



Cambridge International AS & A Level

GEOGRAPHY

9696/32

Paper 3 Advanced Physical Geography Options

October/November 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 deforestation in the Brazilian Amazon tropical rainforest, 1988–2019.
- (a) Describe the pattern of deforestation shown in Fig. 1.1. [4]
- (b) Explain how nutrient cycling in the tropical rainforest ecosystem is affected by deforestation. [6]
- 2** Assess the role of the intertropical convergence zone (ITCZ) in explaining the climatic characteristics of tropical environments. [20]
- 3** With reference to **either** the rainforest ecosystem **or** the savanna ecosystem, assess the extent to which climate is the main problem of sustainable management. [20]

Coastal environments

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

- 4** Fig. 4.1 shows the global pattern of coastal dunes and coastal saltmarshes.
- (a) Compare the global pattern of coastal dunes and coastal saltmarshes shown in Fig. 4.1. [4]
- (b) Explain the formation of coastal saltmarshes. [6]
- 5** ‘Some threats to coral reefs are more significant than others.’
- How far do you agree? [20]
- 6** Assess the role of wave refraction in the formation of coastal landforms. [20]

Hazardous environments

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

7 Fig. 7.1 shows the likelihood of landslides triggered by earthquakes in The Philippines.

(a) Describe the distribution of likelihood of landslides triggered by earthquakes shown in Fig. 7.1. [4]

(b) Briefly explain **two** causes of landslides **other** than earthquakes. [6]

8 Assess the extent to which hazards from volcanic eruptions can be predicted. [20]

9 With reference to a case study of a hazardous environment, assess the view that some of the problems of that environment are more difficult to manage than others. [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 hot arid landscape of the Kaluts Desert, Iran.

(a) Describe the physical landscape shown in Fig. 10.1. [4]

(b) Suggest how the landform labelled A in Fig. 10.1 was formed. [6]

11 Assess the role of water in the formation of piedmont zone landforms of hot arid and semi-arid environments. [20]

12 'Population pressure is the main cause of desertification.'

How far do you agree? [20]

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