



# Cambridge International AS & A Level

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## GEOGRAPHY

9696/31

Paper 3 Advanced Physical Geography Options

May/June 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 a subtropical anticyclone over Australia, 2 September 2018.
  - (a) Describe the atmospheric pressure pattern over Australia shown in Fig. 1.1. [4]
  - (b) Explain the role of subtropical anticyclones in influencing the characteristics of tropical climates. [6]
- 2 Assess the influence of different rock types on the formation of characteristic landforms of tropical environments. [20]
- 3 To what extent is human activity the most significant influence on the development of plant communities in tropical ecosystems? [20]

### Coastal environments

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

- 4 Fig. 4.1 is an aerial photograph of a spit in British Columbia, Canada.
  - (a) Describe the characteristics of the spit shown in Fig. 4.1. [4]
  - (b) Suggest how the spit shown in Fig. 4.1 has formed. [6]
- 5 Using a case study, evaluate the relative importance of problems of sustainably managing coasts. [20]
- 6 'Sea level change has a very limited role in the formation of coastal landforms.'  
How far do you agree? [20]

### Hazardous environments

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

- 7 Fig. 7.1 shows the extent of two historic mudflows from the Mount Rainier volcano, USA.
- (a) Compare the extent of the two mudflows shown in Fig. 7.1. [4]
- (b) Suggest how the mudflows shown in Fig. 7.1 were formed. [6]
- 8 Assess the relative importance of the factors influencing the formation of tornadoes. [20]
- 9 'Perception of risk varies depending on the type of hazard.'  
To what extent do you agree with this view? [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 shows the results of two laboratory experiments.
- (a) Compare the patterns of weight loss in the two experiments shown in Fig. 10.1. [4]
- (b) Explain how rocks are weathered by salt in semi-arid environments. [6]
- 11 Assess the relative significance of the causes of aridity. [20]
- 12 'Wind transportation in hot arid and semi-arid environments is more important in the formation of some characteristic landforms than others.'  
How far do you agree with this view? [20]

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