



Cambridge International AS & A Level

GEOGRAPHY

9696/11

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 the intensity of flooding of parts of the Mississippi River and Ohio River, USA, between 1985 and 2020.
- (a) Name the type of channel within area A shown in Fig. 1.1. [1]
- (b) Compare the extent and intensity of flooding of the Mississippi River and Ohio River shown in Fig. 1.1. [4]
- (c) Explain how changes in land use might cause a river to flood. [5]

Atmosphere and weather

- 2 Fig. 2.1 shows seasonal changes in snow cover in North America, 1975–2020.
- (a) Which season shows the greatest change in snow cover for the period 1975 to 2020? [1]
- (b) Compare the trends in seasonal snow cover shown in Fig. 2.1. [4]
- (c) Explain the formation of snow. [5]

Rocks and weathering

- 3 Fig. 3.1 is a photograph which shows a mass movement in the Isle of Wight, UK.
- (a) Name the type of mass movement shown in Fig. 3.1. [1]
- (b) Draw a sketch of the mass movement shown in Fig. 3.1. Label the main features. [4]
- (c) Suggest reasons why the mass movement shown in Fig. 3.1 occurred. [5]

Section B

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

Hydrology and fluvial geomorphology

- 4 (a) (i) Describe how throughflow occurs on slopes. [3]
- (ii) Explain how slopes affect the shape of a storm hydrograph. [4]
- (b) Describe **and** explain the formation of gorges. [8]
- (c) 'Soft engineering can reduce the impacts of river floods but cannot prevent them.'
With the aid of examples, how far do you agree with this statement? [15]

Atmosphere and weather

- 5 (a) (i) Describe the atmospheric process of convection. [3]
- (ii) Explain how fog can form. [4]
- (b) Describe **and** explain how energy is transferred in the atmosphere by wind belts. [8]
- (c) 'The most significant effect of human activity on urban climates is on temperature.'
With the aid of one or more examples, how far do you agree with this statement? [15]

Rocks and weathering

- 6 (a) (i) Define the weathering terms *heating/cooling* and *hydration*. [4]
- (ii) Briefly explain how rockfalls occur on slopes. [3]
- (b) Describe **and** explain the formation of volcanic island arcs. [8]
- (c) With the aid of examples, assess the extent to which rainfall is the most important factor affecting the type **and** rate of weathering. [15]

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