

Cambridge International AS & A Level

GEOGRAPHY

9696/32

Paper 3 Advanced Physical Geography Options

October/November 2024

1 hour 30 minutes

A standard linear barcode is positioned vertically on the left side of the page. It consists of vertical black bars of varying widths on a white background. To the left of the barcode, the numbers 5, 7, 4, 9, 6, 8, 3, 3, 6, 3, 3 are printed vertically, corresponding to the barcode's data.

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 the average climatic characteristics of two tropical locations.
 - (a) Compare the climatic characteristics of the two locations shown in Fig. 1.1. [4]
 - (b) Suggest reasons for the climatic characteristics of Chittagong shown in Fig. 1.1. [6]
- 2 'The vegetation of humid tropical (rainforest) ecosystems has developed into a climatic climax plant community, but the vegetation of seasonally humid tropical (savanna) ecosystems has developed into a plagioclimax plant community.'

How far do you agree with this view? [20]

- 3 Assess the view that tors, inselbergs and bornhardts in tropical environments have been formed by the same processes and differ only in their size. [20]

Coastal environments

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

- 4 Fig. 4.1 shows generalised summer and winter beach profiles of a sandy beach.
 - (a) Compare the summer and winter beach profiles shown in Fig. 4.1. [4]
 - (b) Explain the summer and winter beach profiles shown in Fig. 4.1. [6]
- 5 Evaluate the role of wind in the formation and characteristics of coastal dunes. [20]
- 6 Assess the success of attempts to sustainably manage a stretch or stretches of coastline. [20]

Hazardous environments

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

7 Fig. 7.1 is a photograph which shows the eruption of the Soufrière Hills volcano, on the Caribbean island of Montserrat, in 2010.

(a) Describe the main characteristics of the volcanic eruption shown in Fig. 7.1. [4]

(b) Explain how volcanic hazards may be related to the type of volcanic eruption. [6]

8 'Hazard mapping is the most effective way to prepare for hazards from mass movements.'

How far do you agree with this view? [20]

9 Assess the view that it is easier to predict and monitor large-scale atmospheric disturbances (cyclones, hurricanes, typhoons) than it is for 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 shows the rainfall variability over the semi-arid regions of Namibia, Botswana and north-west South Africa, 1910–2010.

(a) Describe the rainfall variability shown in Fig. 10.1. [4]

(b) Explain why rainfall variability in semi-arid areas is very high. [6]

11 To what extent is wind action the most important factor in the formation of landforms of hot arid and semi-arid environments? [20]

12 'The fragility of vegetation in hot arid and semi-arid environments is the result of low biomass productivity.'

How far do you agree with this view? [20]

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