



# Cambridge International AS & A Level

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## GEOGRAPHY

9696/31

Paper 3 Advanced Physical Geography Options

October/November 2022

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:  
Answer questions from **two** options.  
For **each** option, follow the instructions inside on which questions to answer.
- 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.
- You should make reference to appropriate examples studied in the field or the classroom, even where such examples are not specifically requested by the question.

### 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.



Answer questions from **two** different options.

### Tropical environments

If answering this option, answer Question 1 and **either** Question 2 **or** Question 3.

- 1 Fig. 1.1 shows the global distribution of oxisols/latosols.
- (a) Describe the distribution of oxisols/latosols shown in Fig. 1.1. [3]
- (b) Explain the formation of oxisols/latosols. [7]
- 2 Assess the extent to which the formation of granite landforms in tropical environments has been influenced by climate. [20]
- 3 'There is little variation in the vegetation of seasonally humid tropical (savanna) ecosystems.'
- How far do you agree? [20]

### Coastal environments

If answering this option, answer Question 4 and **either** Question 5 **or** Question 6.

- 4 Fig. 4.1 shows the loss of coral cover along the Great Barrier Reef, Australia, 2016.
- (a) Describe the pattern of coral cover loss shown in Fig. 4.1. [4]
- (b) Explain **two** factors that account for loss of coral cover on reefs. [6]
- 5 'An understanding of the operation of coastal sediment cells is essential for sustainable management of coastlines.'
- How far do you agree? [20]
- 6 Evaluate the role of sub-aerial processes in the development of coastal cliffs and wave-cut platforms. [20]

### Hazardous environments

If answering this option, answer Question 7 and **either** Question 8 **or** Question 9.

- 7 Fig. 7.1 shows a landslide potential map of mainland USA.
- (a) Describe the distribution of landslide potential shown in Fig. 7.1. [4]
- (b) Explain why some areas are more prone to landslides than others. [6]
- 8 Assess the extent to which high rainfall is the most significant hazard resulting from atmospheric disturbances. [20]
- 9 'It is more difficult to produce a hazard map of earthquakes than it is for volcanic eruptions.'
- How far do you agree? [20]

### Hot arid and semi-arid environments

If answering this option, answer Question 10 and **either** Question 11 **or** Question 12.

- 10 Fig. 10.1 is a photograph which shows a hot arid landscape in Erg Chigaga, Morocco.
- (a) Describe the features of the landscape shown in Fig. 10.1. [4]
- (b) Explain the formation of the landform labelled A in Fig. 10.1. [6]
- 11 'Water processes are the most important processes in the development of landforms in hot arid and semi-arid environments.'
- How far do you agree? [20]
- 12 Assess the extent to which plants in hot arid and semi-arid environments are adapted to extreme temperatures rather than drought. [20]

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