

Wednesday 22 June 2016 – Morning

GCSE ENVIRONMENTAL AND LAND-BASED SCIENCE

B683/01 Commercial Horticulture, Agriculture and Livestock Husbandry
(Foundation Tier)

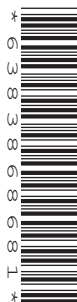
Candidates answer on the Question Paper.

OCR supplied materials:
None

Other materials required:

- Pencil
- Ruler (cm/mm)
- Calculator

Duration: 1 hour



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. 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. If additional space is required, you should use the lined page(s) at the end of this booklet. The question number(s) must be clearly shown.
- Do **not** write in the bar codes.

INFORMATION FOR CANDIDATES

- The quality of written communication is assessed in questions marked with a pencil (✎).
- 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 **50**.
- This document consists of **16** pages. Any blank pages are indicated.

2

Answer **all** the questions.

- 1 A grower wants to plant up a large tub with bedding plants.

The photographs show four suitable plants.

A**B****C****D**

- (a) Match the correct name of each plant to the photograph of its flower.

Write the correct letters in the boxes.

Marigold

Lobelia

Fuchsia

Pelargonium (geranium)

[3]

3

(b) Which of these bedding plants is the only one that can have orange flowers?

..... [1]

(c) Describe how you would plant up a tub for sale using these bedding plants.

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..... [4]

(d) A planted tub sells for £22.

The grower wants to make 75% profit on each planted tub.

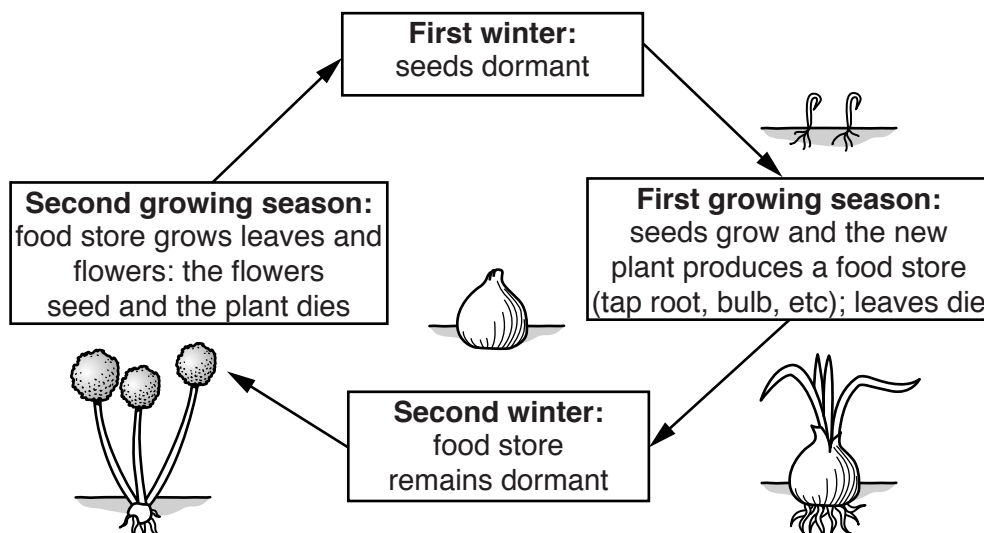
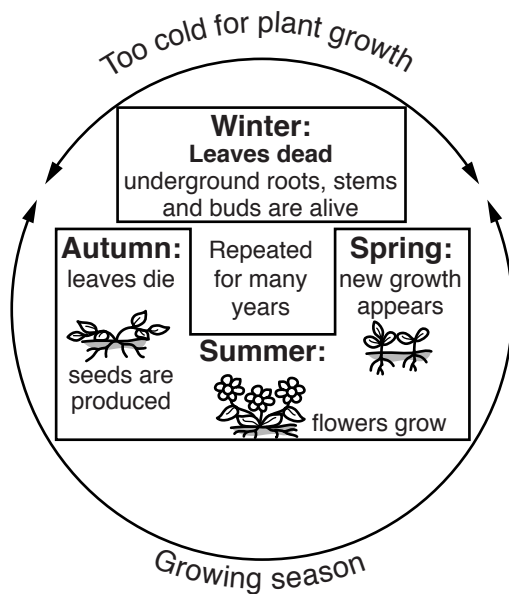
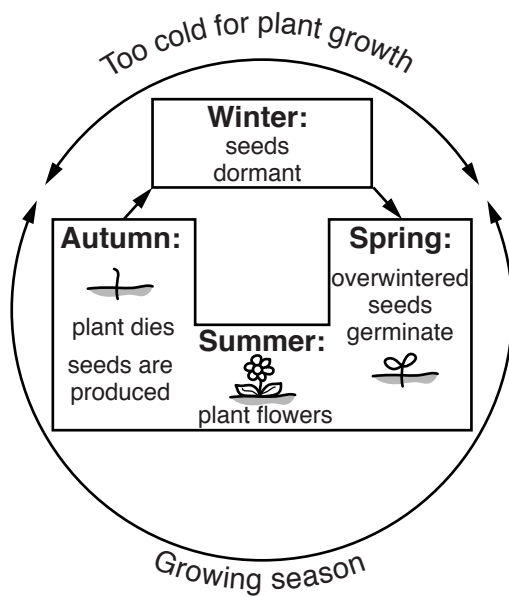
25 planted tubs are sold.

How much profit does he make?

Show your working.

£ [2]

2 The diagrams show three different plant life cycles.



5

- (a) Use the words below to correctly label each of the **three** life cycles.

Write your answers in the empty boxes on the opposite page.

annual

biennial

perennial

[2]

- (b) Write down the names of **three** plants, one for each example of these life cycles.

annual

biennial

perennial

[3]

- (c) State **one** difference between a deciduous tree and an evergreen tree.

.....

..... [1]

6

- 3 The photograph shows a lean-to glasshouse.



- (a) It is best to build a glasshouse on a wall facing:

North

South

East

West

Circle the correct answer.

[1]

- (b) The glasshouse has opening windows in the roof and walls.

The windows provide ventilation.

To provide enough ventilation, the area of the opening windows should be 15% of the floor area of the glasshouse.

What area of opening windows is needed for a glasshouse that measures $100\text{ m} \times 20\text{ m}$?

Show your working.

..... m^2 [2]

7

- 4 Some plants are propagated asexually rather than by seed.

Describe the different ways that plants can reproduce **asexually**.

Use named examples of plants in your answer.



The quality of written communication will be assessed in your answer to the question.

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..... [6]

- 5 The photograph shows a healthy calf.



- (a) Describe **two** signs that show this calf is healthy.

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..... [2]

- (b) Which **one** of the following lists the requirements needed for good animal welfare?

- A enough food and enough water
- B enough water and a healthy environment
- C a healthy environment and enough food
- D enough food, enough water and a healthy environment

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

- (c)** A growing animal needs to be housed correctly if it is to remain healthy.

Describe the features of good animal housing.

Explain why different types of farm animal need different types of housing.

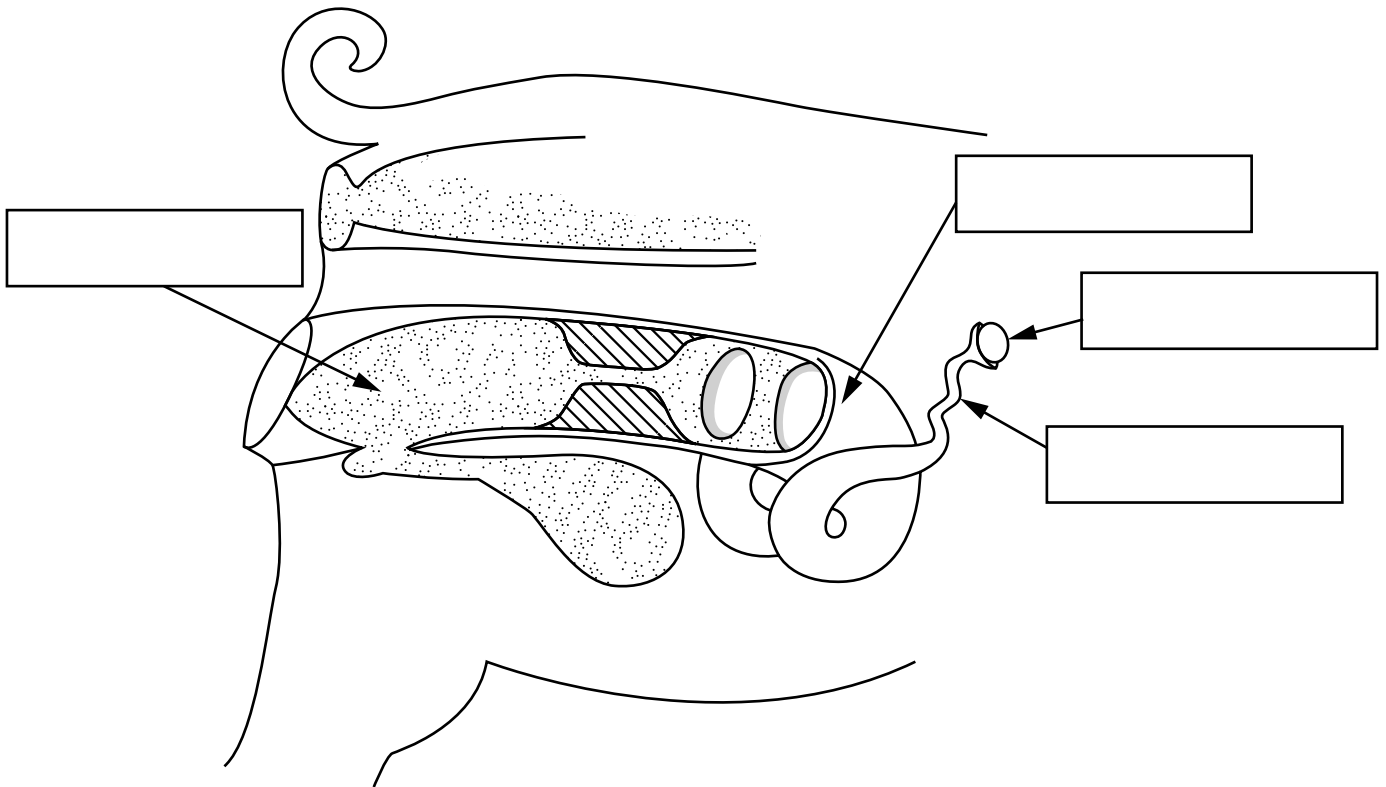


The quality of written communication will be assessed in your answer to the question.

[6]

10

6 The diagram shows the main reproductive organs of a sow (female pig).



(a) Label the diagram by choosing the correct **four** organs from the list below.

Reproductive organ
egg
cervix
ovary
oviduct
uterus
vagina

[4]

- (b) For a mammal you have studied, describe mating and the stages that follow until birth.



The quality of written communication will be assessed in your answer to the question.

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..... [6]

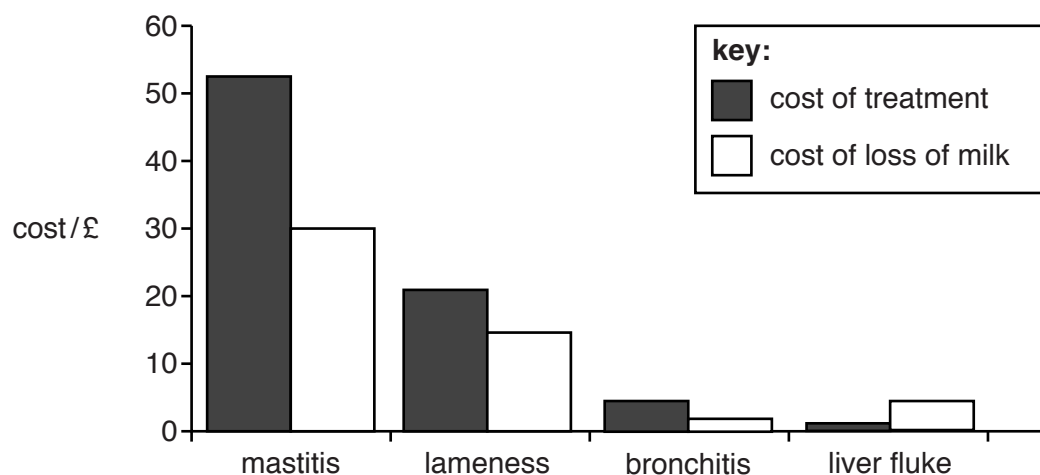
12

7 Illness in dairy cattle causes a loss in milk production.

Loss in milk production causes farmers to lose money.

Farmers need to treat illness in their cattle.

The graph shows the costs per cow of four illnesses.



(a) Which illness causes the biggest loss of profit to the farmer?

Answer [1]

(b) How much does the treatment of mastitis cost per cow?

Answer £ [1]

(c) Mastitis causes cows to produce less milk.

A farmer loses 15 400 litres of milk from his herd, per year, because of mastitis.

The farmer is paid 32p per litre for milk.

How much is this loss of milk costing in a year?

Answer £ [1]

13

(d) It costs the dairy farmer 28p to produce 1 litre of milk from a healthy cow.

A cow produces 10 000 litres of milk per year.

Using the information given in all of Question 7, and your own knowledge, describe the impact that mastitis has on the profitability of dairy farming.

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..... [3]

END OF QUESTION PAPER

This image shows a full page of primary-ruled notebook paper. It features a vertical solid line on the left side, creating a narrow margin. The rest of the page is filled with horizontal dashed lines, providing a guide for letter height in handwriting practice. There are no markings, text, or illustrations on the page.

[illegible]

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