

**GEOGRAPHY**

**9696/31**

Paper 3 Advanced Physical Geography Options

**October/November 2018**

**1 hour 30 minutes**

No Additional Materials are required.

**READ THESE INSTRUCTIONS FIRST**

An answer booklet is provided inside this question paper. You should follow the instructions on the front cover of the answer booklet. If you need additional answer paper ask the invigilator for a continuation booklet.

In this paper there are four Physical Geography options.

**Tropical environments**

**Coastal environments**

**Hazardous environments**

**Hot arid and semi-arid environments**

Answer questions from **two** different options.

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.

All the resources referred to in the questions are contained in the Insert.

The number of marks is given in brackets [ ] at the end of each question or part question.

The total number of marks for this paper is 60.

This document consists of **3** printed pages, **1** blank page and **2** Inserts.

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 granite landforms in a tropical environment.
- (a) Describe the landforms shown in Fig. 1.1. [4]
- (b) Briefly explain how the landforms described in (a) might have developed. [6]
- 2 For **one** tropical ecosystem, assess the role of physical factors in limiting the development of climax vegetation. [20]
- 3 Evaluate problems of sustainable management of areas within **either** the tropical rainforest ecosystem **or** the savanna ecosystem. [20]

[Total: 30]

### Coastal environments

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

- 4 Fig. 4.1 shows coastline change in Long Bay, South Carolina, USA, 1996–2000.
- (a) Describe the rates of change shown in Fig. 4.1 from North Island to Waites Island. [4]
- (b) Suggest **two** reasons for the rates of coastline change described in (a). [6]
- 5 To what extent is the formation of cliff profiles the result of marine erosion? [20]
- 6 Describe the problems of sustainably managing a stretch or stretches of coastline and evaluate the attempted solutions. [20]

[Total: 30]

### Hazardous environments

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

7 Fig. 7.1 shows the tracks of selected hurricanes in the Atlantic Ocean in 2014.

(a) Describe the tracks of the hurricanes shown in Fig. 7.1. [4]

(b) Outline possible reasons for the source and direction of movement of the hurricanes shown in Fig. 7.1. [6]

8 'Prediction is the most effective way of reducing the impacts of volcanic eruptions on lives and property.'

How far do you agree with this view? [20]

9 For the hazardous environment you have studied, assess the view that sustainable management is impossible. [20]

[Total: 30]

### 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 sand dunes in a hot arid environment.

(a) With the aid of a labelled diagram, describe the sand dunes shown in Fig. 10.1. [4]

(b) Suggest how the sand dunes described in (a) have developed. [6]

11 With the aid of examples, assess the extent to which ocean currents are the cause of aridity. [20]

12 'Desertification is caused by human factors.'

How far do you agree with this view? [20]

[Total: 30]

**BLANK PAGE**

---

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 International Examinations Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at [www.cie.org.uk](http://www.cie.org.uk) after the live examination series.

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