

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

Total Marks
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**Geography**  
**PAPER 1: Physical geography**

Time: 1 hour 10 minutes plus your additional time allowance.

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 Book**

**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 62.**

**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.**

**Good luck with your examination.**

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**SECTION A**

**Answer TWO questions from this section.**

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

**Indicate which question you are answering by marking a cross in the box. If you change your mind, put a line through the box and then indicate your new question with a cross.**

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

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## 1. River environments

(a) (i) Identify ONE store in the hydrological cycle.

**A** Evaporation

**B** Infiltration

**C** Lake

**D** Throughflow

Answer

(1 mark)

(continued on the next page)

Turn over

1. (a) continued.

(ii) Identify the statement that best defines transpiration in the hydrological cycle.

**A** Transfer of water from the atmosphere to land.

**B** Plants take up water from the soil and release it into the atmosphere as water vapour.

**C** Water moving through the soil as a result of gravity.

**D** Water vapour cooling in the atmosphere to become liquid.

Answer

(1 mark)

(continued on the next page)

Turn over

**1. continued.**

**(b) (i) State ONE physical factor that influences deposition in a river.**

**(1 mark)**

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**(ii) Explain how abrasion erodes the river channel.**

**(2 marks)**

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**(continued on the next page)**

**Turn over**

1. continued.

(c) Study Figure 1a in the Resource Book.

**Suggest TWO reasons for the different  
storm hydrograph shapes.**

**(4 marks)**

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2 \_\_\_\_\_

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**Turn over**



**1. continued.**

**(d) Explain ONE way agriculture can affect water quality.**

**(3 marks)**

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**(continued on the next page)**

**Turn over**

1. continued.

(e) Study Figure 1b in the Resource Book.

Identify the feature labelled **X**.

(1 mark)

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(continued on the next page)

**1. continued.**

**(f) Explain the formation of a waterfall.**

**(4 marks)**

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**Turn over**

**1. continued.**

**(g) Study Figure 1c in the Resource Book.**

## Analyse the factors that can affect river flood risk.

**(8 marks)**

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

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**Turn over**

**1. (g) continued.**

[illegible]

**Turn over**

**1. (g) continued.**

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

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**If you answer Question 2 put a cross in this box**

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## 2. Coastal environments

(a) Identify the best definition of **mechanical weathering**.

- A** Where rocks are broken down by physical factors in the environment.
- B** Where rocks are eroded by activities of plants and animals.
- C** Where rocks are protected from physical processes on a coastline.
- D** Where the chemical composition of the rocks is changed.

Answer

(1 mark)

(continued on the next page)

Turn over



2. continued.

(b) (i) Identify an **abiotic** factor that affects coastal ecosystems.

**A** Animals

**B** Climate

**C** Plants

**D** Fungi

Answer

(1 mark)

(continued on the next page)

Turn over

**2. (b) continued.**

**(ii) Identify ONE feature of coral reef ecosystems.**

**(1 mark)**

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**(iii) Explain ONE factor that controls the distribution of coral reef ecosystems.**

**(2 marks)**

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**Turn over**

**2. continued.**

**(c) Study Figure 2a in the Resource Book.**

**Suggest TWO marine processes forming these coastal landforms.**

**(4 marks)**

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

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

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**Turn over**

**2. continued.**

**(d) Explain ONE way industry can threaten coastal ecosystems.**

**(3 marks)**

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**(continued on the next page)**

**2. continued.**

**(e) Study Figure 2b in the Resource Book.**

**Identify the feature labelled X.**

**(1 mark)**

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**2. continued.**

**(f) Explain how prevention strategies can reduce the impact of coastal flooding.**

**(4 marks)**

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**Turn over**

**2. continued.**

**(g) Study Figure 2c in the Resource Book.**

**Analyse the different viewpoints affecting the decisions on coastal management strategies.**

**(8 marks)**

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

[illegible]

**Turn over**

**2. (g) continued.**

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**2. (g) 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 which of the following can be used to record earthquakes.

**A** Flow meter

**B** Hygrometer

**C** Richter scale

**D** Seismograph

Answer

(1 mark)

(continued on the next page)

Turn over

3. continued.

(b) (i) Identify a method of measuring tropical cyclones.

**A** Bradshaw scale

**B** Pressure scale

**C** Saffir–Simpson scale

**D** Wind speed scale

Answer

(1 mark)

(continued on the next page)

Turn over

3. (b) continued.

(ii) State ONE factor that influences the development of tropical cyclones.

(1 mark)

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(iii) Explain ONE physical impact of a tropical cyclone hazard.

(2 marks)

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(continued on the next page)

Turn over

3. continued.

(c) Study Figure 3a in the Resource Book.

**Suggest TWO reasons why some places are more vulnerable to tectonic hazards than others.**

**(4 marks)**

**1**

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**2**

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**Turn over**

**3. continued.**

**(d) Explain ONE strategy to reduce the impacts  
from earthquake events.**

**(3 marks)**

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**3. continued.**

**(e) Study Figure 3b in the Resource Book.**

**Identify the type of plate boundary.**

**(1 mark)**

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**Turn over**



**3. continued.**

**(f) Explain the formation of a volcano.**

**(4 marks)**

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**Turn over**

### 3. continued.

**(g) Study Figure 3c in the Resource Book.**

## Analyse the short- and long-term impacts of the earthquake event.

**(8 marks)**

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

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**Turn over**

**3. (g) continued.**

[illegible]

**Turn over**

**3. (g) continued.**

[illegible]

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

**TOTAL FOR SECTION A = 50 MARKS**

**Turn over**

**SECTION B****Geographical Enquiry**

**Answer ONE question from this section.**

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

**Indicate which question you are answering by marking a cross in the box. If you change your mind, put a line through the box and then indicate your new question with a cross.**

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

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## Investigating river environments

4. (a) (i) Identify which of the following statements refers to systematic sampling.

**A** Collecting data at random sites along a river.

**B** Collecting data every 100 metres along a river.

**C** Collecting data from two different river catchments.

**D** Collecting data from three sites along a river.

Answer

(1 mark)

(continued on the next page)

Turn over

4. (a) continued.

(ii) Name ONE piece of equipment you would use to measure river wetted perimeter.

(1 mark)

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(iii) Describe ONE health and safety risk it is important to be aware of when carrying out fieldwork near rivers.

(2 marks)

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**4. continued.**

**(b) Study Figure 4 in the Resource Book. It shows information about some design, some data collection methods used, data presentation and conclusion.**

**The aim of the student's enquiry was to examine change in river channel shape along the course of a river.**

**Evaluate how far the design and the data collection methods provided reliable evidence for the student's conclusions.**

**(8 marks)**

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

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**Turn over**



**4. (b) continued.**

[illegible]

**Turn over**

**4. (b) continued.**

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**Turn over**

4. (b) continued.

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(Total for Question 4 = 12 marks)

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**If you answer Question 5 put a cross in this box**

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## Investigating coastal environments

5. (a) (i) Identify the correct definition of systematic sampling.

- A** Collecting data at random sites along a coastline.
- B** Collecting data every **100** metres along a coastline.
- C** Collecting data from two different coastlines.
- D** Collecting data from three sites along a coastline.

Answer

(1 mark)

(continued on the next page)

Turn over

5. (a) continued.

(ii) Name ONE piece of equipment you would use to measure beach gradient.

(1 mark)

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(iii) Describe ONE health and safety risk it is important to be aware of when carrying out fieldwork in a coastal environment.

(2 marks)

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**5. continued.**

**(b) Study Figure 5 in the Resource Book. It shows information about some design, some data collection methods used, data presentation and a conclusion.**

**The aim of the student's investigation was to examine change in beach characteristics along the stretch of coastline.**

**Evaluate how far the design and the data collection methods provided reliable evidence for the student's conclusions.**

**(8 marks)**

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

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**5. (b) continued.**

[illegible]

**Turn over**



**5. (b) continued.**

[illegible]

**Turn over**

5. (b) continued.

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(Total for Question 5 = 12 marks)

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**If you answer Question 6 put a cross in this box**

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## Investigating hazardous environments

6. (a) (i) Identify the correct definition of systematic sampling.

**A** Collecting rainfall data at random sites in a town.

**B** Collecting rainfall data every 1 km away from the town centre.

**C** Collecting rainfall data from two different towns.

**D** Collecting rainfall data from three sites in a town.

Answer

(1 mark)

(continued on the next page)

Turn over

6. (a) continued.

(ii) Name ONE piece of equipment you would use to measure rainfall.

(1 mark)

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(iii) Describe ONE health and safety risk it is important to be aware of when carrying out fieldwork related to hazardous environments.

(2 marks)

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Turn over

**6. continued.**

**(b) Study Figure 6 in the Resource Book. It shows information about some design, some data collection methods used, data presentation and a conclusion.**

**The aim of the student's investigation was to examine change in weather patterns using a weather diary.**

**Evaluate how far the design and the data collection methods provided reliable evidence for the student's conclusions.**

**(8 marks)**

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

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**6. (b) continued.**

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**Turn over**

**6. (b) continued.**

[illegible]

**Turn over**



6. (b) continued.

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(Total for Question 6 = 12 marks)

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**TOTAL FOR SECTION B = 12 MARKS**

**TOTAL FOR PAPER = 62 MARKS**

**END OF PAPER**

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