

Please write clearly in block capitals.

Centre number

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Candidate number

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Surname

Forename(s)

Candidate signature

I declare this is my own work.

A-level GEOGRAPHY

Paper 1 Physical geography

Thursday 16 May 2024

Morning

Time allowed: 2 hours 30 minutes

Materials

For this paper you must have:

- the colour insert (enclosed)
- a pencil
- a rubber
- a ruler.

You may use a calculator.

For Examiner's Use

Section	Mark
A	
B	
C	
TOTAL	

Instructions

- Use black ink or black ball-point pen.
- Fill in the boxes at the top of this page.
- Answer **all** questions in Section A.
- Answer **either** Question 2 **or** Question 3 **or** Question 4 in Section B.
- Answer **either** Question 5 **or** Question 6 in Section C.
- You must answer the questions in the spaces provided. Do **not** write outside the box around each page or on blank pages.
- If you need additional extra space for your answer(s), use the lined pages at the end of this book. Write the question number against your answer(s).
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information

- The marks for questions are shown in brackets.
- The total number of marks available for this paper is 120.



J U N 2 4 7 0 3 7 1 0 1

Section A**Water and carbon cycles**

Answer **all** questions in this section.

0 1 . 1

Outline how human factors impact upon the water cycle.

[4 marks]

Extra space _____



IB/G/Jun24/7037/1

Figure 2 shows river flow data measured at various gauging stations across parts of the UK on 7 November 2019.

Using **Figure 2** and your own knowledge, assess factors affecting the likelihood of flooding across the UK.

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[20 marks]

[illegible]

[illegible]

End of Section A
Turn over for Section B



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ANSWER IN THE SPACES PROVIDED**



Section B

Answer **one** question in this section.

Answer **either** Question 2 **or** Question 3 **or** Question 4.

Question 2 Hot desert systems and landscapes**0 2 . 1**

Outline characteristics of a pediment.

[4 marks]

Extra space

Question 2 continues on the next page



Figure 3a shows the average rainfall and current extent of the Sahara Desert and other vegetation types in central and north Africa.

Figure 3b shows the average rainfall and vegetation types in central and north Africa around 6000–10 000 years ago.

Using **Figure 3a** and **Figure 3b**, interpret the change in rainfall and vegetation patterns in central and north Africa.

[illegible]



Figure 4 shows some of the factors causing desertification in selected locations.

Using **Figure 4** and your own knowledge, assess the potential impact of desertification.

[illegible]

Extra space _____

Question 2 continues on the next page



With reference to **one or more** hot deserts that you have studied, assess potential impacts of climate change on the development of landforms.

[illegible]

Extra space



36**End of Question 2**

0	3	.	1
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[4 marks]

Extra space _____

Question 3 continues on the next page



Figure 5b shows coastal vulnerability due to erosion in Vietnam as a whole and by coastal zone.

[6 marks]

[illegible]



Figure 6 shows some challenges facing West Africa's coastal resources.

Using **Figure 6** and your own knowledge, assess potential approaches to managing this coastal region.

[illegible]

Turn over ►



With reference to **one or more** coastal environments that you have studied, assess the potential impact of climate change on the development of landforms.

[illegible]

[illegible]

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36

End of Question 3



Question 4 Glacial systems and landscapes**0 4 . 1**

Outline processes which lead to the development of a corrie.

[4 marks]

Extra space

Question 4 continues on the next page

Figure 7a shows cumulative length change in selected Scandinavian glaciers, 1896–2016.

Figure 7b shows cumulative mass balance change in selected Scandinavian glaciers, 1960–2014.

Analyse the data shown in **Figure 7a** and **Figure 7b**.

[6 marks]

Extra space _____

Figure 8 shows future challenges and opportunities in the Alps as the climate changes.

Using **Figure 8** and your own knowledge, evaluate opportunities for developing a sustainable future for this region.

[illegible]

Turn over ►



[20 marks]

[illegible]

[illegible]

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36

End of Question 4

End of Section B



Section C

Answer **one** question in this section.

Answer **either** Question 5 **or** Question 6.

Question 5 Hazards

0	5	.	1
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Outline processes involved in the formation of ocean ridges.

[4 marks]

Extra space _____

Question 5 continues on the next page



Figure 9 shows data related to the changing frequency of tropical storms between 1980 and 2018.

Interpret the data shown in **Figure 9**.

[6 marks]

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Figure 10 shows data related to the Hunga Tonga–Hunga Ha’apai submarine volcanic eruption and tsunamis on 14 January 2022.

Using **Figure 10** and your own knowledge, assess challenges in responding to this event.

[illegible]

Extra space _____

To what extent do you agree that changes to the carbon cycle are responsible for increasingly frequent and severe tropical storms?

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Extra space _____

0 5 . 5

‘The Hazard Management Cycle is useful in minimising the impact of wildfires.’

Evaluate this view with reference to a wildfire event that you have studied.

[20 marks]



[illegible]

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48



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Question 6 Ecosystems under stress**0 6 . 1**

Outline processes involved in mineral nutrient cycling in an ecosystem.

[4 marks]

Extra space

Question 6 continues on the next page

Figure 11 shows information about global biodiversity by species category measured in 2019.

[6 marks]

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Figure 12 shows a food web diagram of a coastal lagoon in Italy.

Using **Figure 12** and your own knowledge, assess the potential impact of human activity on this food web.

[9 marks]

[illegible]

Extra space



How far do you agree that changes to the carbon cycle are leading to an increasingly uncertain future for coral reefs?

[illegible]

Extra space _____

0 6 . 5

With reference to **one** plagioclimax in the British Isles, assess the factors affecting change and development in this ecosystem.

[20 marks]



[illegible]

[illegible]

48



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[illegible]

Question number	Additional page, if required. Write the question numbers in the left-hand margin.
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