



Cambridge International AS & A Level

GEOGRAPHY

9696/11

Paper 1 Core Physical Geography

October/November 2024

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.

Section A

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

Hydrology and fluvial geomorphology

1 Fig. 1.1 shows the intensity of flooding of parts of the Mississippi River and Ohio River, USA, between 1985 and 2020.

(a) Name the type of channel within area A shown in Fig. 1.1. [1]

(b) Compare the extent and intensity of flooding of the Mississippi River and Ohio River shown in Fig. 1.1. [4]

(c) Explain how changes in land use might cause a river to flood. [5]

Atmosphere and weather

2 Fig. 2.1 shows seasonal changes in snow cover in North America, 1975–2020.

(a) Which season shows the greatest change in snow cover for the period 1975 to 2020? [1]

(b) Compare the trends in seasonal snow cover shown in Fig. 2.1. [4]

(c) Explain the formation of snow. [5]

Rocks and weathering

3 Fig. 3.1 is a photograph which shows a mass movement in the Isle of Wight, UK.

(a) Name the type of mass movement shown in Fig. 3.1. [1]

(b) Draw a sketch of the mass movement shown in Fig. 3.1. Label the main features. [4]

(c) Suggest reasons why the mass movement shown in Fig. 3.1 occurred. [5]

Section B

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

Hydrology and fluvial geomorphology

4 (a) (i) Describe how throughflow occurs on slopes. [3]

(ii) Explain how slopes affect the shape of a storm hydrograph. [4]

(b) Describe **and** explain the formation of gorges. [8]

(c) 'Soft engineering can reduce the impacts of river floods but cannot prevent them.'

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

Atmosphere and weather

5 (a) (i) Describe the atmospheric process of convection. [3]

(ii) Explain how fog can form. [4]

(b) Describe **and** explain how energy is transferred in the atmosphere by wind belts. [8]

(c) 'The most significant effect of human activity on urban climates is on temperature.'

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

Rocks and weathering

6 (a) (i) Define the weathering terms *heating/cooling* and *hydration*. [4]

(ii) Briefly explain how rockfalls occur on slopes. [3]

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

(c) With the aid of examples, assess the extent to which rainfall is the most important factor affecting the type **and** rate of weathering. [15]

BLANK PAGE

The boundaries and names shown, the designations used and the presentation of material on any maps contained in this question paper/insert do not imply official endorsement or acceptance by Cambridge Assessment International Education concerning the legal status of any country, territory, or area or any of its authorities, or of the delimitation of its frontiers or boundaries.

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge Assessment International Education Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cambridgeinternational.org after the live examination series.

Cambridge Assessment International Education is part of Cambridge Assessment. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate (UCLES), which is a department of the University of Cambridge.