



# Cambridge International AS & A Level

---

## 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)

---

## 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.

---

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]

**BLANK PAGE**

---

The boundaries and names shown, the designations used and the presentation of material on any maps contained in this question paper/insert do not imply official endorsement or acceptance by Cambridge Assessment International Education concerning the legal status of any country, territory, or area or any of its authorities, or of the delimitation of its frontiers or boundaries.

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge Assessment International Education Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at [www.cambridgeinternational.org](http://www.cambridgeinternational.org) after the live examination series.

Cambridge Assessment International Education is part of Cambridge Assessment. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate (UCLES), which is a department of the University of Cambridge.