

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

B495/02

Livestock Husbandry
(Higher Tier)

**Thursday 4 June 2009
Morning**

Duration: 45 minutes

Candidates answer on the question paper

OCR Supplied Materials:
None

- Other Materials Required:**
- Electronic 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.

Answer **all** the questions.

- 1 The photograph shows a poultry house that is sitting on a sled. The sled allows the house to be easily moved around the field.



Moving the house allows the grass to recover.

Suggest **two** other advantages of being able to move the poultry house.

advantage 1

.....

advantage 2

..... [2]

2 The diagram shows a farmer trimming a sheep's foot.



Foot trimming is a regular task for the farmer.

Suggest **two** problems that might occur if the farmer does not regularly trim the animals' feet.

problem 1

.....

.....

.....

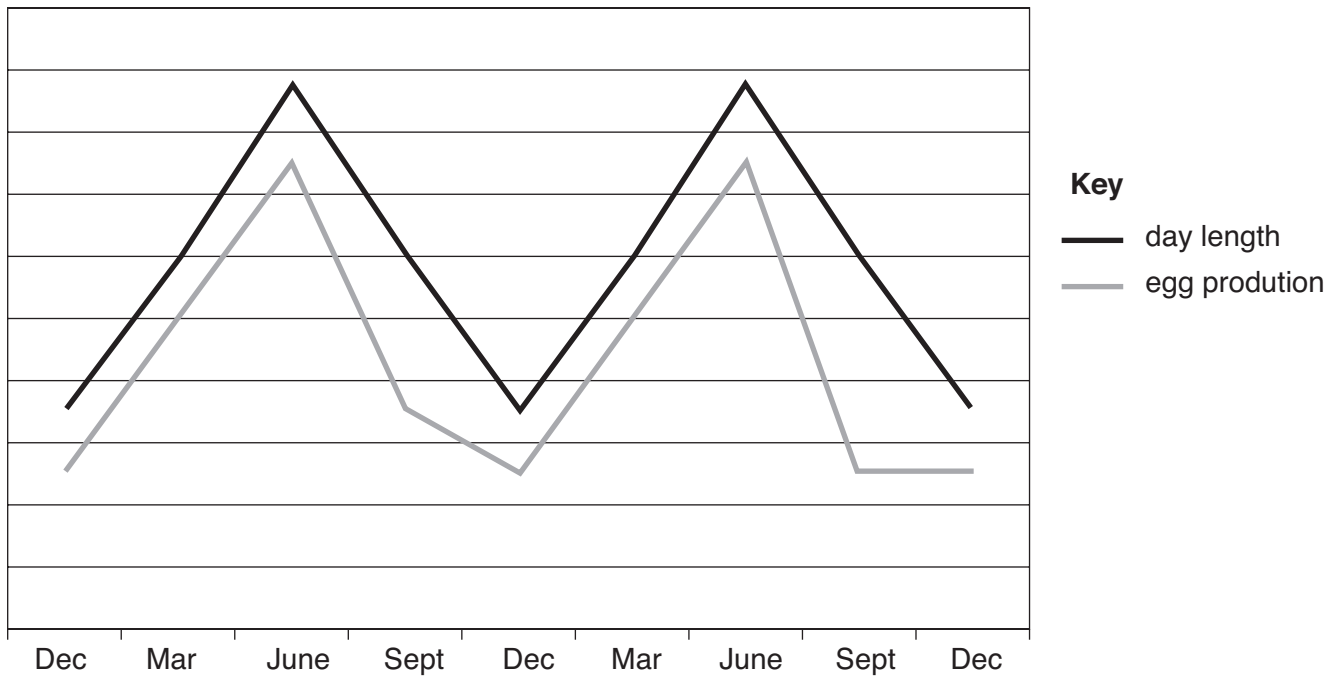
problem 2

.....

.....

..... [2]

3 The graph shows the relationship between day length and egg production.



Which is the correct explanation for this relationship?

- A hens lay more eggs when it is warmer
- B more food is available in spring and summer
- C longer days stimulate egg production
- D the farmer had different numbers of hens at the different times of year

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

- 4 The photograph shows a poultry shed with an alternative energy supply capable of generating electricity.



Suggest how the farmer may use this system to increase egg production in his free-range flock.

.....

.....

.....

..... [2]

- 5 Trimming the feet of livestock could result in the farmer or animals being hurt.

Complete the risk assessment below by identifying **three** possible hazards and suggesting how you would control them.

Activity:	Foot trimming	
Date:	June 2009	
	Hazard	Control measure

[3]

6 Choose the correct word from the list below to complete the following sentences.

chromosomes

gene

genotype

mutations

phenotype

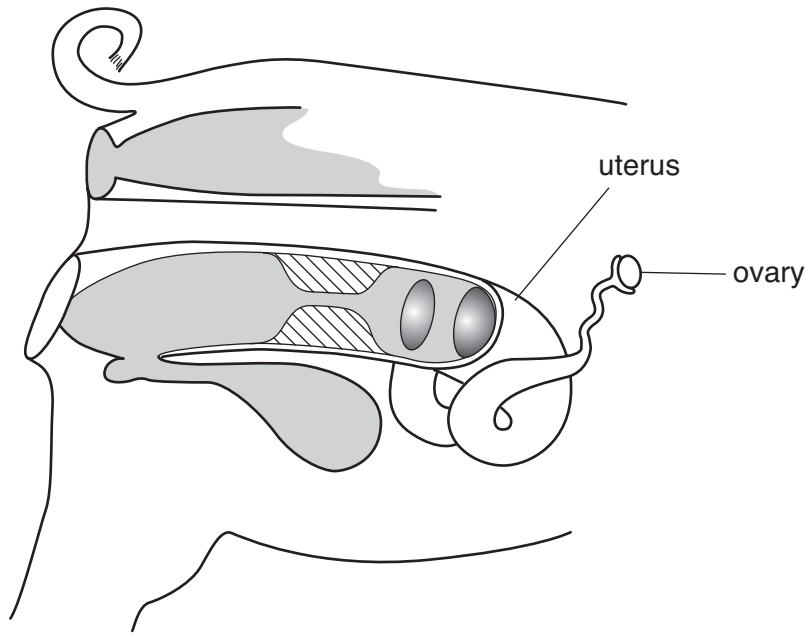
The genetic information of an animal or plant is carried by pairs of
located in the nucleus of the cell.

Each characteristic is coded for by a particular for that characteristic.

All the genetic information of an animal is called its and the
characteristics that this produces is the

[4]

7 The diagram shows the reproductive system of a sow (female pig).



What is the job (function) of the following parts of the reproductive system?

ovary

.....

.....

.....

uterus

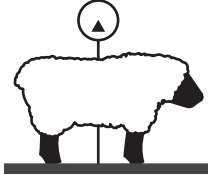
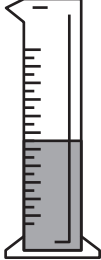
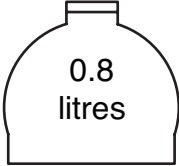
.....

.....

..... [2]

8 This is a label from a bottle of sheep wormer.

It shows the dosage instructions.

Animal Weight	Doses of FASINEX 5%	Number of Doses per Bottle
up to 10 kg	2	400
11–15 kg	3	266
16–20 kg	4	200
21–30 kg	6	133
31–40 kg	8	100
41–50 kg	10	80
51–61 kg	12	66

(a) How many doses of wormer would a sheep weighing 35 kg require?

..... [1]

(b) A farmer is using a dosage rate for 45kg sheep.

(i) How many sheep can be treated from a standard 0.8 litre bottle?

..... [1]

(ii) The farmer uses this dosage for a flock of 240 sheep. How many bottles will be needed?

..... [1]

9 The photograph shows a dairy farmer using a computer to keep his farm records.



Suggest **three** different types of record farmers might keep on their computers to manage the breeding of their cattle.

- 1
- 2
- 3 [3]

10 Illness in animals can have a number of causes.

Name **four** types of organism that cause disease in farm animals.

- 1
- 2
- 3
- 4 [2]

11 Farmers may catch diseases from their animals.

For each disease below select the most likely way a farmer might catch it. Choose from:

- A eating contaminated food
- B bacteria getting into a cut
- C by a animal coughing on you
- D by being bitten

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

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

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

12 The sperm used in AI (artificial insemination) is frozen soon after collection.

What is the reason for freezing the sperm?

- A Sperm which have been frozen and then thawed are more active.
- B Sperm would die if kept at room temperature.
- C It makes it easier to put the sperm into the cow.
- D Freezing prevents the transmission of disease to the cow.

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

13 The photograph shows a group of rare breed pigs.



Rare breeds are generally less productive.

Suggest reasons why a farmer may make a **commercial** decision to keep rare breeds.

.....

.....

.....

..... [2]

14 The photograph shows an extensive pig unit.



Animals can be produced extensively or intensively.

Suggest why each might be considered **bad** for animal welfare.

intensive

.....

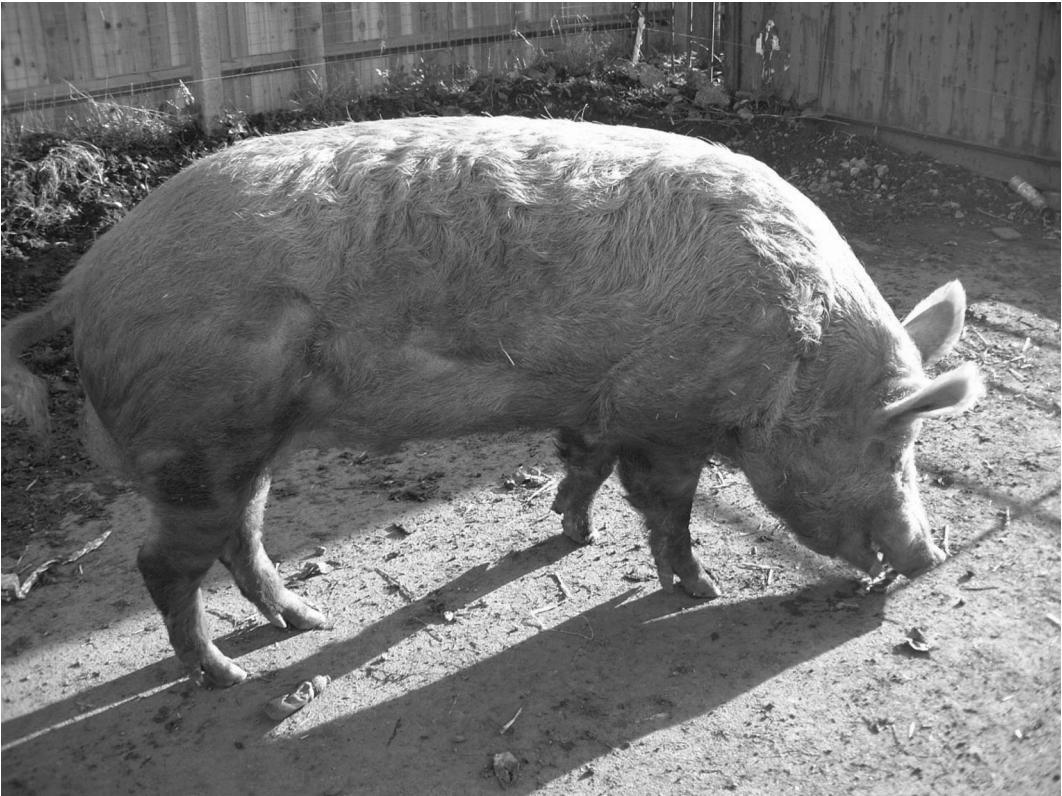
.....

extensive

.....

..... [2]

15



Sometimes young sows do not come into season when they should.

Putting a boar near to the sow can often have the effect of bringing her into season.

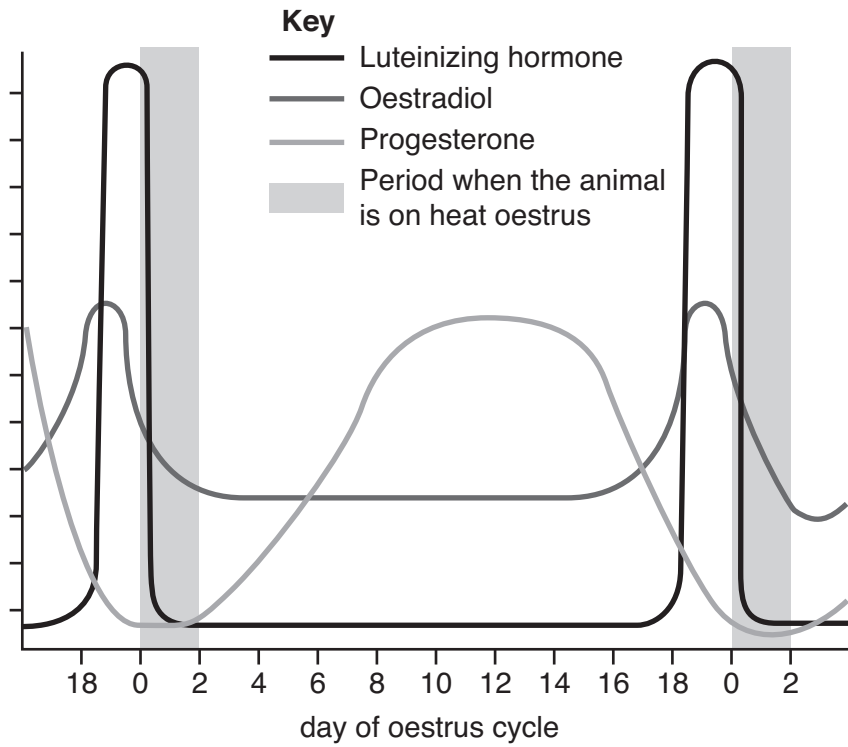
Suggest how the presence of the boar could alter her reproductive cycle.

.....

.....

..... [2]

16 The graph shows the changes in an animal's hormones during its oestrous cycle.



The onset of heat (oestrus) in an animal is controlled by a number of hormones.

(a) Which hormones trigger the onset of oestrus?

..... [1]

(b) Which hormone reduces with the onset of oestrus?

..... [1]

END OF QUESTION PAPER

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