



Rewarding Learning

General Certificate of Secondary Education  
2019

Centre Number

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Candidate Number

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# Agriculture and Land Use

Unit 1  
Soils, Crops and Habitats



GAR11

[GAR11]

FRIDAY 31 MAY, AFTERNOON

### TIME

1 hour 15 minutes.

### INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.

Write your answers in the spaces provided in this question paper.

Answer **all nine** questions.

### INFORMATION FOR CANDIDATES

The total mark for this paper is 75.

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

Quality of written communication will be assessed in Questions **6(b)** and **9**.

For Examiner's use only

Question Number	Marks
1	
2	
3	
4	
5	
6	
7	
8	
9	

Total Marks	
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- 2 The picture below shows an anaerobic digester which breaks down organic matter such as biomass crops and waste substances to produce fertiliser and gas for energy.



Source: Chief Examiner

- (a) Suggest two **waste** substances which can be fed into a biodigester.

1. \_\_\_\_\_

2. \_\_\_\_\_

[2]

- (b) Apart from using waste, describe **three** advantages of using a biodigester to produce energy in Northern Ireland.

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

3. \_\_\_\_\_

\_\_\_\_\_

[3]

Examiner Only

Marks Remark

(c) The gas produced is usually burned to produce electricity which can be used on the farm.

Give **two** other ways of producing electricity on the farm.

1. \_\_\_\_\_

2. \_\_\_\_\_

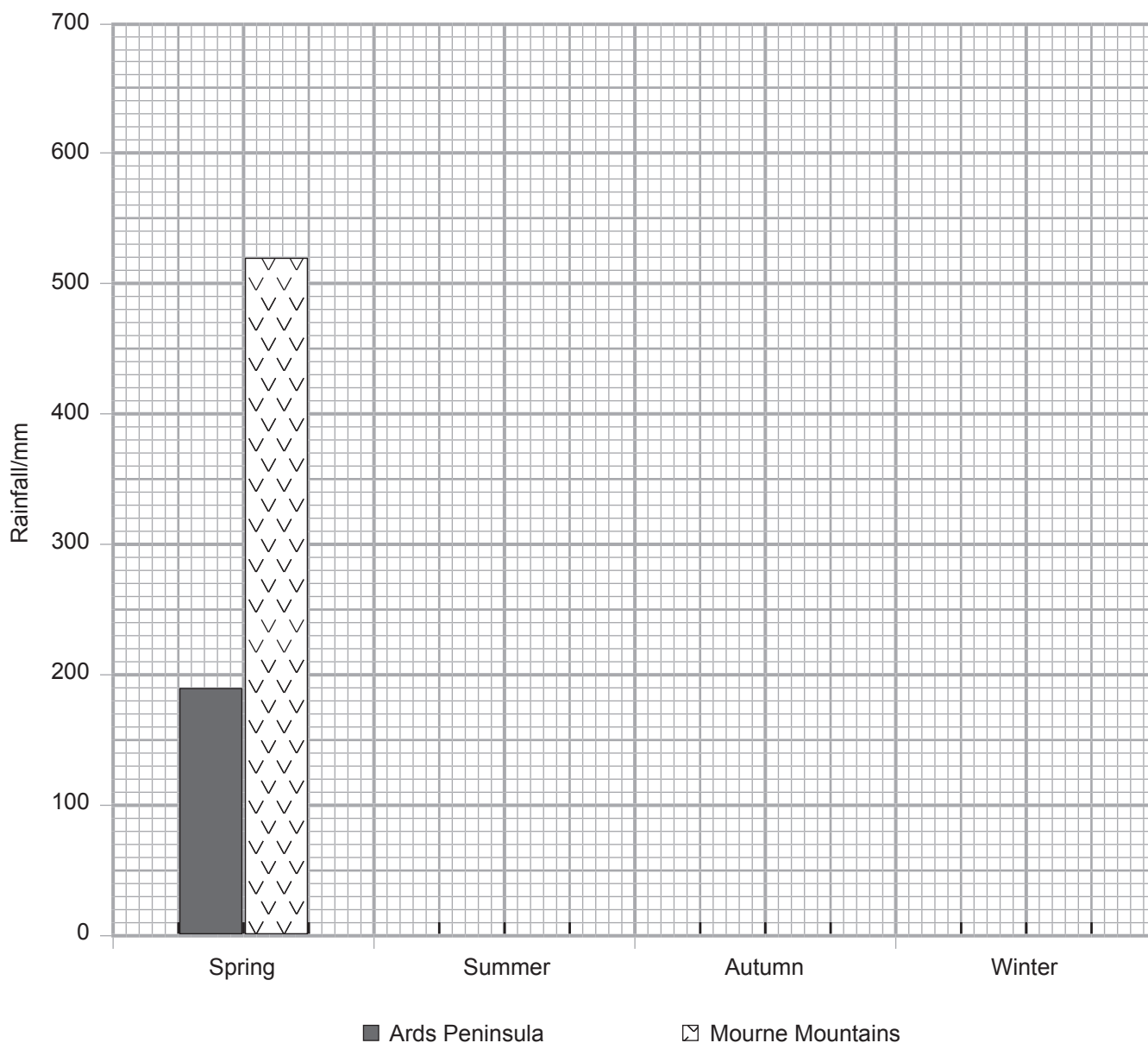
[2]

Examiner Only	
Marks	Remark

- 3 The rainfall levels in Northern Ireland vary depending on many factors. In 2015 the rainfall was recorded in the Ards Peninsula and in the Mourne Mountains. The results from the study are shown in the table below.

Season	Total rainfall/mm/season	
	Ards Peninsula	Mourne Mountains
Spring	190	520
Summer	210	480
Autumn	240	490
Winter	310	670

(a) Below is an incomplete bar chart showing the rainfall in the two areas.





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- 4 (a) Silage is an important winter feed produced on many farms in Northern Ireland. Mowing the grass is the first stage of harvesting silage.

Describe **two** factors the farmer must consider before mowing the grass for silage.

1. \_\_\_\_\_  
\_\_\_\_\_  
2. \_\_\_\_\_  
\_\_\_\_\_ [2]

- (b) After the grass is mowed it is collected and stored.



Source: Chief Examiner

- (i) State **two** ways grass can be **stored** to make into silage.

1. \_\_\_\_\_  
2. \_\_\_\_\_ [2]

- (ii) Fungus or mould growing on silage may be a sign of poor quality.

State **two** other indicators a farmer can use to assess silage quality.

1. \_\_\_\_\_  
2. \_\_\_\_\_ [2]

Examiner Only

Marks Remark











- 8 (a) Northern Ireland has a wide range of habitats, one of which is shown in the photograph below.



Source: Chief Examiner

- (i) Name the type of habitat shown.

\_\_\_\_\_ [1]

- (ii) Name **one** priority species that you would expect to find in this habitat.

\_\_\_\_\_ [1]

- (b) Describe **two** ways farmers could minimise their impact on this habitat.

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_ [2]

Examiner Only

Marks Remark









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