

Please check the examination details below before entering your candidate information

Candidate surname

Other names

Centre Number

Candidate Number

## Pearson Edexcel Level 3 GCE

**Tuesday 13 May 2025**

Morning (Time: 2 hours 15 minutes)

Paper  
reference

**9GE0/01**

### Geography

Advanced  
PAPER 1

**You must have:**

Resource Booklet (enclosed)  
Calculator, ruler

Total Marks

### Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions in Section **A**, and Section **C**.
- Answer **either** Question 2 **or** Question 3 in Section **B**.
- Answer the questions in the spaces provided  
– *there may be more space than you need.*
- Any calculations must show all stages of working out and a clear answer.

### Information

- The total mark for this paper is 105.
- The marks for **each** question are shown in brackets  
– *use this as a guide as to how much time to spend on each question.*
- Calculators may be used.

### 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

### Tectonic Processes and Hazards

**Answer ALL questions in this section. Write your answers in the spaces provided.**

**You must use the Resource Booklet provided.**

- 1** Study Figure 1 which shows significant earthquake events in California, 1999–2022.

Date of significant earthquake event	Magnitude (Mw) ( $x_i$ )	Mean ( $\mu$ )	Magnitude-Mean ( $x_i - \mu$ )	(Magnitude-Mean) <sup>2</sup> ( $x_i - \mu$ ) <sup>2</sup>
1999	7.1	6.2	0.9	0.81
2000	5	6.2	-1.2	
2003	6.6	6.2	0.4	0.16
2007	5.6	6.2	-0.6	0.36
2008	5.4	6.2	-0.8	0.64
2010	7.2	6.2	1	1
2010	6.5	6.2	0.3	0.09
2014	6	6.2	-0.2	0.04
2014	5.1	6.2	-1.1	1.21
2019	7.1	6.2	0.9	0.81
2019	6.4	6.2	0.2	0.04
2022	6.4	6.2	0.2	0.04
$\Sigma(x_i - \mu)^2$				

**Figure 1**

**Significant earthquake events in California, 1999–2022**

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(a) Using Figure 1;

(i) Calculate the value of  $(x_i - \mu)^2$  for the year 2000.

(1)

(ii) Calculate  $\sum (x_i - \mu)^2$

(1)

(iii) Using the answer to a(ii) and the formula below, calculate the Standard Deviation (SD) for this data.

In this data set  $n = 12$ .

You **must** show your working.

Give your answer to **two** decimal places.

$$SD = \sqrt{\frac{\sum (x_i - \mu)^2}{n - 1}}$$

(2)



(b) Assess the importance of community preparedness in influencing the vulnerability of people to tectonic hazards.

(12)

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**(Total for Question 1 = 16 marks)**

**TOTAL FOR SECTION A = 16 MARKS**





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Study Figure 2b in the Resource Booklet.

(b) Explain the influence of geology in the formation of this knock and lochan landscape.

(6)

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(c) Explain why meltwater creates distinctive depositional fluvio-glacial landforms.

(8)

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(d) Evaluate the view that the management of glaciated landscapes should always prioritise preservation over economic exploitation.

(20)

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**(Total for Question 2 = 40 marks)**

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Study Figure 3b in the Resource Booklet.

(b) Explain the influence of constructive waves in the formation of this landscape.

(6)

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(c) Explain why subaerial processes influence the rate of coastal recession.

(8)

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Handwriting practice lines consisting of six horizontal dotted lines.



(d) Evaluate the view that coastal management should always prioritise the environment over economic considerations.

(20)

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**(Total for Question 3 = 40 marks)**

**TOTAL FOR SECTION B = 40 MARKS**



**SECTION C**

**Physical Systems and Sustainability**

**Answer ALL questions in this section.**

**You must use the Resource Booklet provided.**

**4** Study Figure 4 in the Resource Booklet.

(a) Explain **one** reason why the global water budget limits water availability for human use.

(3)

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Unconventional fossil fuel energy resources include tar sands, shale gas, shale oil and deepwater oil.

(c) Explain the costs and benefits of developing unconventional fossil fuel energy resources.

(8)

Area with horizontal dotted lines for writing the answer to question (c).



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(d) Assess the extent to which future demand for water can be met using sustainable approaches.

(12)

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(e) Evaluate the view that global agreements are essential in order to reduce further planetary warming.

(20)

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**(Total for Question 4 = 49 marks)**

**TOTAL FOR SECTION C = 49 MARKS**  
**TOTAL FOR PAPER = 105 MARKS**



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# Pearson Edexcel Level 3 GCE

**Tuesday 13 May 2025**

Morning (Time: 2 hours 15 minutes)

Paper  
reference

**9GE0/01**

## **Geography**

**Advanced  
PAPER 1**

### **Resource Booklet**

**Do not return this Booklet with the question paper.**

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**SECTION B**

**The following resources relate to Question 2.**



**Figure 2a**

**Relict upland glaciated valley**





**Figure 2b**

**A knock and lochan glaciated landscape**

The following resources relate to Question 3.



**Figure 3a**

**A landscape of coastal erosion**



**Figure 3b**  
**A landscape of coastal deposition**

SECTION C

The following resource relates to Question 4a.

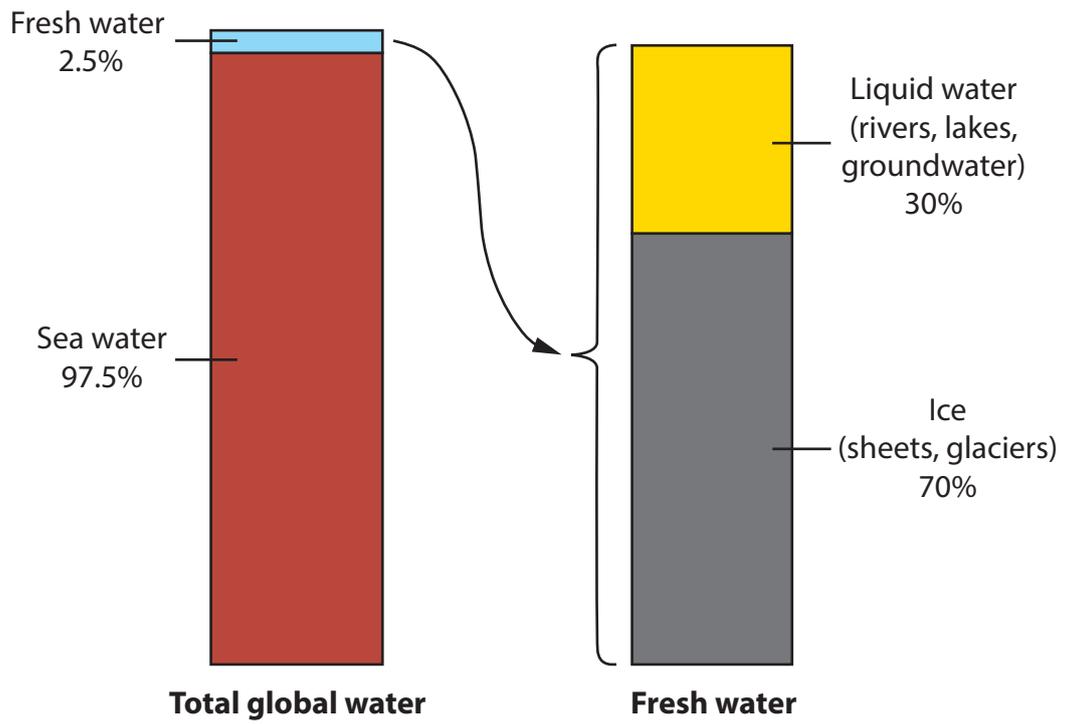


Figure 4

Major stores in the global water budget

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**Acknowledgements**

Pearson Education Ltd gratefully acknowledges all following sources used in preparation of this paper:

Figure 2a: © Howard Litherland/Alamy Stock Photo

Figure 2b: © Vincent Lowe/Alamy Stock Photo

Figure 3a: © Simon Turner/Alamy Stock Photo

Figure 3b: [www.discoverhelston.co.uk/discover/loepool](http://www.discoverhelston.co.uk/discover/loepool)

