

A Level Geography

H481/01 Physical systems

Sample Question Paper

Date – Morning/Afternoon

Time allowed: 1 hour 30 minutes

You must have:

- the Resource Booklet
- the OCR 12-page Answer Booklet
(OCR 12 sent with general stationary)

You may use:

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



INSTRUCTIONS

- Use black ink. You may use an HB pencil for graphs and diagrams.
- Section A: Choose **one** option and answer **all** parts of the question in the option.
- Section B: Answer **all** questions.
- Write your answer to each question in the Answer Booklet.
- Additional paper may be used if required but you must clearly show your candidate number, centre number and question number(s).
- Do **not** write in the bar codes.
- The separate Resource Booklet will be found inside this document.

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 (*).
- This document consists of **8** pages.

Section A – Landscape Systems

Answer **all** questions from **one** option.

Option A – Coastal landscapes

- 1 (a) Explain the influence of sea level rise and geomorphic processes in the formation of rias.

[8]

- (b) Study **Table 1**, which shows wave height off the coast in the United Kingdom on 28th November 2015.

Time	0100	0300	0500	0700	0900	1100	1300	1500	1700	1900	2100	2300
Wave height (m)	3	3	2	2	3	5	4	4	5	5	6	6

Table 1 Wave height off the coast in the United Kingdom on 28th November 2015

- (i) Calculate the mean wave height for the data shown in **Table 1**.
You must show your working.
- (ii) Calculate the standard deviation for the data shown in **Table 1**.
You must show your working and give your answer to 2 decimal places.

[2]

[4]

- (c) Study **Fig. 1**, a coastal landscape in the United Kingdom.

With reference to **Fig. 1**, explain which geomorphic processes are the most influential in forming landform **A**.

[3]

- (d)* 'Human activity influences coastal landscape systems more than physical factors'. To what extent do you agree with this statement?

[16]

Option B – Glaciated landscapes

- 2 (a) Explain the influence of climate changes and geomorphic processes in the formation of eskers.

[8]

- (b) Study **Table 2**, which shows monthly precipitation for a glaciated landscape in Norway.

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Precipitation (cm)	4	4	5	4	4	7	8	10	9	9	6	2

Table 2 Monthly precipitation for a glaciated landscape in Norway

- (i) Calculate the mean monthly precipitation for the data shown in **Table 2**. You must show your working.

[2]

- (ii) Calculate the standard deviation for the data shown in **Table 2**. You must show your working and give your answer to 2 decimal places.

[4]

- (c) Study **Fig. 2**, a glaciated landscape in Norway.

With reference to **Fig. 2**, explain which geomorphic processes are the most influential in forming landform **B**.

[3]

- (d)* 'Human activity influences glaciated landscape systems more than physical factors'. To what extent do you agree with this statement?

[16]

Option C – Dryland landscapes

- 3 (a) Explain the influence of pluvial conditions and geomorphic processes in the formation of inselbergs.

[8]

- (b) Study **Table 3**, which shows monthly average wind speed for a dryland landscape in Algeria.

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Wind speed (knots)	3	3	6	1	6	7	5	9	9	8	2	1

Table 3 Monthly average wind speed for a dryland landscape in Algeria

- (i) Calculate the mean monthly wind speed for the data shown in **Table 3**. You must show your working.

[2]

- (ii) Calculate the standard deviation for the data shown in **Table 3**. You must show your working and give your answer to 2 decimal places.

[4]

- (c) Study **Fig. 3**, a dryland landscape in Algeria.

With reference to **Fig. 3**, explain which geomorphic processes are the most influential in forming landform **C**.

[3]

- (d)* 'Human activity influences dryland landscape systems more than physical factors'. To what extent do you agree with this statement?

[16]

Section B – Earth's Life Support Systems

Answer **all** questions

- 4** **(a)** Study **Fig. 4**, atmospheric CO₂ changes 1700-2015.
- Suggest how the changing CO₂ concentrations shown in **Fig. 4** influence global management strategies for the carbon cycle.
- [4]**
- (b)** Explain **three** benefits of mapping rates of deforestation using Geographical Information Systems (GIS).
- [3]**
- (c)** Examine the significance of the role of vegetation in linking the water and carbon cycles.
- [10]**
- (d)*** “Human factors affect the water cycle more significantly in the tropical rainforest than in the Arctic tundra”. Discuss.
- [16]**

END OF QUESTION PAPER

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