



Cambridge International AS & A Level

GEOGRAPHY

9696/12

Paper 1 Core Physical Geography

October/November 2021

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 is a photograph which shows a river flooding.
- (a) Name the feature:
- (i) labelled X [1]
 - (ii) between Y and Z. [1]
- (b) Describe the features of the flooding shown in Fig. 1.1. [3]
- (c) Suggest the factors that led to the flooding shown in Fig. 1.1. [5]

Atmosphere and weather

- 2 Fig. 2.1 shows predicted increased impacts of hazards as a result of global warming, in the USA, 2050.
- (a) Which part of the USA is predicted to be most affected by an increase in precipitation? [1]
- (b) Describe the pattern of predicted increased impacts of hazards shown in Fig. 2.1. [3]
- (c) Examine how global warming might explain **two** of the predicted increased impacts of hazards shown in Fig. 2.1. [6]

Rocks and weathering

- 3 Fig. 3.1 shows three types of mass movement.
- (a) Name the type of mass movement labelled A. [1]
- (b) Compare the features of the mass movements labelled B and C in Fig. 3.1. [4]
- (c) Suggest how mass movement B shown in Fig. 3.1 formed. [5]

Section B

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

Hydrology and fluvial geomorphology

- 4 (a) (i) Define the fluvial terms *laminar flow* and *evapotranspiration*. [4]
- (ii) Briefly explain why abrasion/corrasion varies along a river channel. [3]
- (b) Explain the relationship between riffle and pool sequences in meandering river channels. [8]
- (c) 'Climate is the most important factor influencing flows and stores in a drainage basin system.'
With the aid of examples, how far do you agree? [15]

Atmosphere and weather

- 5 (a) (i) Define the atmospheric terms *deposition* and *sensible heat transfer*. [4]
- (ii) Briefly explain radiation cooling. [3]
- (b) Explain how human activity affects precipitation and winds in urban areas. [8]
- (c) With the aid of examples, assess the view that latitude is the most important factor in seasonal variations in pressure and wind belts. [15]

Rocks and weathering

- 6 (a) (i) Contrast continental and oceanic tectonic plates. [4]
- (ii) Briefly explain the distribution of volcanic island arcs. [3]
- (b) Explain how afforestation and slope grading can reduce mass movements on slopes. [8]
- (c) 'Temperature is the most important factor affecting the type and rate of weathering.'
With the aid of examples, how far do you agree? [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 the Cambridge Assessment Group. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate (UCLES), which itself is a department of the University of Cambridge.