



Cambridge International AS & A Level

GEOGRAPHY

9696/31

Paper 3 Advanced Physical Geography Options

May/June 2021

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 the distribution of seasonally humid tropical (savanna) environments in Africa.
 - (a) Describe the distribution of seasonally humid tropical (savanna) environments shown in Fig. 1.1. [4]
 - (b) Suggest **two** reasons for the distribution shown in Fig. 1.1. [6]
- 2 Assess the relative importance of weathering in the nutrient cycle of humid tropical (rainforest) ecosystems. [20]
- 3 'Geology is the most important factor influencing the formation of tropical karst landforms.'
How far do you agree with this view? [20]

Coastal environments

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

- 4 Fig. 4.1 shows the movement of waves approaching an irregular coastline.
 - (a) Describe the pattern of wave approach shown in Fig. 4.1. [4]
 - (b) Explain the pattern of wave approach shown in Fig. 4.1 and how the pattern affects the distribution of wave energy. [6]
- 5 To what extent can the threats to coral reefs be successfully managed? [20]
- 6 Evaluate the role of sub-aerial processes in the formation of erosional landforms in coastal environments. [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 volcanoes.

(a) Describe the global distribution of volcanoes shown in Fig. 7.1. [4]

(b) Explain why volcanoes are not found at all types of tectonic plate boundary. [6]

8 Assess the relative significance of the hazards resulting from small-scale atmospheric disturbances (tornadoes). [20]

9 'Earthquake hazards cannot be prepared for successfully.'

How far do you agree? [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 an arid landscape in Kazakhstan.

(a) With the aid of a labelled diagram, describe the main physical features of the landscape shown in Fig. 10.1. [4]

(b) Suggest how water processes have influenced the formation of the landscape shown in Fig. 10.1. [6]

11 Assess the relative importance of the factors influencing desertification in semi-arid environments. [20]

12 'Pressure systems are the most important cause of aridity.'

To what extent do you agree with this statement? [20]

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