



# Cambridge International AS & A Level

## GEOGRAPHY

9696/11

Paper 1 Core Physical Geography

May/June 2020

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. Blank pages are indicated.

## 2

## Section A

Answer **all** questions in this section. All questions carry 10 marks.

**Hydrology and fluvial geomorphology**

1 Fig. 1.1 shows part of a drainage basin system.

(a) Using Fig. 1.1, name:

(i) feature A [1]

(ii) flow B. [1]

(b) With reference to Fig. 1.1, describe **two** types of above ground flow. [4]

(c) Explain why channel storage may change over time. [4]

**Atmosphere and weather**

2 Fig. 2.1 shows a simplified diagram of one part of the energy budget over land and sea.

(a) Using Fig. 2.1:

(i) calculate the value of energy at A in  $\text{W/m}^2$  [1]

(ii) name transfer B. [1]

(b) With reference to Fig. 2.1, describe the path of incoming (shortwave) solar radiation. [4]

(c) Explain why reflected solar radiation may vary over time. [4]

**Rocks and weathering**

3 Fig. 3.1 is a photograph which shows a slope being modified to reduce mass movement.

(a) Identify **two** methods of slope modification shown in the photograph in Fig. 3.1. [2]

(b) Describe how **one** method of slope modification in Fig. 3.1 increases the stability of the slope. [3]

(c) Explain the role of water in the movement of sediment on a hillslope. [5]

## 3

## Section B

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

**Hydrology and fluvial geomorphology**

- 4 (a) (i) Describe **one** way a spring is formed in an area. [3]
- (ii) Briefly explain why some parts of a river are braided. [4]
- (b) Explain the formation of floodplains **and** river bluffs. [8]
- (c) With the aid of examples, assess the extent to which drainage basin size and shape influence flood risk. [15]

**Atmosphere and weather**

- 5 (a) (i) Define the atmospheric terms *evaporation* and *radiation cooling*. [4]
- (ii) Briefly describe how ocean currents affect the atmospheric transfer of energy. [3]
- (b) Explain how frontal uplift of air **and** orographic uplift of air cause precipitation. [8]
- (c) 'The causes of global warming are only a result of human factors.'
- With the aid of examples, how far do you agree? [15]

**Rocks and weathering**

- 6 (a) (i) Define the weathering terms *pressure release (dilatation)* and *freeze-thaw*. [4]
- (ii) Briefly explain why some rock types are more affected by the weathering process of carbonation. [3]
- (b) Explain how vegetation **and** relief affect the type of weathering. [8]
- (c) 'All plate tectonic landforms are the result of subduction.'
- With the aid of examples, how far do you agree? [15]

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