



Cambridge International AS & A Level

GEOGRAPHY

9696/12

Paper 1 Core Physical Geography

May/June 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 shows a storm hydrograph.
- (a) (i) State when maximum precipitation occurred in Fig. 1.1. [1]
- (ii) Identify feature A of the storm hydrograph shown in Fig. 1.1. [1]
- (b) Describe how the storm hydrograph in Fig. 1.1 might change following deforestation in the area. [4]
- (c) Explain reasons for the changes you described in (b). [4]

Atmosphere and weather

- 2 Fig. 2.1 is a photograph which shows a type of precipitation.
- (a) Describe the characteristics of the type of precipitation shown in Fig. 2.1. [2]
- (b) Briefly explain the formation of the type of precipitation shown in Fig. 2.1. [3]
- (c) Explain how orographic uplift of air can lead to precipitation. [5]

Rocks and weathering

- 3 Fig. 3.1 shows tectonic plate boundaries in East Asia.
- (a) (i) Identify the plate boundary at X in Fig. 3.1. [1]
- (ii) Name the process at Y in Fig. 3.1. [1]
- (b) Draw a cross section of the plate boundary at line Z. Label the main features. [4]
- (c) Explain the formation of **one** landform associated with the type of plate boundary shown at X in Fig. 3.1. [4]

Section B

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

Hydrology and fluvial geomorphology

- 4 (a) (i) Describe **two** ways that sediment is transported in rivers. [4]
- (ii) Describe a riffle and pool sequence in a river channel. [3]
- (b) Explain how a river flood can impact the natural (physical) environment. [8]
- (c) 'Water abstraction by human activities is the main influence on the groundwater store.'
With the aid of examples, how far do you agree? [15]

Atmosphere and weather

- 5 (a) (i) Define the atmospheric terms *evaporation* and *convection*. [4]
- (ii) Briefly explain the latitudinal radiation surplus in the global energy budget. [3]
- (b) Explain the seasonal variation in global pressure belts. [8]
- (c) 'The most significant effect of human activity on urban climates is on wind.'
With the aid of examples, how far do you agree? [15]

Rocks and weathering

- 6 (a) (i) Describe the characteristics of a mass movement flow. [4]
- (ii) Describe the process of a mass movement heave. [3]
- (b) Explain how rainfall influences the type and rate of weathering. [8]
- (c) With the aid of examples, assess the extent to which mass movement can be reduced. [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.