

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

Total Marks

Geography
PAPER 1: Physical geography

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

Diagram 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 or in the Diagram Booklet – 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.

There may be spare copies of some diagrams in case you need them.

ADVICE

Read each question carefully before you start to answer it.

Check your answers if you have time at the end.

Turn over

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

SECTION A

Answer TWO questions from this section.

If you answer Question 1 put a cross in this box

☐

Turn over

1. River environments

(a) Identify ONE landform usually found in the upper course of a river.

A delta

B estuary

C oxbow lake

D interlocking spurs

Answer

(1 mark)

(continued on the next page)

Turn over

1. continued.

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

A boundary of a drainage basin

B bend in a river

C where a river meets the sea

D where two rivers meet

Answer

(1 mark)

(continued on the next page)

Turn over

1. (b) continued.

(ii) State ONE transfer in the
hydrological cycle.

(1 mark)

(continued on the next page)

Turn over

1. continued.

**(c) Explain how a river channel is
eroded by solution (corrosion).
(2 marks)**

(continued on the next page)

Turn over

1. continued.

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

**Explain ONE advantage and
ONE disadvantage of the flood
prevention measures shown.**

(4 marks)

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

Advantage

Turn over

1. (d) continued.

Disadvantage

(continued on the next page)

Turn over

1. continued.

**(e) Explain how urban land use can
affect river regimes.**

(3 marks)

(continued on the next page)

Turn over

1. continued.

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

**Identify the feature of the storm
hydrograph labelled X.**

(1 mark)

(continued on the next page)

Turn over

1. continued.

(g) Explain how erosion can form waterfalls.

(4 marks)

Answer lines are on the next page.

Turn over

1. (g) continued.

(continued on the next page)

Turn over

1. continued.

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

**Analyse the importance of this
dam for managing the demand
and supply of water.**

(8 marks)

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

Turn over

1. (h) continued.

Turn over

1. (h) continued.

Turn over

1. (h) continued.

Turn over

1. (h) continued.

(Total for Question 1 = 25 marks)

Turn over

21

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

☐

Turn over

2. Coastal environments

(a) Identify the feature of a mangrove ecosystem.

- A** high altitude
- B** steep land gradient
- C** complex root system
- D** cold temperatures

Answer

(1 mark)

(continued on the next page)

Turn over

2. continued.

(b) (i) Identify a process of coastal erosion.

A abrasion

B beach

C fetch

D swash

Answer

(1 mark)

(continued on the next page)

Turn over

2. (b) continued.

**(ii) State ONE transportation
process that occurs along a
coastline.**

(1 mark)

(continued on the next page)

Turn over

2. continued.

(c) Explain ONE way to reduce the impact of coastal flooding.

(2 marks)

(continued on the next page)

Turn over

2. continued.

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

**Explain TWO reasons why there
may be conflicts over the coastal
management strategies chosen.**

(4 marks)

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

1

Turn over

2. (d) continued.

2

(continued on the next page)

Turn over

2. continued.

**(e) Explain ONE way climate change
may affect coastal environments.
(3 marks)**

(continued on the next page)

Turn over

2. continued.

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

Identify the type of wave shown.

(1 mark)

(continued on the next page)

Turn over

2. continued.

(g) Explain the formation of a cave.

(4 marks)

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

Turn over

2. (g) continued.

(continued on the next page)

Turn over

2. continued.

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

**Analyse the importance of
managing the threats to this
coral reef ecosystem.**

(8 marks)

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

Turn over

2. (h) continued.

Turn over

2. (h) continued.

Turn over

2. (h) continued.

Turn over

2. (h) continued.

(Total for Question 2 = 25 marks)

Turn over

37

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

☐

Turn over

3. Hazardous environments

(a) Identify a type of plate boundary.

A asymmetrical

B constructive

C hot spot

D mantle

Answer

(1 mark)

(continued on the next page)

Turn over

3. continued.

(b) (i) Identify ONE characteristic of a tropical cyclone.

A area of very high pressure

B very little rainfall

C low wind speeds

D eye in the centre

Answer

(1 mark)

(continued on the next page)

Turn over

3. (b) continued.

**(ii) State ONE factor that can
affect tropical cyclone
formation.**

(1 mark)

(continued on the next page)

Turn over

3. continued.

**(c) Explain one long-term impact of
a tropical cyclone.**

(2 marks)

(continued on the next page)

Turn over

3. continued.

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

**Explain TWO reasons why
people continue to live in areas
at risk from volcanoes.**

(4 marks)

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

1

Turn over

3. (d) continued.

2

(continued on the next page)

Turn over

3. continued.

**(e) Explain ONE way building design
can help prepare for earthquakes.
(3 marks)**

(continued on the next page)

Turn over

3. continued.

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

**Identify a potential short-term
impact of the hazard shown.**

(1 mark)

(continued on the next page)

Turn over

3. continued.

(g) Explain how volcanoes are formed at a destructive plate boundary.

(4 marks)

Answer lines are on the next page.

Turn over

3. (g) continued.

(continued on the next page)

Turn over

3. continued.

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

**Analyse the hazard risk from this
predicted distribution of
tropical cyclones.**

(8 marks)

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

Turn over

3. (h) continued.

Turn over

3. (h) continued.

Turn over

3. (h) continued.

Turn over

3. (h) continued.

(Total for Question 3 = 25 marks)

TOTAL FOR SECTION A = 50 MARKS

Turn over

SECTION B

Answer ONE question from this section.

If you answer Question 4 put a cross in this box

☐

Turn over

4. Investigating river environments

A group of students have undertaken an enquiry that investigates the characteristics of a river along its course.

(a) Study Figure 4a in the Resource Booklet.

(i) Identify ONE type of primary data used by the students from the options on the next page.

(continued on the next page)

Turn over

4. (a) (i) continued.

A Environment Agency
flood risk map

B field sketches

C local historical map

D newspaper articles

Answer

(1 mark)

(continued on the next page)

Turn over

4. (a) continued.

**(ii) Name ONE piece of
equipment the students
could have used in their
enquiry.**

(1 mark)

(continued on the next page)

Turn over

4. continued.

(b) Study Figure 4b in the Resource Booklet. It shows some data about river velocity at four sites.

(i) Calculate the mean river velocity at Site 2.

Give your answer to one decimal place.

You must show all your workings in the space on the next two pages.

(2 marks)

Turn over

4. (b) (i) continued.

Turn over

4. (b) (i) continued.

_____ m/s

(continued on the next page)

Turn over

4. (b) continued.

(ii) State ONE type of sampling students could have used to choose their data collection sites.

(1 mark)

(continued on the next page)

Turn over

4. (b) continued.

(iii) Suggest ONE reason why
the data for Site 1 may not
be reliable.

(2 marks)

(continued on the next page)

Turn over

4. continued.

(c) (i) Look at the diagram for Question 4(c)(i) in the Diagram Booklet. It shows an incomplete graph. Complete the graph in the Diagram Booklet, using data highlighted in Figure 4c in the Resource Booklet.

(2 marks)

(ii) Explain ONE advantage of using a line graph to present results.

(3 marks)

Answer lines are on the next page.

Turn over

4. (c) (ii) continued.

(Total for Question 4 = 12 marks)

Turn over

64

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

☐

Turn over

5. Investigating coastal environments

A group of students have undertaken an enquiry that explores how beach characteristics change due to coastal management.

(a) Study Figure 5a in the Resource Booklet.

(i) Identify ONE type of primary data used by the students from the options on the next page.

(continued on the next page)

Turn over

5. (a) (i) continued.

**A local shoreline
management plan**

B field sketches

C local historical map

D newspaper articles

Answer

(1 mark)

(continued on the next page)

Turn over

5. (a) continued.

**(ii) Name ONE piece of
equipment the students
could have used in their
enquiry.**

(1 mark)

(continued on the next page)

Turn over

5. continued.

(b) Study Figure 5b in the Resource Booklet. It shows some data about beach characteristics at four sites where data was collected.

(i) Calculate the mean pebble size at Site 2.

Give your answer to one decimal place.

You must show all your workings in the space on the next two pages.

(2 marks)

Turn over

5. (b) (i) continued.

Turn over

5. (b) (i) continued.

_____ mm

(continued on the next page)

Turn over

5. (b) continued.

(ii) State ONE type of sampling students could have used to choose their data collection sites.

(1 mark)

(continued on the next page)

Turn over

5. (b) continued.

**(iii) Suggest ONE reason why
the data for Site 1 may not
be reliable.**

(2 marks)

(continued on the next page)

Turn over

5. continued.

- (c) (i) Look at the diagram for Question 5(c)(i) in the Diagram Booklet. It shows an incomplete graph. Complete the beach profile on the graph in the Diagram Booklet using data highlighted in Figure 5c in the Resource Booklet.**
- (2 marks)**

(continued on the next page)

Turn over

5. (c) continued.

(ii) Explain ONE advantage of using a line graph to present results.

(3 marks)

Answer lines continue on the next page.

Turn over

5. (c) (ii) continued.

(Total for Question 5 = 12 marks)

76

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

☐

Turn over

6. Investigating hazardous environments

A group of students have undertaken an enquiry that explores relationships between local weather characteristics.

(a) Study Figure 6a in the Resource Booklet.

(i) Identify ONE type of primary data used by the students from the options on the next page.

(continued on the next page)

Turn over

6. (a) (i) continued.

A local weather map

B field sketches

**C a local weather diary
from last year**

D newspaper articles

Answer

(1 mark)

(continued on the next page)

Turn over

6. (a) continued.

**(ii) Name ONE piece of
equipment the students
could have used in their
enquiry.**

(1 mark)

(continued on the next page)

Turn over

6. continued.

- (b) Study Figure 6b in the Resource Booklet. It shows some data on wind speed at four sites where data was collected.**
- (i) Calculate the mean wind speed collected at Site 2.**

Give your answer to one decimal place.

You must show all your workings in the space on the next two pages.

(2 marks)

Turn over

6. (b) (i) continued.

Turn over

6. (b) (i) continued.

_____ mph

(continued on the next page)

Turn over

6. (b) continued.

(ii) State ONE type of sampling students could have used to choose their data collection sites.

(1 mark)

(continued on the next page)

Turn over

6. (b) continued.

**(iii) Suggest ONE reason why
the data for Site 1 may not
be reliable.**

(2 marks)

(continued on the next page)

Turn over

6. continued.

- (c) (i) Look at the diagram for Question 6(c)(i) in the Diagram Booklet. It shows an incomplete graph. Complete the graph in the Diagram Booklet using data highlighted in Figure 6c in the Resource Booklet.**
- (2 marks)**

(continued on the next page)

Turn over

6. (c) continued.

(ii) Explain ONE advantage of using a line graph to present results.

(3 marks)

Answer lines continue on the next page.

Turn over

6. (c) (ii) continued.

(Total for Question 6 = 12 marks)

TOTAL FOR SECTION B = 12 MARKS

TOTAL FOR PAPER = 62 MARKS

END OF PAPER
