

# 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.



# 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.

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- 2 Assess the role of the intertropical convergence zone (ITCZ) in explaining the climatic characteristics of tropical environments. [20]
- 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.
  - **(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.
  - **(b)** Suggest how the landform labelled A in Fig. 10.1 was formed. [6]

[4]

- 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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