



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 is a cross-section which shows some effects of the weathering of granite in a tropical environment.
- (a) Use Fig. 1.1 to describe the effects of weathering. [4]
- (b) Explain the effects of weathering you described in (a). [6]
- 2 To what extent are the plant communities of seasonally humid tropical (savanna) ecosystems climax communities? [20]
- 3 Assess the role of monsoons in the global distribution and climatic characteristics of tropical environments. [20]

### Coastal environments

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

- 4 Fig. 4.1 shows hard engineering solutions to coastal erosion in north Norfolk, UK.
- (a) Describe the distribution of hard engineering solutions shown in Fig. 4.1. [3]
- (b) Suggest reasons why the type of hard engineering solutions varies along a stretch of coastline. [7]
- 5 Assess the role of wave characteristics in explaining the form and development of the cross-section (profile) of beaches. [20]
- 6 'Global warming is the greatest threat to coral reefs.'
- With the aid of examples, 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 global distribution of deaths from rainfall-triggered mass movement events, 2007–17.
- (a) Use Fig. 7.1 to describe the global distribution of mass movement events with over 100 deaths. [4]
- (b) Explain **two** reasons why the number of deaths from mass movement events varies. [6]
- 8 'Earthquakes are more difficult to predict, but easier to prepare for, than volcanic eruptions.'
- How far do you agree with this view? [20]
- 9 Assess the extent to which high winds are the most significant hazard of small-scale atmospheric disturbances (tornadoes). [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 desertified landscape in a semi-arid environment.
- (a) Describe the features of the landscape shown in Fig. 10.1. [4]
- (b) Explain how **one** physical factor and **one** human factor lead to the desertification of a semi-arid environment. [6]
- 11 Discuss the view that thermal fracture is the most important weathering process in hot arid and semi-arid environments. [20]
- 12 'The sustainable management of **either** a hot arid **or** semi-arid environment is difficult mainly because of the fragility of the vegetation.'
- With reference to a case study, how far do you agree? [20]

**BLANK PAGE**

---

The boundaries and names shown, the designations used and the presentation of material on the 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 the Cambridge Assessment Group. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate (UCLES), which itself is a department of the University of Cambridge.