



Oxford Cambridge and RSA

Wednesday 17 May 2023 – Morning

A Level Geography

H481/01 Physical systems

Time allowed: 1 hour 30 minutes



You must have:

- the OCR 12-page Answer Booklet
- the Resource Booklet (inside this document)

You can use:

- a ruler (cm/mm)
- a scientific or graphical calculator

INSTRUCTIONS

- Use black ink. You can use an HB pencil, but only for graphs and diagrams.
- Write your answer to each question in the Answer Booklet. The question numbers must be clearly shown.
- Fill in the boxes on the front of the Answer Booklet.
- Choose **one** option in Section A and answer **all** the questions for that option. Answer **all** the questions in Section B.

INFORMATION

- The total mark for this paper is **66**.
- The marks for each question are shown in brackets [].
- Quality of extended response will be assessed in questions marked with an asterisk (*).
- This document has **8** pages.

ADVICE

- Try to answer every part of each question you choose.
- Read each question carefully before you start your answer.

Section A

Landscape Systems

Choose **one** option and answer **all** the parts of the question in your chosen option.

Option A – Coastal Landscapes

- 1 (a) With reference to a **case study** of **one** coastal landscape that is being used by people, explain the reasons for the economic development taking place. [8]
- (b) Study **Table 1**, which shows mean monthly wind speed for a coastal location in South Africa for 11 months during 2019.

Table 1

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Mean wind speed (m/sec)	6.1	5.2	4.5	4.5	3.6	3.8	4.4	4.4	5.3	5.5	5.5

- (i) Using the data in **Table 1**, calculate the median.
You must show your working. [2]
- (ii) Using the data in **Table 1**, calculate the interquartile range.
You must show your working. [2]
- (iii) The mean wind speed for December 2019 was 9.4 m/sec.
Interpret this value with reference to the interquartile range for the data in **Table 1**. [2]
- (c) Study **Fig. 1**, a coastal landscape in England.
With reference to **Fig. 1**, explain **one** way flows of material influence the formation of landform **A**. [3]
- (d)* Discuss the relative importance of geomorphic processes in forming coastal landforms. [16]

Option B – Glaciated Landscapes

- 2 (a) With reference to a **case study** of **one** glaciated landscape that is being used by people, explain the reasons for the human activity taking place. [8]
- (b) Study **Table 2**, which shows mean monthly precipitation for a glaciated location in Canada for 11 months during 2019.

Table 2

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Mean precipitation (mm)	250	210	190	185	140	120	110	160	240	390	280

- (i) Using the data in **Table 2**, calculate the median.
You must show your working. [2]
- (ii) Using the data in **Table 2**, calculate the interquartile range.
You must show your working. [2]
- (iii) The mean monthly precipitation for December 2019 was 370 mm.
Interpret this value with reference to the interquartile range for the data in **Table 2**. [2]
- (c) Study **Fig. 2**, a glaciated landscape in England.
With reference to **Fig. 2**, explain **one** way flows of material influence the formation of landform **B**. [3]
- (d)* Discuss the relative importance of geomorphic processes in forming glacial landforms. [16]

Option C – Dryland Landscapes

- 3 (a) With reference to a **case study** of **one** dryland landscape that is being used by people, explain the reasons for the economic activity taking place. [8]
- (b) Study **Table 3**, which shows mean monthly precipitation for a dryland location in Australia for 11 months during 2019.

Table 3

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Mean precipitation (mm)	45	35	30	10	15	1	8	8	9	18	30

- (i) Using the data in **Table 3**, calculate the median.
You must show your working. [2]
- (ii) Using the data in **Table 3**, calculate the interquartile range.
You must show your working. [2]
- (iii) The mean monthly precipitation for December 2019 was 40 mm.
Interpret this value with reference to the interquartile range for the data in **Table 3**. [2]
- (c) Study **Fig. 3**, a dryland landscape in the USA.
With reference to **Fig. 3**, explain **one** way flows of material influence the formation of landform **C**. [3]
- (d)* Discuss the relative importance of geomorphic processes in forming dryland landforms. [16]

Section B**Earth's Life Support Systems**

- 4 (a)** Study **Fig. 4**, which shows spring snowmelt timing in Alaska 1999–2015.
- (i)** Using evidence from **Fig. 4**, identify **three** limitations of the data presentation method. **[3]**
 - (ii)** With reference to **Fig. 4**, suggest **one** way this seasonal change affects the water cycle in the Arctic tundra. **[2]**
 - (iii)** With reference to **Fig. 4**, suggest **one** way this seasonal change affects the carbon cycle in the Arctic tundra. **[2]**
- (b)** Examine how temperature affects flows and stores in the carbon cycle of a tropical rainforest. **[10]**
- (c)*** To what extent do human factors enhance rather than disturb the natural processes and stores in the water cycle? **[16]**

END OF QUESTION PAPER

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