

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

Total Marks

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

Turn over

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.

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.

Turn over

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.

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

☐

Turn over

1. River environments

(a) Name the landform created by erosion in a river.

A salt marsh

B meander

C spring

D delta

Answer

(1 mark)

(continued on the next page)

Turn over

1. continued.

(b) (i) Identify when deposition in a river is most likely to take place.

- A when a river flows through a V-shaped valley**
- B when a river begins at its source**
- C when a river flows over a waterfall**
- D when a river has a slow velocity**

Answer

(1 mark)

(continued on the next page)

Turn over

1. (b) continued.

(ii) State what is meant by the term drainage basin.

(1 mark)

(continued on the next page)

1. (b) continued.

**(iii) Explain ONE reason for poor
water quality in a river.**

(2 marks)

(continued on the next page)

1. continued.

**(c) Study Figure 1a in the
Resource Booklet.**

**Explain TWO transfers in the
hydrological cycle shown.**

(4 marks)

**Answer lines continue on the
next page.**

1 _____

1. (c) continued.

2 _____

(continued on the next page)

1. continued.

**(d) Explain how ONE physical factor
can affect river regimes.**

(3 marks)

(continued on the next page)

Turn over

1. continued.

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

**Identify the feature of a
river valley labelled X.**

(1 mark)

(continued on the next page)

1. continued.

(f) Explain why water shortages can occur.

(4 marks)

Answer lines continue on the next page.

1. (f) continued.

(continued on the next page)

1. continued.

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

Analyse the causes of the river flood.

Refer to the resources in your answer.

(8 marks)

Answer lines continue on the next four pages.

Turn over

1. (g) continued.

1. (g) continued.

Turn over

1. (g) continued.

1. (g) continued.

(Total for Question 1 = 25 marks)

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

☐

2. Coastal environments

(a) Identify the soft engineering technique used on coastlines.

A rock armour

B groynes

C sea wall

D beach replenishment

Answer

(1 mark)

(continued on the next page)

Turn over

2. continued.

(b) (i) Identify the best definition of a coral reef ecosystem.

A an ecosystem consisting of sandy deposits

B an ecosystem made of small animals (polyps) living together in water with a temperature of 23–27°C

C an ecosystem consisting of small shrubs and trees

D an ecosystem where plants and animals are adapted to both salt and fresh water

Answer

(1 mark)

(continued on the next page)

Turn over

2. (b) continued.

**(ii) State ONE abiotic feature of
an ecosystem.**

(1 mark)

(continued on the next page)

2. (b) continued.

**(iii) Explain ONE factor that can
affect the distribution of
mangrove ecosystems.**

(2 marks)

(continued on the next page)

2. continued.

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

**Suggest TWO ways deposition
can affect coastal landforms.**

(4 marks)

**Answer lines continue on the
next page.**

1 _____

2. (c) continued.

2 _____

(continued on the next page)

2. continued.

**(d) Explain ONE factor that affects
the rate of coastal erosion.**

(3 marks)

(continued on the next page)

Turn over

2. continued.

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

**Name the type of weathering
taking place at X.**

(1 mark)

(continued on the next page)

Turn over

2. continued.

(f) Explain the formation of a coastal arch.

(4 marks)

Answer space and lines continue on the next two pages.

2. (f) continued.

Turn over

2. (f) continued.

(continued on the next page)

2. continued.

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

Analyse why conflicts between development and conservation occur in coastal areas.

Refer to the resources in your answer.

(8 marks)

Answer lines continue on the next four pages.

Turn over

2. (g) continued.

2. (g) continued.

2. (g) continued.

Turn over

2. (g) continued.

(Total for Question 2 = 25 marks)

**If you answer Question 3, put a
cross in this box**

☐

3. Hazardous environments

(a) Identify the natural hazard.

A car emission pollution

B nuclear meltdown

C oil slick from a ship

D volcanic eruption

Answer

(1 mark)

(continued on the next page)

Turn over

3. continued.

(b) (i) Identify a factor that affects development of tropical cyclones.

- A large areas of high pressure**
- B warm sea surface temperatures**
- C an undersea earthquake**
- D pyroclastic flows**

Answer

(1 mark)

(continued on the next page)

Turn over

3. (b) continued.

**(ii) State ONE measure of
tropical cyclone intensity.**

(1 mark)

(continued on the next page)

3. (b) continued.

(iii) Explain how the

**Coriolis force affects tropical
cyclones.**

(2 marks)

(continued on the next page)

Turn over

3. continued.

**(c) Explain the formation of a
constructive plate margin.**

(3 marks)

(continued on the next page)

Turn over

3. continued.

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

**Suggest TWO short-term
impacts of the earthquake shown.**

(4 marks)

**Answer lines continue on the
next page.**

1 _____

Turn over

3. (d) continued.

2 _____

(continued on the next page)

3. continued.

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

**Identify the feature shown at *X*
on the diagram.**

(1 mark)

(continued on the next page)

3. continued.

(f) Explain the long-term impacts of tropical cyclones.

(4 marks)

Answer lines continue on the next page.

Turn over

3. (f) continued.

(continued on the next page)

3. continued.

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

Analyse the reasons why people continue to live in areas prone to volcanic eruptions.

Refer to the resources in your answer.

(8 marks)

Answer lines continue on the next four pages.

Turn over

3. (g) continued.

Turn over

3. (g) continued.

Turn over

3. (g) continued.

3. (g) continued.

(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

☐

Turn over

4. Investigating river environments

You have studied a river environment as part of your own geographical enquiry.

Title of your geographical enquiry

(continued on the next page)

Turn over

4. continued.

(a) Explain why your fieldwork location was suitable for this enquiry.

(2 marks)

(continued on the next page)

Turn over

4. continued.

**(b) Explain ONE quantitative method
you chose for data collection.**

(3 marks)

(continued on the next page)

Turn over

4. continued.

(c) Explain ONE advantage of a technique you used to present your fieldwork data.

(3 marks)

(continued on the next page)

Turn over

4. continued.

**(d) Explain TWO techniques you
used to analyse your data.**

(4 marks)

**Answer lines continue on the
next page.**

1 _____

2 _____

Turn over

4. (d) continued.

(continued on the next page)

4. continued.

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

The aim of the student's enquiry was to determine the most important factor affecting river discharge.

(continued on the next page)

Turn over

4. (e) continued.

**Evaluate how far the data
collection methods used
supported the student in
achieving their aim.**

(8 marks)

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

4. (e) continued.

Turn over

4. (e) continued.

Turn over

(Total for Question 4 = 20 marks)

Turn over

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

☐

5. Investigating coastal environments

You have studied a coastal environment as part of your own geographical enquiry.

Title of your geographical enquiry

(continued on the next page)

Turn over

5. continued.

(a) Explain why your fieldwork location was suitable for this enquiry.

(2 marks)

(continued on the next page)

Turn over

5. continued.

**(b) Explain ONE quantitative method
you chose for data collection.**

(3 marks)

(continued on the next page)

Turn over

5. continued.

(c) Explain ONE advantage of a technique you used to present your fieldwork data.

(3 marks)

(continued on the next page)

Turn over

5. continued.

(d) Explain TWO techniques you used to analyse your data.

(4 marks)

Answer lines continue on the next page.

1 _____

2 _____

Turn over

5. (d) continued.

(continued on the next page)

5. continued.

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

The aim of the student's enquiry was to determine the most important factor affecting a beach profile.

(continued on the next page)

Turn over

5. (e) continued.

**Evaluate how far the data
collection methods used
supported the student in
achieving their aim.**

(8 marks)

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

5. (e) continued.

5. (e) continued.

Turn over

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(Total for Question 5 = 20 marks)

Turn over

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

☐

6. Investigating hazardous environments

You have studied a hazardous environment as part of your own geographical enquiry.

Title of your geographical enquiry

(continued on the next page)

Turn over

6. continued.

(a) Explain why your fieldwork location was suitable for this enquiry.

(2 marks)

(continued on the next page)

Turn over

6. continued.

**(b) Explain ONE quantitative method
you chose for data collection.**

(3 marks)

(continued on the next page)

Turn over

6. continued.

(c) Explain ONE advantage of a technique you used to present your fieldwork data.

(3 marks)

(continued on the next page)

Turn over

6. continued.

(d) Explain TWO techniques you used to analyse your data.

(4 marks)

Answer lines continue on the next page.

1 _____

2 _____

Turn over

6. (d) continued.

(continued on the next page)

6. continued.

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

The aim of the student's enquiry was to determine the most important characteristic that influences local weather conditions.

(continued on the next page)

Turn over

6. (e) continued.

**Evaluate how far the data
collection methods used
supported the student in
achieving their aim.**

(8 marks)

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

6. (e) continued.

6. (e) continued.

Turn over

6. (e) continued.

(Total for Question 6 = 20 marks)

TOTAL FOR SECTION B = 20 MARKS

TOTAL FOR PAPER = 70 MARKS

END OF PAPER
