

Paper Reference 4GE1/01  
Pearson Edexcel  
International GCSE (9–1)

Total Marks
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Geography  
PAPER 1: Physical Geography

Monday 22 May 2023 – Afternoon  
Time: 1 hour 10 minutes

In the boxes below, write your name, centre number and candidate number.

Surname					
Other names					
Centre Number					
Candidate Number					

**YOU MUST HAVE**

**Calculator**

**YOU WILL BE GIVEN**

**Resource Booklet**

**INSTRUCTIONS**

**In Section A answer TWO questions from Questions 1, 2 AND 3.**

**In Section B answer ONE question from Questions 4, 5 AND 6.**

**Answer the questions in the spaces provided in this Question Paper – there may be more space than you need.**

**Calculators may be used.**

**Where asked you must show all your working out with your answer clearly identified at the end of your solution.**

**Turn over**

## **INFORMATION**

**The total mark for this paper is 70.**

**The marks for EACH question are shown in brackets  
– use this as a guide as to how much time to spend on  
each question.**

## **ADVICE**

**Read each question carefully before you start to  
answer it.**

**Check your answers if you have time at the end.**

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**SECTION A**

**Answer TWO questions from this section.**

**Some questions are multiple choice. Write the letters(s) of your chosen answer(s) in the box(es) provided.**

**If you answer Question 1 put a cross in this box**

☐

## 1. River environments

(a) Identify ONE physical factor that affects river regimes.

**A** amount of rainfall

**B** building a reservoir

**C** building a football stadium

**D** size of river mouth

Answer

(1 mark)

(continued on the next page)

Turn over

1. continued.

(b) (i) Identify the best definition of a meander.

**A** where two rivers meet

**B** a bend in a river

**C** the starting point of a river

**D** where a river meets the sea

Answer

(1 mark)

(ii) State ONE type of erosion that takes place in a river.

(1 mark)

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(continued on the next page)

Turn over

1. continued.

(c) Explain ONE way human activity affects water quality.

(2 marks)

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1. continued.

(d) Study Figure 1a in the Resource Booklet.

**Explain TWO ways in which a river changes  
along its course.**

**(4 marks)**

**1** \_\_\_\_\_

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**2** \_\_\_\_\_

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**Turn over**



**1. continued.**

**(e) Explain how deposition leads to the formation of levees.**

**(3 marks)**

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**(f) Study Figure 1b in the Resource Booklet.**

**Identify the river feature at X.**

**(1 mark)**

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**(continued on the next page)**

**Turn over**

1. continued.

(g) Explain TWO causes of river flooding.  
(4 marks)

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Turn over

**1. continued.**

**(h) Study Figure 1c and Figure 1d in the  
Resource Booklet.**

**Analyse reasons why water management in the  
21st century can be challenging.**

**Refer to the resources in your answer.**

**(8 marks)**

**Answer lines continue on the next two pages.**

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**Turn over**

**1. (h) continued.**

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**1. (h) continued.**

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**(Total for Question 1 = 25 marks)**

**Turn over**

If you answer Question 2 put a cross in this box

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## 2. Coastal environments

(a) Identify the coastal landform created by deposition.

**A** cave

**B** cliff

**C** spit

**D** wave-cut platform

Answer

☐

(1 mark)

(continued on the next page)

Turn over

**2. continued.**

**(b) (i) Identify the best definition of hydraulic action.**

**A** where waves pick up stones and they hit the cliffs

**B** waves hit the cliffs forcing pockets of air into cracks

**C** waves carry material along the coast

**D** where rocks are dissolved by sea water

**Answer**

**(1 mark)**

**(ii) State ONE type of weathering process.**

**(1 mark)**

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**Turn over**

**2. continued.**

**(c) Explain ONE way human activity can threaten coastal ecosystems.**

**(2 marks)**

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**(continued on the next page)**



**2. continued.**

**(d) Study Figure 2a in the Resource Booklet.**

**Explain TWO factors that could influence  
landforms on this coastline.**

**(4 marks)**

**1** \_\_\_\_\_

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**2** \_\_\_\_\_

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**Turn over**

**2. continued.**

**(e) Explain the process of longshore drift.**

**(3 marks)**

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**(f) Study Figure 2b in the Resource Booklet.**

**Identify the coastal management strategy  
shown.**

**(1 mark)**

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**Turn over**

**2. continued.**

**(g) Explain ONE advantage and ONE disadvantage of soft engineering strategies.**

**(4 marks)**

**Advantage**

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**Disadvantage**

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**Turn over**

**2. continued.**

**(h) Study Figure 2c and Figure 2d in the  
Resource Booklet.**

**Analyse the effectiveness of the coastal flood  
prevention strategies shown.**

**Refer to the resources in your answer.**

**(8 marks)**

**Answer lines continue on the next two pages.**

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**2. (h) continued.**

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**2. (h) continued.**

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**(Total for Question 2 = 25 marks)**

**Turn over**

If you answer Question 3 put a cross in this box

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**3. Hazardous environments**

**(a) Identify the hazard often associated with earthquakes.**

**A** landslide

**B** volcanic bombs

**C** heavy rain

**D** high wind speeds

**Answer**

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**(1 mark)**

**(continued on the next page)**

**Turn over**

**3. continued.**

**(b) (i) Identify the statement that best defines a constructive plate margin.**

**A tectonic plates collide**

**B tectonic plates move towards each other**

**C tectonic plates pull apart**

**D tectonic plates move alongside each other**

**Answer**

**(1 mark)**

**(ii) Define the term hot spot.**

**(1 mark)**

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**Turn over**



3. continued.

(c) Explain ONE way people can prepare for earthquakes.

(2 marks)

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3. continued.

(d) Study Figure 3a in the Resource Booklet.

**Suggest TWO reasons why tropical cyclones  
can cause damage.**

**(4 marks)**

**1** \_\_\_\_\_

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**2** \_\_\_\_\_

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**Turn over**

**3. continued.**

- (e) Explain ONE reason why emergency aid can be important for responding to earthquake events.  
(3 marks)**

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- (f) Study Figure 3b in the Resource Booklet.**

**Identify the feature shown at X.  
(1 mark)**

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**Turn over**

3. continued.

(g) Explain TWO hazards associated with volcanic eruptions.

(4 marks)

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**3. continued.**

**(h) Study Figure 3c and Figure 3d in the Resource Booklet.**

**Analyse possible reasons why some countries are more vulnerable to the impact of earthquakes.**

**Refer to the resources in your answer.**

**(8 marks)**

**Answer lines continue on the next two pages.**

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**3. (h) continued.**

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**3. (h) continued.**

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**(Total for Question 3 = 25 marks)**

**TOTAL FOR SECTION A = 50 MARKS**

**Turn over**

## SECTION B

### Geographical enquiry

**Answer ONE question from this section.**

**If you answer Question 4 put a cross in this box**

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#### **4. Investigating river environments**

**You have carried out a geographical enquiry as part of your work on river environments.**

**Title of your geographical enquiry**

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**Turn over**



4. continued.

(a) Describe ONE way you managed a risk that you identified during your enquiry.

(2 marks)

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4. continued.

(b) Explain ONE way you decided on your sites for data collection.

(3 marks)

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4. continued.

(c) Describe TWO types of data collection method  
you used during your enquiry.

(4 marks)

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2 \_\_\_\_\_

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4. continued.

(d) Explain ONE technique you used to analyse your data.

(3 marks)

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**4. continued.**

**(e) Study Figure 4a and Figure 4b in the Resource Booklet. They show some information about data presentation from a student's enquiry.**

**The aim of the student's enquiry was to investigate changes in river characteristics. The student made field sketches of the data collection sites, and collected data on river velocity, river discharge and bedload size.**

**Evaluate the effectiveness of the data presentation techniques used by the student.  
(8 marks)**

**Answer lines continue on the next three pages.**

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**4. (e) continued.**

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**4. (e) continued.**

[illegible]

**Turn over**

4. (e) continued.

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(Total for Question 4 = 20 marks)

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If you answer Question 5 put a cross in this box

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**5. Investigating coastal environments**

You have carried out a geographical enquiry as part of your work on coastal environments.

Title of your geographical enquiry

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**5. continued.**

**(a) Describe ONE way you managed a risk that you identified during your enquiry.**

**(2 marks)**

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5. continued.

(b) Explain ONE way you decided on the sites for your data collection.

(3 marks)

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5. continued.

(c) Describe TWO types of data collection method  
you used during your enquiry.

(4 marks)

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2 \_\_\_\_\_

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5. continued.

(d) Explain ONE technique you used to analyse your data.

(3 marks)

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**5. continued.**

**(e) Study Figure 5a and Figure 5b in the Resource Booklet. They show some information about data presentation from a student's enquiry.**

**The aim of the student's enquiry was to investigate changes in coastal features. The student made field sketches of the data collection sites, and collected data on beach profiles and sediment size.**

**Evaluate the effectiveness of the data presentation techniques used by the student.  
(8 marks)**

**Answer lines continue on the next three pages.**

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**Turn over**

**5. (e) continued.**

[illegible]

**Turn over**

**5. (e) continued.**

[illegible]

**Turn over**



**5. (e) continued.**

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**(Total for Question 5 = 20 marks)**

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If you answer Question 6 put a cross in this box

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**6. Investigating hazardous environments**

You have carried out a geographical enquiry as part of your work on hazardous environments.

Title of your geographical enquiry

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**6. continued.**

**(a) Describe ONE way you managed a risk that you identified during your enquiry.**

**(2 marks)**

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6. continued.

(b) Explain ONE way you decided on the sites for your data collection.

(3 marks)

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6. continued.

(c) Describe TWO types of data collection method  
you used during your enquiry.

(4 marks)

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2 \_\_\_\_\_

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Turn over

6. continued.

(d) Explain ONE technique you used to analyse your data.

(3 marks)

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**6. continued.**

**(e) Study Figure 6a and Figure 6b in the Resource Booklet. They show some information about data presentation from a student's enquiry.**

**The aim of the student's enquiry was to investigate changes in weather features.**

**The student made field sketches of the data collection sites, and collected data on wind speed, temperature and rainfall.**

**Evaluate the effectiveness of the data presentation techniques used by the student.  
(8 marks)**

**Answer lines continue on the next three pages.**

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**Turn over**

**6. (e) continued.**

[illegible]

**Turn over**



**6. (e) continued.**

[illegible]

**Turn over**

6. (e) continued.

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(Total for Question 6 = 20 marks)

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**TOTAL FOR SECTION B = 20 MARKS**

**TOTAL FOR PAPER = 70 MARKS**

**END OF PAPER**

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