



Oxford Cambridge and RSA

**Thursday 16 May 2024 – 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) Explain the influence of flows of materials in the formation of a stack. [8]
- (b) Study **Table 1** which shows data a student collected during fieldwork in a coastal landscape.

**Table 1 Results of a litter survey in a coastal National Park**

1 m by 1 m quadrats were used to survey litter across a 12 m transect of a beach.  
Readings were taken every 2 m.

| Distance from start | 2 m | 4 m | 6 m | 8 m | 10 m | 12 m |
|---------------------|-----|-----|-----|-----|------|------|
| Plastic waste (%)   | 10  | 1   | 25  | 45  | 30   | 5    |
| Paper waste (%)     | 50  | 0   | 30  | 5   | 15   | 0    |
| Other waste (%)     | 0   | 5   | 10  | 5   | 20   | 5    |
| No litter (%)       | 40  | 94  | 35  | 45  | 35   | 90   |

- (i) Using **Table 1**, calculate the median for the percentage of plastic waste. [2]
- (ii) Explain **one** limitation of the data set in **Table 1**. [2]
- (iii) Suggest another data presentation method that would be suitable for this data set and justify your choice. [2]
- (c) Study **Fig. 1**, a coastal landscape in the United Kingdom.
- Referring to **Fig. 1**, suggest **one** way human activity might influence geomorphic processes in the landscape system. [3]
- (d)\* To what extent is sea level rise the most important factor influencing coastal landscapes? [16]

**Option B – Glaciated Landscapes**

2

- (a) Explain the influence of flows of materials in the formation of a corrie. [8]
- (b) Study **Table 2** which shows data a student collected during fieldwork in a glaciated landscape.

**Table 2 Results of a litter survey in an upland glaciated National Park**

1 m by 1 m quadrats were used to survey litter across a 12 m transect of a hillside. Readings were taken every 2 m.

| Distance from start | 2 m | 4 m | 6 m | 8 m | 10 m | 12 m |
|---------------------|-----|-----|-----|-----|------|------|
| Plastic waste (%)   | 10  | 1   | 25  | 45  | 30   | 5    |
| Paper waste (%)     | 50  | 0   | 30  | 5   | 15   | 0    |
| Other waste (%)     | 0   | 5   | 10  | 5   | 20   | 5    |
| No litter (%)       | 40  | 94  | 35  | 45  | 35   | 90   |

- (i) Using **Table 2**, calculate the median for the percentage of plastic waste. [2]
- (ii) Explain **one** limitation of the data set in **Table 2**. [2]
- (iii) Suggest another data presentation method that would be suitable for this data set and justify your choice. [2]
- (c) Study **Fig. 2**, a periglacial landscape in Russia.

Referring to **Fig. 2**, suggest **one** way human activity might influence geomorphic processes in the landscape system. [3]

- (d)\* To what extent is climate change the most important factor influencing glacial landscapes? [16]

### Option C – Dryland Landscapes

3

- (a) Explain the influence of flows of materials in the formation of a canyon. [8]
- (b) Study **Table 3** which shows data a student collected during fieldwork in a dryland landscape.

**Table 3 Results of a litter survey in a desert National Park**

1 m by 1 m quadrats were used to survey litter across a 12 m transect of a hillside. Readings were taken every 2 m.

| Distance from start | 2 m | 4 m | 6 m | 8 m | 10 m | 12 m |
|---------------------|-----|-----|-----|-----|------|------|
| Plastic waste (%)   | 10  | 1   | 25  | 45  | 30   | 5    |
| Paper waste (%)     | 50  | 0   | 30  | 5   | 15   | 0    |
| Other waste (%)     | 0   | 5   | 10  | 5   | 20   | 5    |
| No litter (%)       | 40  | 94  | 35  | 45  | 35   | 90   |

- (i) Using **Table 3**, calculate the median for the percentage of plastic waste. [2]
- (ii) Explain **one** limitation of the data set in **Table 3**. [2]
- (iii) Suggest another data presentation method that would be suitable for this data set and justify your choice. [2]
- (c) Study **Fig. 3**, a dryland landscape in Namibia.

Referring to **Fig. 3**, suggest **one** way human activity might influence geomorphic processes in the landscape system. [3]

- (d)\* To what extent is climate change the most important factor influencing dryland landscapes? [16]

**Section B – Earth’s Life Support Systems**

4

- (a) Study **Fig. 4**, which shows human activity (farming) in a tropical rainforest in Vietnam.

Referring to **Fig. 4**, suggest how human activity might affect nutrient stores in the tropical rainforest. [4]

- (b) Study **Fig. 5**, which shows variations in evapotranspiration rates over a 3-year period.

Explain **three** limitations of using this method of data presentation to show evapotranspiration rates. [3]

- (c) Examine how seasonal change affects flows in the water cycle in the Arctic tundra. [10]

- (d)\* ‘Land-use changes have a greater influence than fossil fuel combustion on the carbon cycle.’ Discuss. [16]

**END OF QUESTION PAPER**

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