

Thursday 2 February 2012 – Morning

GCSE ENVIRONMENTAL AND LAND-BASED SCIENCE

B495/03 Livestock Husbandry (Foundation Tier)

Candidates answer on the Question Paper.
A calculator may be used for this paper.

Duration: 45 minutes

OCR supplied materials:
None

Other materials required:

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

For Examiner's Use	
TOTAL	

Answer **all** the questions.

1 The pictures show four different breeds of cattle.

A



B



D



C



Which **one** of these cattle is a modern beef breed?

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

2 The picture shows a modern dairy breed.



This animal is the result of selective breeding over many years.

Name **three** characteristics that breeders have selected to improve this dairy breed.

- 1
- 2
- 3 [3]

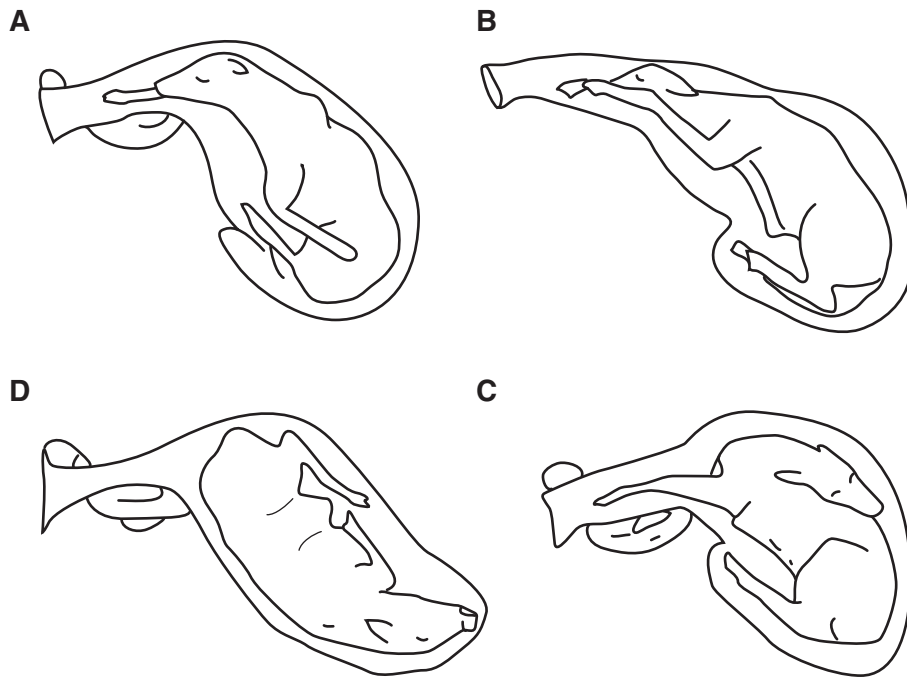
3 The following are parts of an animal's reproductive system.

Put a **ring** around the word that is part of the **female** reproductive system.

- penis
- sperm duct
- testis
- uterus

[1]

4 The pictures show embryo calves in the uterus.



Which **one** of the pictures shows a calf in the correct position for birth?

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

5 Complete the sentence.

The complete genetic make up of an animal is known as its...

A chromosome.

B gene.

C genotype.

D phenotype.

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

6 Which **one** of the following is classed as a bulk feed?

- A barley meal
- B growers pellets
- C meadow hay
- D milk powder

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

7 Draw a straight line between each **health problem** and its correct **cause**.

health problem	cause
roundworm	bacteria
ringworm	external parasite
lice	fungus
mastitis	internal parasite

[2]

8 The photograph shows a badger on farmland.



Which **one** of the following diseases is thought to be transmitted to cattle through contact with badgers?

- A mastitis
- B salmonella
- C tetanus
- D tuberculosis (TB)

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

9 Which **one** of the following is a correct definition of the genetic term **recessive**?

A characteristic which...

- A can only be passed on if both parents have that gene.
- B can only be passed on if neither parent has that gene.
- C is always passed onto offspring.
- D is never passed onto offspring.

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

10 The picture shows a pig farmer recording data on his computer.



Suggest and explain the type of information a farmer might record on a computer about a **breeding sow**.

.....

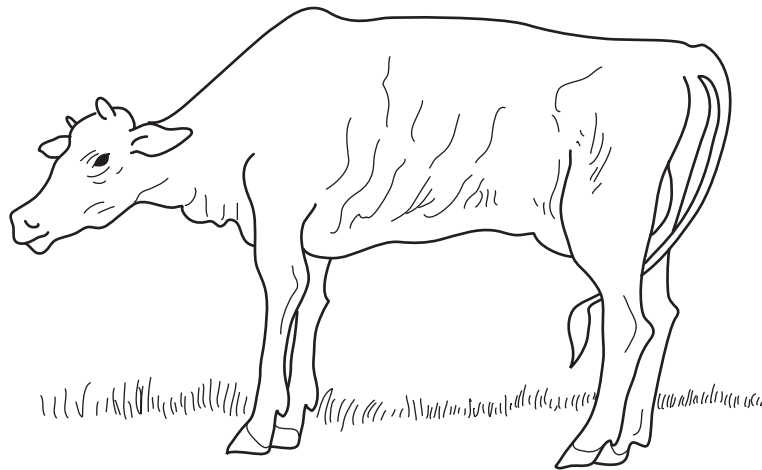
.....

.....

.....

..... [3]

11 The picture shows a cow in poor condition.



Give **three** ways that you can tell that any animal is in poor condition.

- 1
- 2
- 3 **[3]**

12 The picture shows a farmer checking to see if the sow is on heat (ready to mate).



For an animal you have studied, explain the different ways you might tell that the animal is on heat.

.....

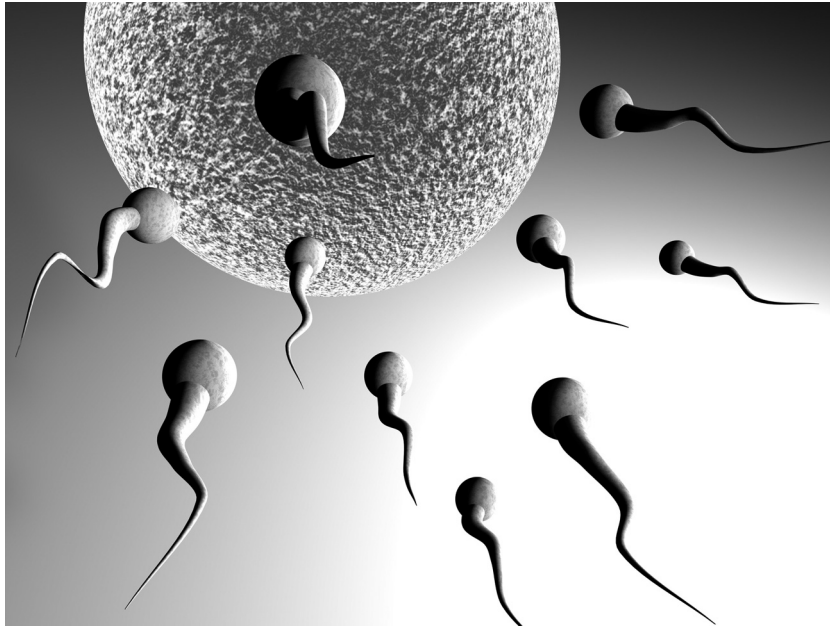
.....

.....

.....

..... [3]

13 The picture shows sperm about to reach the ovum.



Sperm for artificial insemination are often kept for long periods of time.

Under normal environmental conditions sperm quickly die after leaving the body.

(a) Describe how sperm are kept alive for artificial insemination.

..... [1]

(b) Before the sperm are stored they are diluted.

Explain why.

..... [1]

14 The picture shows a pen used for livestock.



Give **two** ways in which this pen would **not** be suitable for housing pigs.

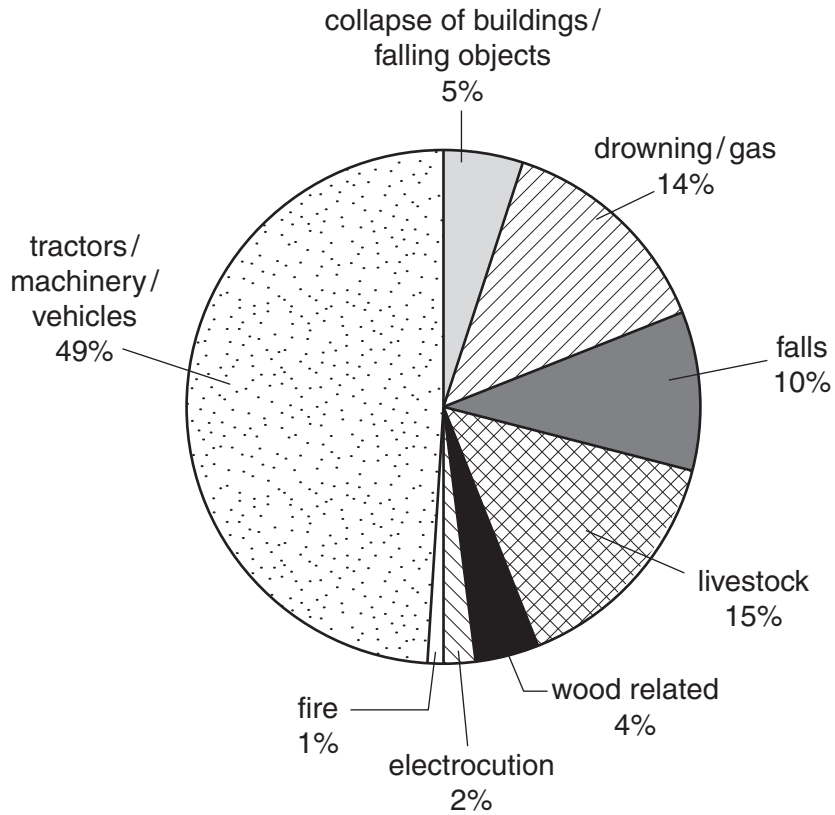
1

2 [2]

15 Between 2000 and 2009 there were 160 deaths on farms.

The pie chart shows the causes of deaths on farms over this ten year period.

causes of farm deaths (2000–2009)



(a) What was the biggest cause of farm deaths over the period?

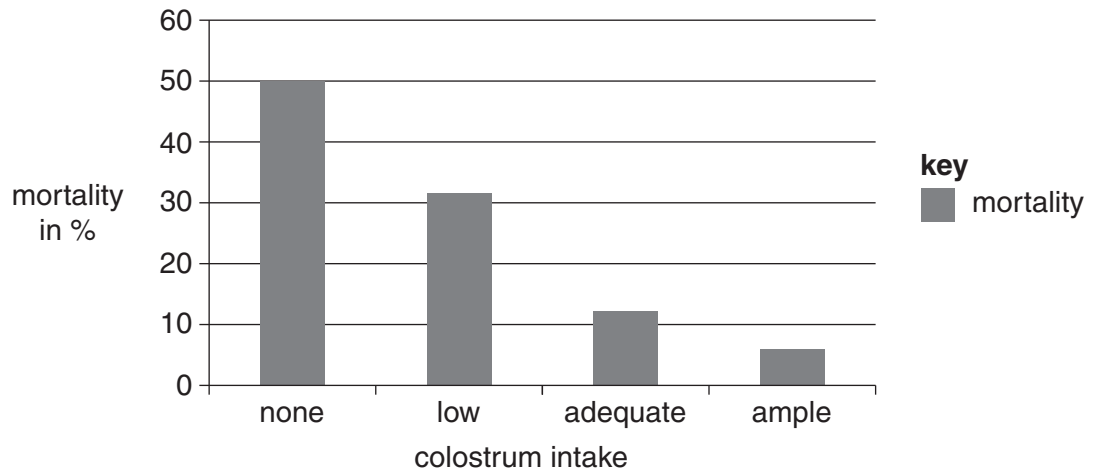
..... [1]

(b) How many people were killed by livestock?

Answer [1]

16 Colostrum is important for lambs to survive.

The graph shows the link between colostrum intake and lamb mortality (deaths).



Look at the graph.

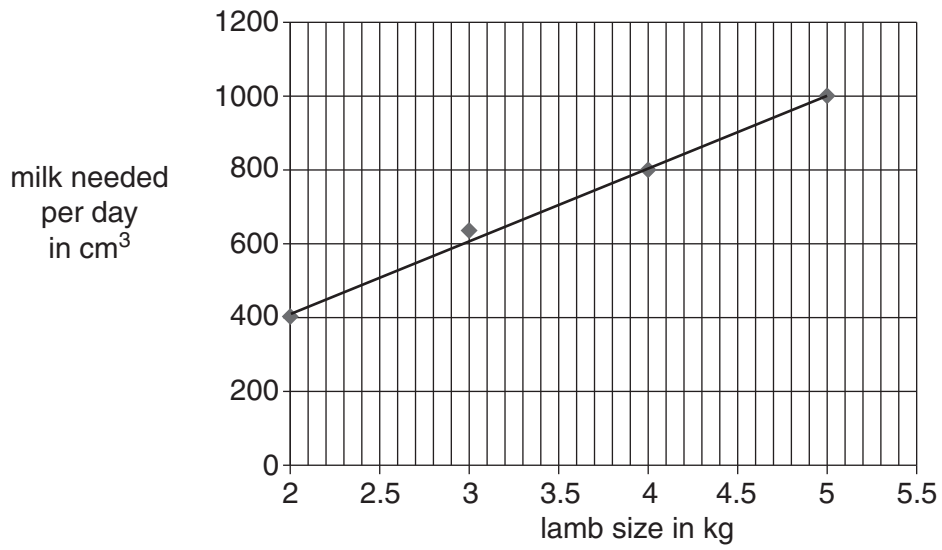
(a) What was the mortality of the lambs that drank no colostrum?

..... % [1]

(b) What is the pattern shown in this graph?

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

17 The graph shows how much milk is needed per day by different sized lambs.



(a) How much milk is needed per day by a 4 kg lamb?

..... cm³

[1]

(b) Estimate the amount of milk needed per day by a 5.5 kg lamb.

..... cm³

[1]

18 The pictures show one lamb being bottle fed and one which is being reared by its mother.



Describe how you would carry out an investigation to see which of the following methods of rearing is better:

- lambs reared by their mothers
- lambs which are bottle fed.

.....

.....

.....

.....

.....

..... [3]

19 The picture shows a large pig outside in the field.



You have to approach a large farm animal.

Suggest **two** things you must do to make this as safe as possible.

- 1
-
- 2
- [2]

END OF QUESTION PAPER



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