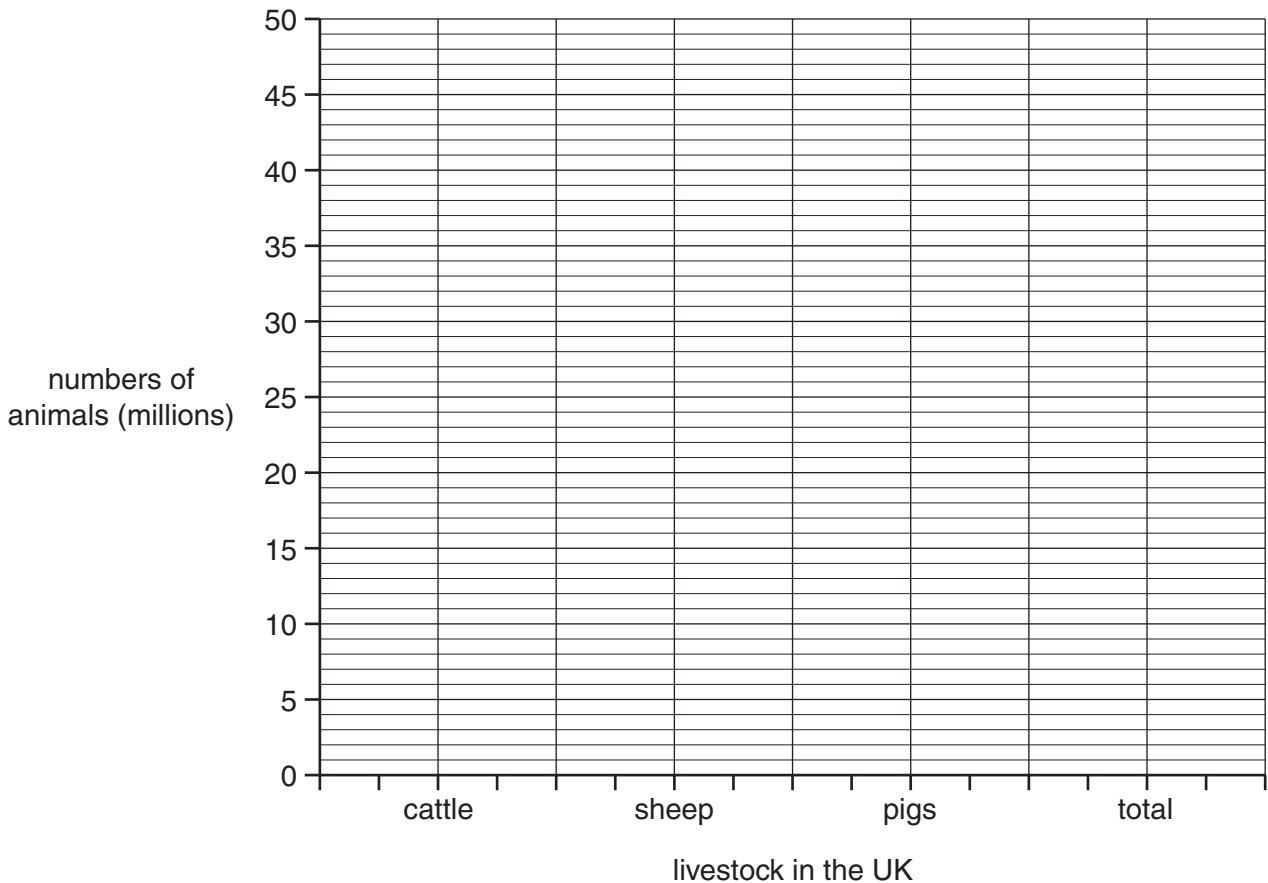
(ii) Which animal is kept in the greatest numbers in the UK?

..... [1]

(iii) What is the total number of livestock kept in Wales?

..... [1]

(b) Use the table to complete the bar chart showing the total numbers of each type of animal in the UK.



[3]

Turn over

14 The picture shows a student weighing a turkey as part of her investigation.



The student wanted to find out which grew best: male or female turkeys.

She used two turkeys, one male one female.

She weighed the turkeys at the start of the investigation and then again after three months.

Suggest how this investigation could be improved.

.....

.....

.....

..... [3]

END OF QUESTION PAPER

15
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