OCR
Oxford Cambridge and RSA

Wednesday 17 May 2023 – Morning

A Level Geography

H481/01 Physical systems

Time allowed: 1 hour 30 minutes

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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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