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Cambridge Assessment International Education

Cambridge International AS & A Level

GEOGRAPHY **9696/13**

Paper 1 Core Physical Geography **October/November 2025**

1 hour 30 minutes

You must answer on the enclosed answer booklet.

You will need: Answer booklet (enclosed)
Insert (enclosed)

INSTRUCTIONS

- Answer **four** questions in total:
  - Section A: answer **all** questions.
  - Section B: answer **one** question.
- Follow the instructions on the front cover of the answer booklet. If you need additional answer paper, ask the invigilator for a continuation booklet.
- Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.

INFORMATION

- The total mark for this paper is 60.
- The number of marks for each question or part question is shown in brackets [ ].
- The insert contains all the resources referred to in the questions.

This document has **4** pages. Any blank pages are indicated.

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Section A

Answer **all** questions in this section. All questions are worth 10 marks.

Hydrology and fluvial geomorphology

1 Fig. 1.1 shows river discharge and flood recurrence intervals for River Logone, Chad, Africa, 1 January 2021 to 1 October 2023.

(a) Calculate the difference in discharge between the 1.5-year flood recurrence interval and the 10-year flood recurrence interval shown in Fig. 1.1. Show your working. [2]

(b) Describe the pattern of river discharge shown in Fig. 1.1. [3]

(c) Explain why the annual hydrograph of a river might vary. [5]

Atmosphere and weather

2 Fig. 2.1 shows the differences in global average surface temperatures, 1880–2022, from the 1901–2000 average.

(a) State the maximum negative difference in global average surface temperatures shown in Fig. 2.1. [1]

(b) Describe the pattern of differences in global average surface temperatures shown in Fig. 2.1. [4]

(c) Explain the pattern of differences in global average surface temperatures between 1980 and 2022 as shown in Fig. 2.1. [5]

Rocks and weathering

3 Fig. 3.1 is a photograph which shows a weathered rock.

(a) Draw a sketch of the weathered rock shown in Fig. 3.1. Label the main features. [4]

(b) Suggest how **one** process might have weathered the rock shown in Fig. 3.1. [3]

(c) Briefly explain **one** way that vegetation can weather rocks. [3]

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Section B

Answer **one** question from this section. All questions are worth 30 marks.

Hydrology and fluvial geomorphology

4 **(a)** **(i)** Describe the process of stemflow. [3]

(ii) Explain how river levées are formed. [4]

(b) Explain how the soils and rock type in a drainage basin might affect the shape of a storm hydrograph. [8]

(c) 'Wetland and riverbank conservation are the most effective ways of reducing the impacts of river floods.'

With the aid of examples, how far do you agree with this statement? [15]

Atmosphere and weather

5 **(a)** **(i)** Describe how the uplift of air might lead to precipitation. [3]

(ii) Explain the daytime energy budget. [4]

(b) Explain why some latitudes experience radiation excesses and some latitudes experience radiation deficits. [8]

(c) With the aid of examples, to what extent does human activity influence patterns of temperature in urban areas? [15]

Rocks and weathering

6 **(a)** **(i)** Describe the process of sea floor spreading. [3]

(ii) Explain how sheetwash occurs on slopes. [4]

(b) Describe and explain the formation of volcanic island arcs. [8]

(c) 'Water is the main cause of mass movement on slopes.'

With the aid of examples, how far do you agree with this statement? [15]

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