

Cambridge International AS & A Level

GEOGRAPHY

9696/13

Paper 1 Core Physical Geography

October/November 2024

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 diagram of a delta in a lake under two climatic conditions.
- (a) Identify feature A shown in Fig. 1.1. [1]
 - (b) Compare the characteristics of the deltas shown in Fig. 1.1. [4]
 - (c) Explain the factors that influence the size and shape of deltas. [5]

Atmosphere and weather

- 2 Fig. 2.1 shows changes in the difference between summer and winter temperatures, 1979–2016.
- (a) State the change in the difference between summer and winter temperatures for location X shown in Fig. 2.1. [1]
 - (b) Describe the global distribution of the changes in the difference between summer and winter temperatures shown in Fig. 2.1. [4]
 - (c) Explain why temperatures are increasing globally. [5]

Rocks and weathering

- 3 Fig. 3.1 shows models of different types of mass movements.
- (a) State the type of mass movement shown in Fig. 3.1 that has the fastest speed under the driest conditions. [1]
 - (b) Describe the relationships between the type of mass movement, speed and moisture content shown in Fig. 3.1. [4]
 - (c) Explain how water influences mass movement. [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 *saltation* and *cavitation*. [4]
- (ii) Briefly explain the process of solution within a river channel. [3]
- (b) Explain the factors influencing stores in a drainage basin system. [8]
- (c) With the aid of examples, assess the view that soft engineering is less effective than hard engineering in reducing river flooding. [15]

Atmosphere and weather

- 5 (a) (i) State **three** characteristics of wind belts. [3]
- (ii) Explain how ocean currents contribute to the global atmospheric transfer of energy. [4]
- (b) Describe **and** explain the main factors that affect the diurnal energy budget. [8]
- (c) With the aid of examples, how far do you agree that convection is the main cause of precipitation? [15]

Rocks and weathering

- 6 (a) (i) Describe the process of rainsplash on slopes. [3]
- (ii) Explain how netting helps to reduce mass movement on slopes. [4]
- (b) Explain how the Peltier diagram can be used to study the effect of climate on weathering processes. [8]
- (c) Assess the extent to which fold mountains are the main landforms associated with convergent plate boundaries. [15]

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