



# Cambridge International AS & A Level

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## GEOGRAPHY

9696/12

Paper 1 Core Physical Geography

May/June 2025

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 and Fig. 1.2 show the depth of groundwater in southern India, May 2019 and January 2020.
- (a) State the depth of groundwater at X in Fig. 1.1. [1]
- (b) Describe **two** similarities and **two** differences between the patterns shown in Fig. 1.1 and Fig. 1.2. [4]
- (c) Suggest reasons for the differences between groundwater levels in Fig. 1.1 and Fig. 1.2. [5]

### Atmosphere and weather

- 2 Fig. 2.1 shows areas of greatest concern from climate-related impacts of global warming.
- (a) (i) State the least common climate-related impact shown in Fig. 2.1. [1]
- (ii) State the number of climate-related impacts identified in area X on Fig. 2.1. [1]
- (b) Describe the pattern shown in Fig. 2.1. [3]
- (c) Suggest reasons for the pattern shown in Fig. 2.1. [5]

### Rocks and weathering

- 3 Fig. 3.1 is a photograph which shows a type of weathering on a brick pavement.
- (a) Name the type of weathering shown in Fig. 3.1. [1]
- (b) With the aid of a diagram, describe the weathering process you named in (a). [4]
- (c) Explain how the amount of rainfall can affect the type **and** rate of weathering. [5]

## 3

## 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 'hydraulic action'. [4]
- (ii) Explain how drainage density is calculated. [3]
- (b) Describe the formation of waterfalls **and** oxbow lakes. [8]
- (c) 'Hard engineering is more effective than soft engineering in preventing river flooding.'  
With the aid of one or more examples, how far do you agree with this statement? [15]

### Atmosphere and weather

- 5 (a) (i) Describe how the type of surface affects the albedo rate. [4]
- (ii) Explain **one** way the incoming (shortwave) radiation is reflected back into the atmosphere before it reaches the Earth's surface. [3]
- (b) Explain the different causes of precipitation. [8]
- (c) 'Incoming solar radiation is the most important factor in determining the global energy budget.'  
With the aid of examples, how far do you agree with this statement? [15]

### Rocks and weathering

- 6 (a) (i) Briefly describe **two** types of plate boundaries. [4]
- (ii) Briefly explain the location of ocean trenches. [3]
- (b) Explain the movement of water and sediment on the surface of slopes. [8]
- (c) With the aid of examples, evaluate attempts to reduce mass movement. [15]

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