



# Cambridge International AS & A Level

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## 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)

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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 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]

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