Please check the examination details below before entering your candidate information

Candidate surname	Other names

Centre Number | Candidate Number

Pearson Edexcel Level 3 GCE

Thursday 16 May 2024

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.*

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.

Turn over

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SECTION A

Tectonic Processes and Hazards

Answer ALL questions in this section.

1 Study Figure 1 below.

This is part of an investigation showing the total number of deaths caused by earthquake events for 11 years from 2011 to 2021.

Year	Total deaths from earthquake events
2011	21,942
2012	689
2013	1,572
2014	756
2015	9,624
2016	1,297
2017	1,012
2018	4,535
2019	244
2020	180
2021	2,476

Figure 1

Deaths from earthquake events, 2011–2021

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(a) Using the data in Figure 1,

(i) Calculate the mean number of deaths for these **earthquake events**.

Give your answer to **one** decimal place.

You **must** show your working.

(2)

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(ii) Calculate the median number of deaths caused by these **earthquake events**.

You **must** show your working.

(2)

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(b) Assess the importance of levels of development in understanding the impacts of tectonic hazards.

(12)

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(Total for Question 1 = 16 marks)

TOTAL FOR SECTION A = 16 MARKS

SECTION B

Landscape Systems, Processes and Change

Answer ONE question in this section – EITHER Question 2 OR Question 3.

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 2, put a cross in the box ☐ .

Glaciated Landscapes and Change

You must use the Resource Booklet provided.

2 Study Figure 2a in the Resource Booklet.

(a) Explain how the processes of lodgement and ablation have created this relict till plain.

(6)

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Study Figure 2b in the Resource Booklet.

(b) Suggest how glacial erosion has contributed to the formation of this landscape.

(6)

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(c) Explain why some glacial landscapes have greater economic value than others.

(8)

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(d) Evaluate the view that active glacial landscapes are always more fragile than relict landscapes.

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(Total for Question 2 = 40 marks)

Do not answer Question 3 if you have answered Question 2.

Answer ONE question in this section – EITHER Question 2 OR Question 3.

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 3, put a cross in the box ☐ .

Coastal Landscapes and Change

You must use the Resource Booklet provided.

3 Study Figure 3a in the Resource Booklet.

(a) Explain how sea level change contributes to the formation of emergent coastlines.

(6)

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Study Figure 3b in the Resource Booklet.

(b) Explain how sediment transport and deposition contribute to the formation of this landscape.

(6)

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(c) Explain the role of mass movement in creating distinctive coastal landforms.

(8)

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(d) Evaluate the view that the higher the level of economic development the greater the consequences of coastal flooding.

(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) Suggest **one** possible impact of the changes shown on forest ecosystems.

(3)

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(b) Explain why hard engineering may increase the risk of river flooding in some places.

(6)

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(c) Explain the role of photosynthesis in the ocean on the carbon cycle.

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(d) Assess the impact of increasing ocean acidification on people and marine ecosystems.

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(e) Evaluate the view that trans-boundary water conflicts will inevitably increase in the future.

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(Total for Question 4 = 49 marks)

TOTAL FOR PAPER = 105 MARKS

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Geography

Advanced

PAPER 1

Resource Booklet

Do not return this Booklet with the question paper.

Turn over

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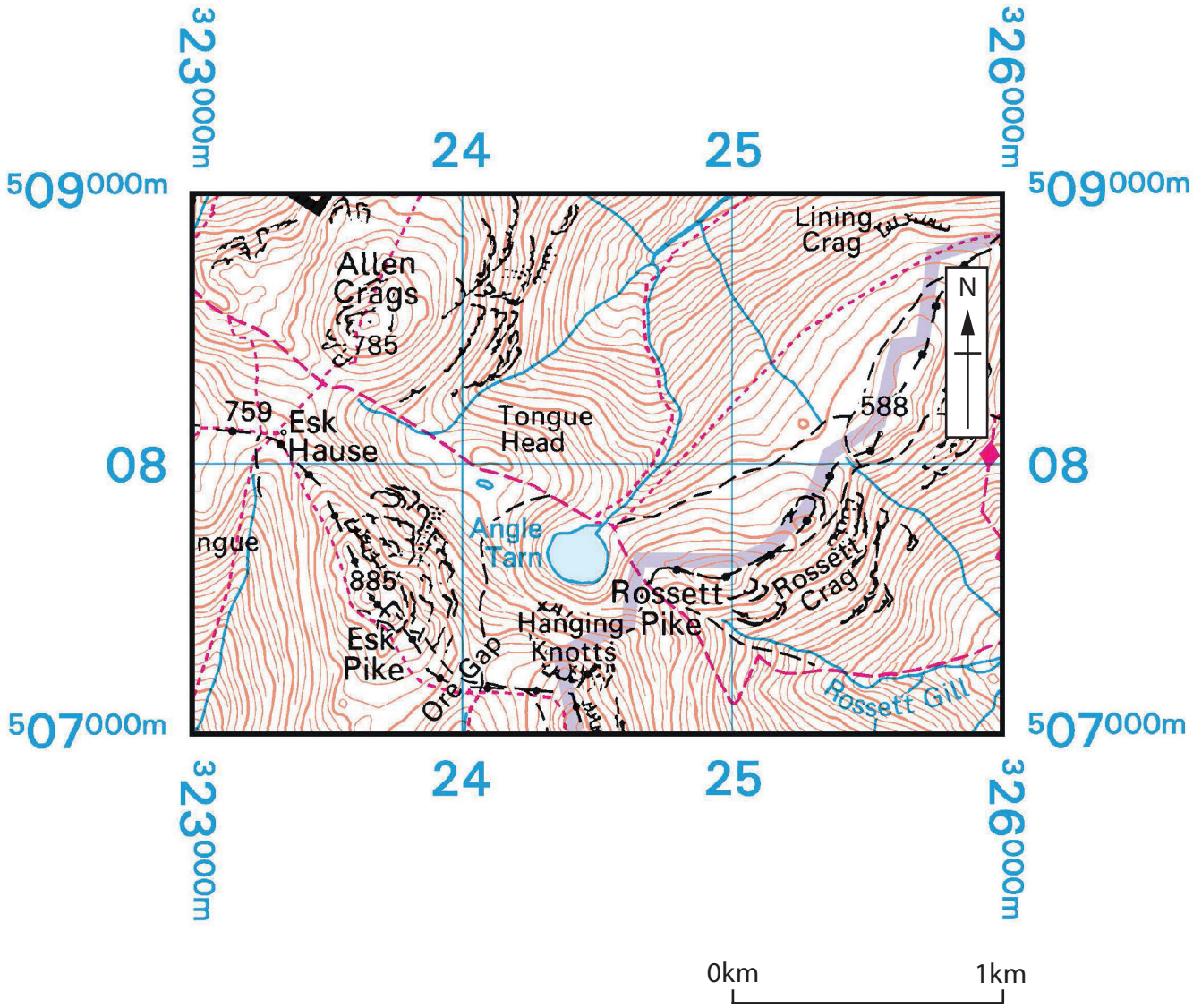
SECTION B

The following resources relate to Question 2.

Figure 2a

A relict till plain created by the Laurentide Ice Sheet, in North America



Key

ROCK FEATURES

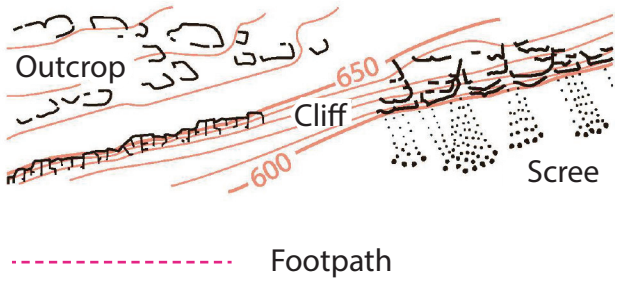


Figure 2b

A relict upland glaciated landscape in the Lake District, northern England

The following resources relate to Question 3.

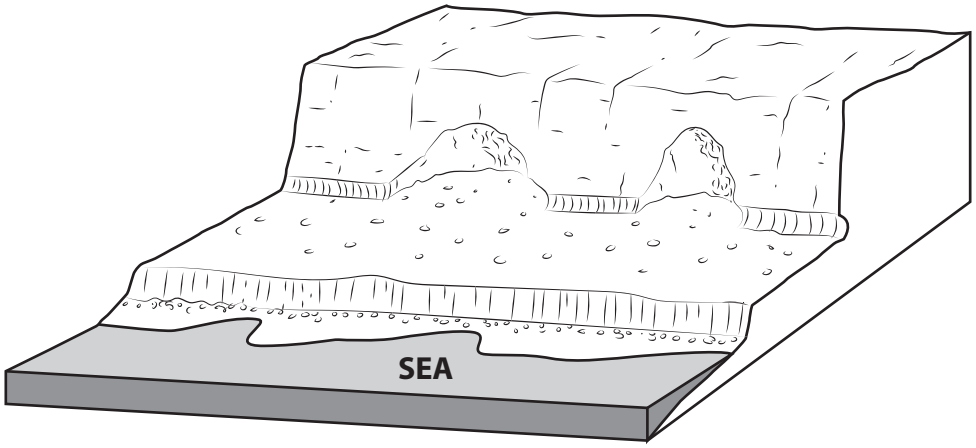
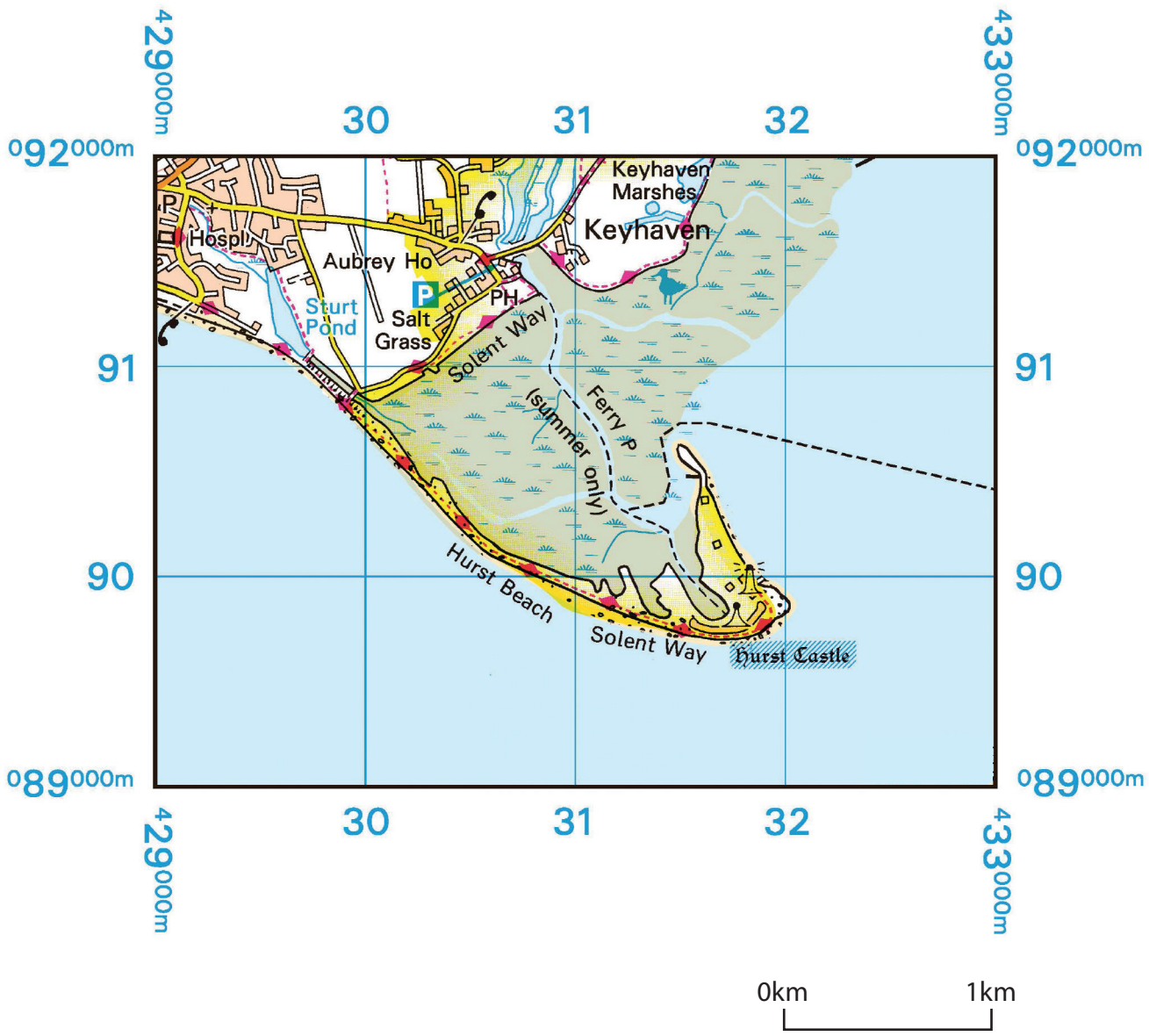


Figure 3a

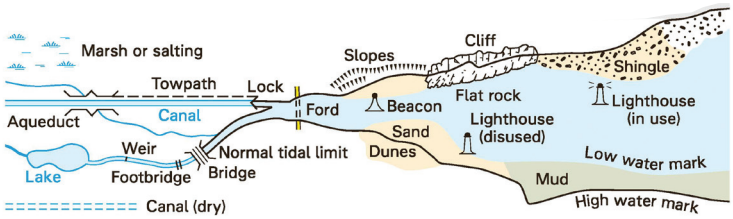
Diagram showing an emergent coastline



Key

National Park

WATER FEATURES



National Trail, Scotland's Great Trails, European Long Distance Path and selected Recreational Routes

Footpath

Figure 3b

A depositional coastal landscape in southern England

SECTION C

The following resource relates to Question 4a.

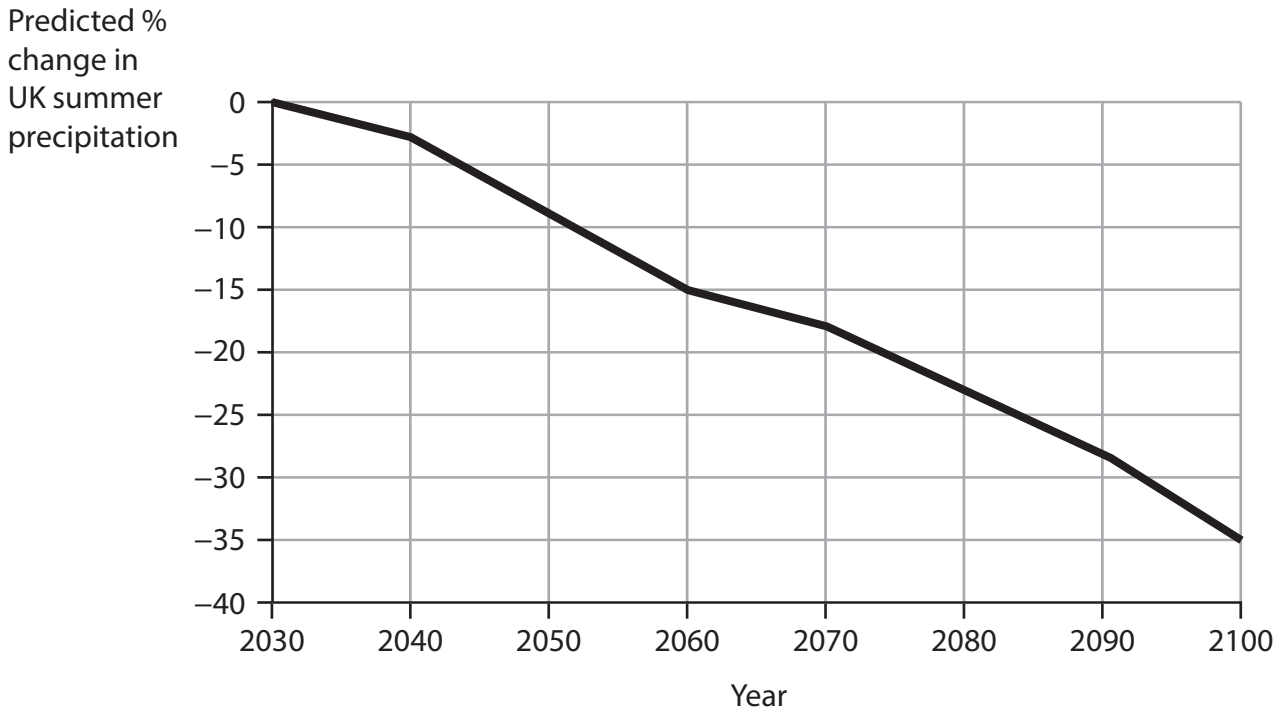


Figure 4

Predicted percentage (%) change to UK summer precipitation, 2030–2100

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Acknowledgements
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Figure 3b: © Crown copyright