Please write clearly in block capitals.

Centre number | | | | | | Candidate number | | | | |

Surname _____

Forename(s) _____

Candidate signature _____
I declare this is my own work.

A-level
GEOGRAPHY

Paper 1 Physical Geography

Wednesday 20 May 2020 Afternoon 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.
- 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.

Do not write outside the box

Section A

Water and carbon cycles

Answer **all** questions in this section.

0 1 . 1 Outline the process of decomposition in the carbon cycle.

[4 marks]

Extra space

Do not write outside the box

Figure 1 is in the insert.

Figure 1 shows annual and 5-year moving average rainfall data for two measuring stations in South Africa: Royal Observatory and Dwarsberg.

0 1 . 2 Analyse the data shown in **Figure 1**.

[6 marks]

Extra space

Question 1 continues on the next page

Do not write outside the box

Figure 2 is in the insert. It shows the number of days when precipitation is high enough for plant growth across southern Africa in 2000 and that projected for 2050.

0 1 . 3 Using **Figure 2** and your own knowledge, assess the predicted impact of climate change upon life in this region.

[6 marks]

Extra space

Do not write outside the box

0 1 . 4 Assess the impact of farming practices on the carbon budget.

[20 marks]

Do not write outside the box

Extra space

Do not write outside the box

36

End of Section A

Turn over for Section B

Do not write outside the box

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 the role of cold ocean currents as a cause of aridity.

[4 marks]

Extra space

Do not write outside the box

Figure 3 is in the insert.

Figure 3 shows desertification risk levels by landscape type in an area of Tunisia, north Africa.

0 2 . 2 Analyse the relationship between landscape type and risk of desertification shown in **Figure 3**.

[6 marks]

Extra space

Question 2 continues on the next page

Do not write outside the box

Figure 4 shows a landscape near to Naein, central Iran.

Figure 4

0 2 . 3 Using **Figure 4** and your own knowledge, assess the view that low precipitation is the most important factor leading to the development of this landscape.

[6 marks]

Do not write outside the box

Extra space

Question 2 continues on the next page

Do not write outside the box

0 2 . 4 'Desertification trends are entirely a product of human-induced climate change as opposed to naturally occurring phenomena.'

To what extent do you agree with this view?

[20 marks]

Do not write outside the box

Extra space

Do not write outside the box

36

End of Question 2

Do not write outside the box

Question 3 **Coastal systems and landscapes**

0 3 . 1 Outline the process of sub-aerial weathering in the development of coastal landscapes.

[4 marks]

Extra space

Question 3 continues on the next page

Do not write outside the box

Figure 5 is in the insert.

Figure 5 shows the isostatic adjustment in 2010 (green arrows) for selected recording stations in Greenland. Information on the 2010 melting day anomaly is also shown.

0 3 . 2 Analyse the relationship between isostatic adjustment and the 2010 melting day anomaly in Greenland as shown in **Figure 5**.

[6 marks]

Extra space

Do not write outside the box

Figure 6 is a photograph of a coastal feature, taken in Malta in 2017.

Figure 6

0 3 . 3 Using **Figure 6** and your own knowledge, assess the view that rock type is the most important factor in the development of this landscape.

[6 marks]

Do not write outside the box

Extra space

Do not write outside the box

0 3 . 4 With reference to a coastal environment at a local scale, assess the predicted impact of climate change upon the landscape.

[20 marks]

Do not write outside the box

Extra space

Do not write outside the box

36

End of Question 3

Do not write outside the box

Question 4 Glacial systems and landscapes

0 4 . 1 Outline the geomorphological process of nivation.

[4 marks]

Extra space

Do not write outside the box

Figure 7 is in the insert.

Figure 7 shows the mean mass balance and cumulative mass balance for selected glaciers around the world.

0 4 . 2 Analyse the data shown in **Figure 7**.

[6 marks]

Extra space

Question 4 continues on the next page

Do not write outside the box

Figure 8 shows an area of tundra vegetation in the Sajama National Park, Bolivia.

Figure 8

0 4 . 3 Using **Figure 8** and your own knowledge, assess the view that temperature variation is the most significant factor in the development of this vegetation.

[6 marks]

Do not write outside the box

Extra space

Question 4 continues on the next page

Do not write outside the box

0 4 . 4 With reference to a glaciated landscape beyond the UK, assess the role of management in shaping alternative possible futures.

[20 marks]

Do not write outside the box

Extra space

Do not write outside the box

36

End of Question 4

End of Section B

Do not write outside the box

Section C

Answer **one** question in this section.

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

Question 5 **Hazards**

0 5 . 1 Outline the process of liquefaction.

[4 marks]

Extra space

Question 5 continues on the next page

Do not write outside the box

Figures 9a and **9b** are in the insert.

Figure 9a shows the number of global reported disasters between 1990 and 2017. It also shows the economic costs associated with the reported disasters.

Figure 9b shows information about the global reported disasters for 2017 as shown in **Figure 9a**.

0 5 . 2 Analyse the data shown in **Figure 9a** and **Figure 9b**.

[6 marks]

Extra space

Do not write outside the box

Figures 10a, **10b** and **10c** are in the insert.

Figure 10a shows the track of Hurricane Michael, and data related to the intensity and timescale of the event.

Figure 10b shows the track of Hurricane Michael between 9–12 October and the rainfall associated with the event.

Figure 10c shows the aftermath of the event at Mexico Beach in Florida, USA.

0 5 . 3 Using **Figures 10a**, **10b**, **10c** and your own knowledge, assess the potential issues associated with managing this event.

[9 marks]

Do not write outside the box

Extra space

0 5 . 4 'Seismic activity offshore will always present a greater threat to people than seismic activity on land.'

To what extent do you agree with this view?

[9 marks]

Do not write outside the box

Extra space

0 5 . 5 How far do you agree that storms and wildfires are increasing in frequency and intensity, presenting an increasing threat to people?

[20 marks]

Do not write outside the box

Do not write outside the box

Extra space

48

End of Question 5

Do not write outside the box

Question 6 Ecosystems under stress

0 6 . 1 Outline the process of succession in a lithosere.

[4 marks]

Extra space

Do not write outside the box

Figures 11a and **11b** are in the insert.

Figure 11a shows the global human footprint in 2009.

Figure 11b shows the change in the global human footprint between 1993 and 2009.

0 6 . 2 Analyse the data shown in **Figure 11a** and **Figure 11b**.

[6 marks]

Extra space

Question 6 continues on the next page

Do not write outside the box

Figures 12a, **12b** and **12c** are in the insert.

Figure 12a shows coral bleaching in the Great Barrier Reef (GBR), Australia, in 2016.

Figure 12b shows estimated change in sea water pH caused by human-created CO_2 between the 1700s and the 1990s.

Figure 12c shows the sea surface temperature anomaly for the Coral Sea, Australia, between 1900 and 2016.

0 6 . 3 Using **Figures 12a**, **12b**, **12c** and your own knowledge, assess the scale of the threat facing this coral reef.

[9 marks]

Do not write outside the box

Extra space

0 6 . 4 Assess the impact of declining biodiversity upon a major terrestrial biome that you have studied.

[9 marks]

Do not write outside the box

Extra space

0 6 . 5 With reference to a region experiencing ecological change, assess the role of human activity in securing a sustainable future.

[20 marks]

Do not write outside the box

Do not write outside the box

Extra space

48

END OF QUESTIONS

Do not write outside the box

There are no questions printed on this page

DO NOT WRITE ON THIS PAGE
ANSWER IN THE SPACES PROVIDED

Do not write outside the box

There are no questions printed on this page

DO NOT WRITE ON THIS PAGE
ANSWER IN THE SPACES PROVIDED

Copyright information

For confidentiality purposes, all acknowledgements of third-party copyright material are published in a separate booklet. This booklet is published after each live examination series and is available for free download from www.aqa.org.uk.

Permission to reproduce all copyright material has been applied for. In some cases, efforts to contact copyright-holders may have been unsuccessful and AQA will be happy to rectify any omissions of acknowledgements. If you have any queries please contact the Copyright Team.

Copyright © 2020 AQA and its licensors. All rights reserved.