

Cambridge International Examinations

Cambridge International Advanced Subsidiary and Advanced Level

GEOGRAPHY 9696/21

Paper 2 Advanced Physical Options

October/November 2017
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.

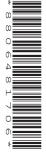
Answer two questions only. Each question answered must be from a different topic.

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 Figures and the Photograph 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.



International Examinations

Tropical environments

Only **one** question may be answered from this topic.

1 (a) Fig. 1 shows tropical rainforest vegetation.

Describe and explain the characteristics of the vegetation shown in Fig. 1. [10]

- (b) For either a tropical rainforest or a savanna ecosystem, describe the effects of human exploitation on nutrient cycling. Evaluate ways in which your chosen ecosystem might be sustainably managed. [15]
- 2 (a) Describe and explain the characteristics of a tropical monsoon climate. [10]
 - (b) Evaluate the extent to which the development of tropical landforms in **either** granite **or** limestone is the result of the characteristics of the rock type. [15]

Coastal environments

Only **one** question may be answered from this topic.

- 3 (a) Photograph A shows some coastal depositional landforms.
 - With the aid of a labelled diagram, describe the landforms in Photograph A and explain how they may have developed. [10]
 - (b) Describe the conditions required for coral growth and development. Assess the major threats to the continued development of coral reefs. [15]
- 4 (a) Describe and explain how rock type and structure may influence cliff profiles. [10]
 - (b) To what extent do human activities affect the erosion, transport and deposition of sediment along coasts? [15]

© UCLES 2017 9696/21/O/N/17

Hazardous environments

Only **one** question may be answered from this topic.

- **5 (a)** Fig. 2 shows a tropical cyclone (hurricane).
 - Using Fig. 2, describe and explain the development of tropical cyclones (hurricanes). [10]
 - (b) Describe the hazardous impacts of tropical cyclones (hurricanes). To what extent can these impacts be reduced? [15]
- (a) Compare two types of mass movements. Explain why some mass movements may be hazardous.
 - **(b)** Examine the extent to which a hazardous area can be sustainably managed. [15]

Arid and semi-arid environments

Only **one** question may be answered from this topic.

- 7 (a) Explain the global distribution of hot arid environments. [10]
 - **(b)** Fig. 3 shows some hot desert landforms.
 - Describe the landforms shown in Fig. 3. Evaluate the relative importance of processes, past and present, in the development of those landforms. [15]
- **8 (a)** With the aid of labelled diagrams, describe and explain the development of **two** different types of sand dune found in arid environments. [10]
 - (b) With reference to **either** an arid **or** a semi-arid area, evaluate the ways in which it can be developed sustainably. [15]

© UCLES 2017 9696/21/O/N/17

4

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 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.

© UCLES 2017 9696/21/O/N/17