



# Cambridge International AS & A Level

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## 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)

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### 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.

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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]

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