A

Surname ______________________________

Other Names ______________________________

Centre Number ______________________________

Candidate Number ______________________________

Candidate Signature ______________________________

I declare this is my own work.

A-level
GEOGRAPHY
7037/1

Paper 1 Physical Geography

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.

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

[Turn over]

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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 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.

DO NOT TURN OVER UNTIL TOLD TO DO SO

SECTION A

Water and carbon cycles

Answer ALL questions in this section.

0 1 . 1

Explain the concept of negative feedback within the carbon cycle. [4 marks]

[Turn over]

FIGURE 1, on pages 2 and 3 of the insert, shows changes in the terrestrial water system in response to human activity and climate change between 2012 and 2016.

0 1 . 2

Analyse the changes in the terrestrial water system shown in FIGURE 1. [6 marks]

[Turn over]

FIGURE 2, on pages 4 and 5 of the insert, shows regional changes in forest cover between 1990 and 2010.

0 1 . 3

Using FIGURE 2 and your own knowledge, assess the challenges arising out of the changing forest cover.
[6 marks]

[Turn over]

0 1 . 4

‘Human activity needs to focus more on adapting to the expected negative impacts of climate change than on taking measures to restore atmospheric carbon to pre-industrial levels.’

How far do you agree with this view? [20 marks]

36

[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 the sources of water in deserts. [4 marks]

[Turn over]

FIGURES 3a and 3b are on pages 6 to 9 of the insert.

FIGURE 3a shows annual mean temperatures in Australia in 2018 compared to historical temperature observations.

FIGURE 3b shows annual rainfall in Australia in 2018 compared to historical rainfall observations.

0 2 . 2

Analyse the extent of the relationships shown in FIGURE 3a and FIGURE 3b. [6 marks]

[Turn over]

FIGURE 4, on page 10 of the insert, shows a landscape feature in the White Desert in western Egypt.

0 2 . 3

Using FIGURE 4 and your own knowledge, assess the role of wind in the development of this landscape.
[6 marks]

[Turn over]

0 2 . 4

How far can an understanding of systems in physical geography help to mitigate against the expansion of deserts into semi-arid areas? [20 marks]

36

[End of Question 2]

[Turn over]

QUESTION 3 Coastal systems and landscapes

0 3 . 1

Outline factors leading to the formation of fjords.
[4 marks]

[Turn over]

FIGURES 5a and 5b, are on pages 12 and 13 of the insert.

FIGURE 5a shows geographical variation in the 1992–2014 global sea level change using satellite data.

FIGURE 5b shows geographical variation in the 1992–2019 global sea level change using another source of satellite data.

0 3 . 2

Using only FIGURES 5a and 5b, evaluate the relative usefulness of these sources in demonstrating eustatic sea level change. [6 marks]

[Turn over]

FIGURE 6, on page 14 of the insert, is a photograph of part of the Mersey Estuary at Runcorn, Cheshire in 2019.

0 3 . 3

Using FIGURE 6 and your own knowledge, assess the view that deposition is the most important factor in the development of this landscape. [6 marks]

[Turn over]

0 3 . 4

With reference to a coastal landscape from beyond the UK, assess the role of human intervention in shaping the physical environment. [20 marks]

36

[End of Question 3]

[Turn over]

QUESTION 4 Glacial systems and landscapes

0 4 . 1

Outline processes leading to the formation of kames.
[4 marks]

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[Turn over]

FIGURES 7a and 7b, are on pages 16 and 17 of the insert.

FIGURE 7a shows the distribution, size and type of selected Himalayan glaciers.

FIGURE 7b shows the change in mass balance of the selected glaciers between 2000 and 2016.

0 4 . 2

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

[Turn over]

FIGURE 8, on page 18 of the insert, shows a glacial landscape feature, Striding Edge, in the Lake District National Park, England.

0 4 . 3

Using FIGURE 8 and your own knowledge, assess the role of erosion in the development of this landscape feature. [6 marks]

[Turn over]

0 4 . 4

‘Human activity is having a devastating impact upon cold environments with little evidence of a sustainable future emerging.’

To what extent do you agree with this view? [20 marks]

36

[End of Question 4]

[Turn over]

SECTION C

Answer ONE question in this section.

Answer EITHER Question 5 OR Question 6.

QUESTION 5 Hazards

0 5 . 1

Outline factors which lead to the formation of mudflows, a volcanic hazard. [4 marks]

[Turn over]

FIGURE 9, on page 19 of the insert, shows responses by some companies and individuals to the Haiti earthquake, 2010.

0 5 . 2

Analyse the data shown in FIGURE 9. [6 marks]

[Turn over]

FIGURES 10a, 10b and 10c are on pages 20 to 25 of the insert.

FIGURES 10a, 10b and 10c show data related to coastal flooding risk in Louisiana, USA, based upon a 2017 master plan. The information is based upon a 1 in 100 year extreme flood event.

0 5 . 3

Using FIGURES 10a, 10b, 10c and your own knowledge, assess the challenges in managing flood risk associated with tropical storms in Louisiana. [9 marks]

0 5 . 4

Assess the usefulness of prediction in the management of wildfire. [9 marks]

0 5 . 5

‘Seismic hazards will always be harder to manage than volcanic hazards due to their unpredictability and scale.’

To what extent do you agree with this view? [20 marks]

48

[End of Question 5]

[Turn over]

QUESTION 6 Ecosystems under stress

0 6 . 1

Outline the concept of climatic climax in vegetation succession. [4 marks]

[Turn over]

FIGURE 11a and FIGURE 11b are on pages 26 and 27 of the insert.

FIGURE 11a shows the cause of deforestation in equatorial west Africa, 2000–2014.

FIGURE 11b shows national estimates of forest loss by area and cause in equatorial west Africa, 2000–2014.

0 6 . 2

Analyse the data shown in FIGURE 11a and FIGURE 11b.
[6 marks]

[Turn over]

FIGURE 12, on pages 28 to 31 of the insert, shows a range of issues facing game parks and reserves in Kenya, east Africa.

0 6 . 3

Using FIGURE 12 and your own knowledge, assess the implications of this data for sustainability in areas of savanna grassland in east Africa. [9 marks]

0 6 . 4

Analyse the interconnections between climate, vegetation and soils in the development of temperate deciduous woodland. [9 marks]

0 6 . 5

With reference to an ecosystem at a local scale, evaluate the extent to which management has created a viable future for the area. [20 marks]

48

END OF QUESTIONS

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For Examiner's Use	
Section	Mark
A	
B	
C	
TOTAL	

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