



Cambridge International AS & A Level

GEOGRAPHY

9696/11

Paper 1 Core Physical Geography

October/November 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.

Section A

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

Hydrology and fluvial geomorphology

- 1 Fig. 1.1 shows some components of the drainage basin system.
- (a) Using Fig. 1.1, name:
- (i) A [1]
- (ii) B. [1]
- (b) Describe the process of throughflow in the drainage basin system. [3]
- (c) Use Fig. 1.1 to explain how land use can affect the movement of water in a drainage basin. [5]

Atmosphere and weather

- 2 Fig. 2.1 shows an energy balance for a rural area and for an urban area.
- (a) State **two** differences in the energy balance between the rural area and the urban area shown in Fig. 2.1. [2]
- (b) Use Fig. 2.1 to calculate the maximum difference between incoming (shortwave) solar radiation and reflected solar radiation. Show your working. [2]
- (c) Explain why temperatures in urban areas are often higher than in surrounding areas. [6]

Rocks and weathering

- 3 Fig. 3.1 is a photograph which shows several mass movements on a slope in Malaysia.
- (a) Identify **two** mass movements shown in Fig. 3.1. [2]
- (b) Suggest how **one** mass movement shown in Fig. 3.1 might have occurred. [4]
- (c) Explain how slopes may be modified to reduce mass movement. [4]

Section B

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

Hydrology and fluvial geomorphology

- 4 (a) (i) Define the fluvial terms *cavitation* and *traction*. [4]
- (ii) Briefly describe the conditions required for river beds to be eroded. [3]
- (b) Explain the formation of levées and floodplains. [8]
- (c) With the aid of examples, evaluate attempts to reduce the impact of river floods. [15]

Atmosphere and weather

- 5 (a) (i) Define the atmospheric terms *longwave radiation* and *convection*. [4]
- (ii) Briefly explain the formation of dew. [3]
- (b) Explain the latitudinal pattern of radiation excesses and deficits. [8]
- (c) 'The atmospheric impact of global warming depends on latitude.'
With the aid of examples, how far do you agree? [15]

Rocks and weathering

- 6 (a) (i) Briefly describe the weathering process of pressure release (dilatation). [3]
- (ii) Explain how ocean trenches are formed. [4]
- (b) Explain the movement of material on slopes. [8]
- (c) 'Rainfall is the most important factor in the weathering of rocks.'
With the aid of examples, how far do you agree? [15]

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