

Candidate Name	Centre Number	Candidate Number									
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**WELSH JOINT EDUCATION COMMITTEE AND  
OXFORD CAMBRIDGE AND RSA EXAMINATIONS**

**General Certificate of Secondary Education**

**GEOGRAPHY SPECIFICATION B (Avery Hill)**

**1987/3**

**PAPER 3 FOUNDATION TIER**

Monday

**12 JUNE 2006**

Afternoon

1 hour 30 minutes

Additional materials:

Resource Booklet (1987/3,4/RB) – inserted

**TIME** 1 hour 30 minutes

**INSTRUCTIONS TO CANDIDATES**

Write your name, Centre number and candidate number in the spaces at the top of this page.

Answer **all** questions.

Write your answers in the spaces provided on this question paper. If there is not sufficient space, continue on the lined pages at the end of the question paper. Any answers on the lined pages **must** be clearly numbered.

**INFORMATION FOR CANDIDATES**

You are strongly advised to read through each section carefully before answering.

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 60.

You will be awarded marks for the quality of written communication.

FOR EXAMINER'S USE	
<b>PART A</b>	
<b>PART B</b>	
<b>PART C</b>	
<b>TOTAL</b>	

**This question paper consists of 13 printed pages, 1 blank page, 2 lined pages  
and 1 Resource Booklet.**

This paper looks at a development that could cause damage to an ecosystem in Northern Ireland. The paper is in three parts:

		Marks
<b>Part A</b>	This part looks at the climate and an ecosystem in the Ballymoney area of Northern Ireland.	<b>20</b>
<b>Part B</b>	This part looks at the possible effects of a proposal to develop an open cast mine extracting lignite (brown coal) from the area. It also looks at alternative energy sources.	<b>20</b>
<b>Part C</b>	This part looks at how the area may be once mining has finished. It also asks you to decide whether or not the mine should actually be developed.	<b>20</b>
<b>Total marks</b>		<b>60</b>

### Part A

**You are advised to spend about 25 minutes on this part.**

This part looks at the climate and an ecosystem in the Ballymoney area of Northern Ireland.

- (a) Study Map 1 in the separate Resource Booklet. It shows the location of Ballymoney. **Complete** the following passage by **circling** the correct answers.

*Ballymoney is in Northern Ireland. It is about **60 / 80 / 100** kilometres to the*

***south-east / north-west / north-east** of Belfast, the capital city.* [2]

- (b) Look at the graph on the opposite page. It shows climate in the Ballymoney area.

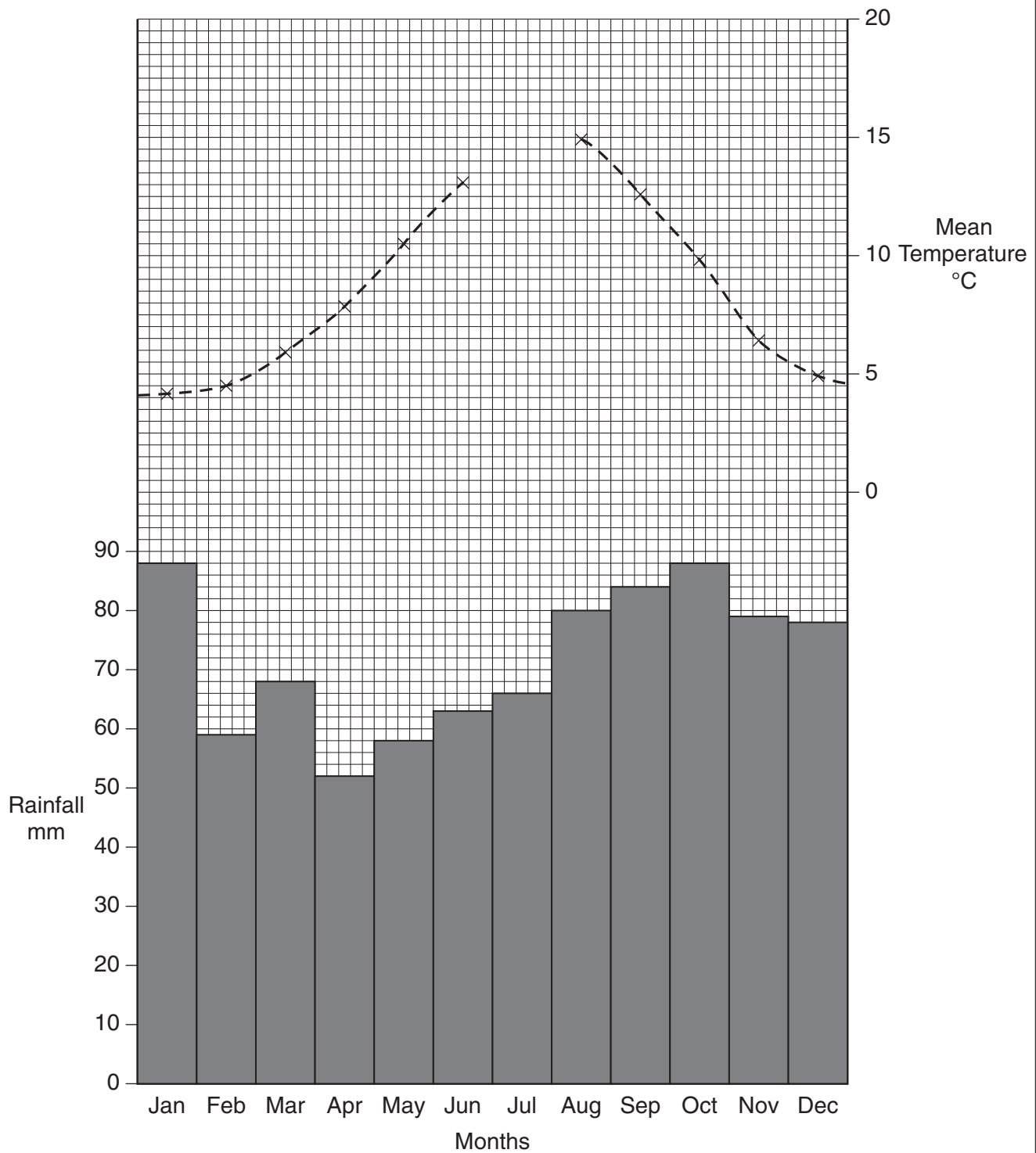
- (i) **Complete** the temperature graph using the following figure:

July temperature = 15°C.

[1]

- (ii) **Describe the rainfall pattern** in the Ballymoney area. Refer to figures from the graph.

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



- (iii) Much rain in Northern Ireland falls as relief rainfall. Use information from Map 1 in the separate Resource Booklet to help **explain** how this relief rainfall occurs.

Use some of the following words to **complete the passage** below.

Sperrin Mountains      Bann Valley      north-easterly      south-westerly  
condenses      evaporates      heats      cools

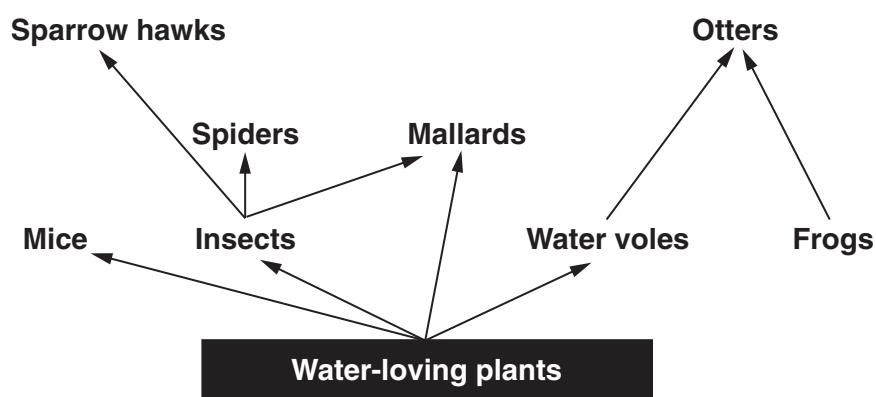
*The prevailing ..... wind carries moist air across Northern Ireland.*

*It is forced to rise over the .....*

*As it does so it ..... . Water vapour ..... to produce  
water droplets to give cloud and rain in the area.*

[4]

- (c) Study the web below. It is a food web for Garry Bog.  
Garry Bog is mainly located in grid squares 9330 and 9329 on Map 2 in the Resource Booklet.



- (i) **Complete the web** by adding arrows to show the following information:

frogs eat water-loving plants  
sparrow hawks eat mice

[2]

- (ii) Give one example of a herbivore and a carnivore from **this** food web.

One example of a herbivore is .....

One example of a carnivore is .....[2]

- (iii) **Explain** how **year round** rainfall is important to **this** food web.

.....

.....

.....[2]

- (iv) Lowering the water table (level of saturated rocks) may kill water-loving plants. **Explain** what other changes might take place in **this** food web if the water table was lowered.

Refer to **specific** animals and plants in your answer.

.....

.....

.....

.....

.....

.....

.....

.....[4]

**Total mark: 20**

**End of Part A**

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## Part B

You are advised to spend about 20 minutes on this part.

This part looks at the possible effects of a proposal to develop an open cast mine extracting lignite (brown coal) from the area. This is shown in Photo 1 in the separate Resource Booklet. It also looks at alternative energy sources.

(a) Study Map 2 in the separate Resource Booklet. It shows the area that may be mined.

(i) **Estimate in square kilometres** the area that may be mined. **Circle** the correct answer below.

The area that may be mined is **5 7 9** square kilometres. [1]

(ii) What is the **shortest distance** between Garry Bog and the area that may be mined?

The shortest distance is ..... kilometres. [1]

(iii) Use **map evidence to explain** how the mining may affect people's lives.

.....  
.....  
.....[2]

(iv) Use **map evidence to explain** how the mining may affect local rivers.

.....  
.....  
.....[2]

(b) The lignite will be burned to generate electricity.

Study Graph 1 in the separate Resource Booklet. It shows electricity supply and demand for the whole of Ireland.

(i) Look at the statements below. One correct statement has been ticked.

**Put a tick (✓) in the box next to the other two correct statements.**

Statement	Tick (✓)
Electricity supply and demand were the same in 2001	✓
The widest gap between predicted supply and demand is in 2015	
Electricity supply will rise steadily between 2001 and 2015	
Electricity supply is greater than demand for four years	
Electricity demand is predicted to drop steadily between 2001 and 2015	

[2]

- (ii) Lignite is a fossil fuel. **Underline** the correct completion to describe a fossil fuel.

*A fossil fuel is **an inorganic material used for heat** / **an organic material used for fertilizer** / **an organic material used for heat**.* [1]

- (iii) Burning fossil fuels adds to the effects of acid rain and global warming. **Explain** the effects on the environment of **either** acid rain **or** global warming. **Circle your choice**.

**Acid rain / Global warming**

.....

.....

.....

.....

.....

.....

.....

.....[4]

- (c) Look at Photographs 3 and 4 in the separate Resource Booklet. They show two renewable sources of energy.

- (i) What is meant by a renewable source of energy?

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

- (ii) **Complete** the following sentences to give two **disadvantages** of using renewable sources of energy to meet Ireland's future energy demand.

Disadvantage 1: Wind farms are located on hills and ridges so .....

.....

Disadvantage 2: Ireland has a great deal of cloud throughout the year so .....

.....[2]

- (iii) **Suggest advantages** of using renewable sources of energy to meet Ireland's future energy demands.

.....

.....

.....

.....

.....

.....

.....[4]

**Total mark: 20**

**End of Part B**

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## Part C

**You are advised to spend about 45 minutes on this part.**

This part looks at how the area may be once mining has finished. It also asks you to decide whether or not the mine should actually be developed.

- (a) Mining is expected to take place for 30 years. Study Sketches 1 and 2 in the separate Resource Booklet.

- (i) **Describe** the area in **Sketch 1**. It shows what the area is like now.

.....

.....

.....[2]

- (ii) **Sketch 2** shows what the area may be like when mining has finished.  
**Explain one good effect** the changes are likely to have on the local environment.

.....

.....

.....[2]

- (iii) **Explain one bad effect** the changes are likely to have on the local environment.

.....

.....

.....[2]

- (iv) Are the changes likely to have a good or bad effect on local people?  
**Circle and explain your choice.**

**Good / Bad**

.....

.....

.....

.....

.....[3]

- (b) Your task is to advise Northern Ireland as to whether it should allow the mine to be developed.

You may choose to support or reject the mine but must write about both its good and its bad points.

**To support the mine**, you must be convinced that, on balance, the mine:

- is good for the local environment
- is good for the wider environment
- is good for the people of Ballymoney and Ireland in general

**To reject the mine**, you must be convinced that, on balance, the mine:

- is bad for the local environment
- is bad for the wider environment
- is bad for the people of Ballymoney and Ireland in general

**Complete the matrix** on page 12 to help you plan a letter to the Northern Ireland government. Use information from **Factfile 1** in the separate Resource Booklet and other evidence in this Paper and Resource Booklet. You may also bring in ideas of your own. Each box in the matrix has been started for you.

**You are advised to spend about fifteen minutes completing the matrix.**

**BLANK PAGE**

<b>Put (s) after the statement if it supports developing the mine or (r) if it rejects developing the mine</b>	<b>Effect</b>	<b>Explain how each statement supports or rejects developing the mine?</b>
<b>Effect on the local environment</b>		
Mined land will quickly return to its original state (s)		so the bad effects will be quickly over
<b>Effect on the wider environment</b>		
The coal contains only 0.2% sulphur (s)		so little sulphur dioxide will go into the air
<b>Effect on people</b>		
Approximately 80 farms will disappear (r)		so farmers will be out of work
<b>Other evidence</b>		

My reasons are .....

[illegible]

**Total mark: 20**

## End of Part C

This image shows a full page of a worksheet designed for handwriting practice. It consists of approximately 20 horizontal rows. Each row is defined by two parallel dashed lines, creating a series of uniform gaps for writing. The lines are evenly spaced across the entire page, providing a guide for letter height and placement. There is no text or other markings on the page.

[illegible]