

# 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**

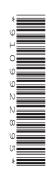
- Use black ink. You can use an HB pencil, but only for graphs and diagrams.
- Write your answer to each question in the Answer Booklet. The question numbers must be clearly shown.
- · Fill in the boxes on the front of the Answer Booklet.
- Choose one option in Section A and answer all the questions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