



Surname _____

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I declare this is my own work.

A-level

GEOGRAPHY

Paper 1 Physical geography

7037/1

Thursday 16 May 2024 Morning

Time allowed: 2 hours 30 minutes

At the top of the page, write your surname and forenames, your centre number, your candidate number and add your signature.

[Turn over]



JUN247037101

MATERIALS

For this paper you must have:

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

You may use a calculator.

INSTRUCTIONS

- **Use black ink or black ball-point pen.**
- **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 on blank pages.**



- **If you need 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 for this paper is 120.**

**DO NOT TURN OVER UNTIL TOLD
TO DO SO**



SECTION A

Water and carbon cycles

Answer ALL questions in this section.

01.1

Outline how human factors impact upon the water cycle. [4 marks]

[Turn over]



FIGURE 1a, on page 2 of the insert, shows change in lake and river surface water temperature by global distribution between 1970 and 2010.

FIGURE 1b, on page 3 of the insert, shows change in lake and surface water temperature by latitude between 1970 and 2010.

0 1 . 2

Analyse the data shown in FIGURE 1a and FIGURE 1b. [6 marks]

[Turn over]





FIGURE 2, on pages 4 and 5 of the insert, shows river flow data measured at various gauging stations across parts of the UK on 7 November 2019.

0 1 . 3

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

[6 marks]

[Turn over]





[Turn over]



[Turn over]



[Turn over]



[Turn over]





[End of Section A]

[Turn over for Section B]



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]**



[Turn over]



FIGURE 3a, on pages 6 and 9 of the insert, shows the average rainfall and current extent of the Sahara Desert and other vegetation types in central and north Africa.

FIGURE 3b, on pages 7 and 9 of the insert, shows the average rainfall and vegetation types in central and north Africa around 6000–10 000 years ago.

0 2 . 2

Using FIGURE 3a and FIGURE 3b, interpret the change in rainfall and vegetation patterns in central and north Africa. [6 marks]



[Turn over]





FIGURE 4, on pages 10 and 11 of the insert, shows some of the factors causing desertification in selected locations.

0 2 . 3

Using FIGURE 4 and your own knowledge, assess the potential impact of desertification. [6 marks]

[Turn over]





[Turn over]



0 2 . 4

**With reference to ONE OR MORE hot deserts that you have studied, assess potential impacts of climate change on the development of landforms.
[20 marks]**

[Turn over]





[Turn over]





[Turn over]





[End of Question 2]

[Turn over]



QUESTION 3 Coastal systems and landscapes

03.1

Outline the sequence in the development of a sea stack. [4 marks]



[Turn over]



FIGURE 5a, on page 12 of the insert, shows coastal zones of Vietnam.

FIGURE 5b, on pages 14 and 15 of the insert, shows coastal vulnerability due to erosion in Vietnam as a whole and by coastal zone.

03.2

Analyse the data shown in FIGURE 5a and FIGURE 5b. [6 marks]

[Turn over]





FIGURE 6, on pages 16, 17 and 18 of the insert, shows some challenges facing West Africa's coastal resources.

0 3 . 3

Using FIGURE 6 and your own knowledge, assess potential approaches to managing this coastal region. [6 marks]

[Turn over]





[Turn over]



03.4

With reference to ONE OR MORE coastal environments that you have studied, assess the potential impact of climate change on the development of landforms. [20 marks]



[Turn over]



[Turn over]



Lined writing area consisting of 18 horizontal lines.



[Turn over]





36

[End of Question 3]

[Turn over]



QUESTION 4 **Glacial systems and landscapes**

0 4 . 1

Outline processes which lead to the development of a corrie. [4 marks]

[Turn over]



FIGURE 7a, on page 20 of the insert, shows cumulative length change in selected Scandinavian glaciers, 1896–2016.

FIGURE 7b, on page 21 of the insert, shows cumulative mass balance change in selected Scandinavian glaciers, 1960–2014.

0 4 . 2

Analyse the data shown in FIGURE 7a and FIGURE 7b. [6 marks]



[Turn over]





FIGURE 8, on pages 22 and 23 of the insert, shows future challenges and opportunities in the Alps as the climate changes.

0 4 . 3

Using FIGURE 8 and your own knowledge, evaluate opportunities for developing a sustainable future for this region. [6 marks]

[Turn over]



04.4

With reference to ONE OR MORE cold environments that you have studied, assess the potential impact of climate change on the development of landforms. [20 marks]

[Turn over]





[Turn over]



[Turn over]



[Turn over]





[End of Question 4]

[End of Section B]

[Turn over for Section C]



SECTION C

Answer ONE question in this section.

Answer EITHER Question 5 OR Question 6.

QUESTION 5 Hazards

05.1

Outline processes involved in the formation of ocean ridges. [4 marks]

[Turn over]



FIGURE 9, on page 24 of the insert, shows data related to the changing frequency of tropical storms between 1980 and 2018.

0 5 . 2

**Interpret the data shown in FIGURE 9.
[6 marks]**



[Turn over]





FIGURE 10, on pages 26 and 27 of the insert, shows data related to the Hunga Tonga–Hunga Ha’apai submarine volcanic eruption and tsunami on 14 January 2022.

0 5 . 3

Using FIGURE 10 and your own knowledge, assess challenges in responding to this event. [9 marks]

[Turn over]



[Turn over]



0 5 . 4

To what extent do you agree that changes to the carbon cycle are responsible for increasingly frequent and severe tropical storms? [9 marks]



[Turn over]





[Turn over]



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]





[Turn over]





48

[End of Question 5]

[Turn over]



QUESTION 6 Ecosystems under stress

0 6 . 1

**Outline processes involved in mineral nutrient cycling in an ecosystem.
[4 marks]**

[Turn over]



FIGURE 11, on pages 28 and 29 of the insert, shows information about global biodiversity by species category measured in 2019.

0 6 . 2

Analyse the information shown in FIGURE 11. [6 marks]

[Turn over]





FIGURE 12, on pages 30 and 31 of the insert, shows a food web diagram of a coastal lagoon in Italy.

0 6 . 3

**Using FIGURE 12 and your own knowledge, assess the potential impact of human activity on this food web.
[9 marks]**

[Turn over]





06.4

How far do you agree that changes to the carbon cycle are leading to an increasingly uncertain future for coral reefs? [9 marks]



[Turn over]



06.5

With reference to ONE plagioclimax in the British Isles, assess the factors affecting change and development in this ecosystem. [20 marks]



[Turn over]







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END OF QUESTIONS



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For Examiner's Use	
Section	Mark
A	
B	
C	
TOTAL	

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1 1 0



2 4 6 A 7 0 3 7 / 1