

**GEOGRAPHY**

**9696/32**

Paper 3 Advanced Physical Geography Options

**October/November 2018**

**1 hour 30 minutes**

No Additional Materials are required.

**READ THESE INSTRUCTIONS FIRST**

An answer booklet is provided inside this question paper. You should follow the instructions on the front cover of the answer booklet. If you need additional answer paper ask the invigilator for a continuation booklet.

In this paper there are four Physical Geography options.

**Tropical environments**

**Coastal environments**

**Hazardous environments**

**Hot arid and semi-arid environments**

Answer questions from **two** different options.

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.

All the resources referred to in the questions are contained in the Insert.

The number of marks is given in brackets [ ] at the end of each question or part question.

The total number of marks for this paper is 60.

This document consists of **3** printed pages, **1** blank page and **2** Inserts.

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 areas of tropical rainforest in Borneo in 1990, 2000 and 2010.  
Fig. 1.2 shows nutrient cycling for location **X** in Fig. 1.1 before and after deforestation.
- (a) Describe the changes shown in Fig. 1.1. [4]
- (b) Explain how the changes at location **X** in Fig. 1.1 have affected the nutrient cycle shown in Fig. 1.2. [6]
- 2 Assess the extent to which the climate of seasonally humid tropical environments is the result of the intertropical convergence zone (ITCZ). [20]
- 3 Evaluate the factors that have influenced the development of deep weathering profiles in granite. [20]

[Total: 30]

### Coastal environments

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

- 4 Fig. 4.1 shows a cliffed coastline.
- (a) Describe the features of the cliffs shown in Fig. 4.1. [4]
- (b) Suggest how the features described in (a) developed. [6]
- 5 'Salt marshes are a more fragile coastal environment than mangroves.'  
How far do you agree with this view? [20]
- 6 To what extent is pollution the greatest threat to coral reefs? [20]

[Total: 30]

### 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 a mass movement.
- (a) With the aid of a labelled diagram, describe the characteristics of the mass movement shown in Fig. 7.1. [4]
- (b) Suggest the impacts on lives and property of the mass movement shown in Fig. 7.1. [6]
- 8 Assess the effectiveness of attempts to reduce the hazardous impacts of large scale tropical disturbances (cyclones, hurricanes, typhoons). [20]
- 9 'Earthquakes are difficult to predict but their impacts can be reduced.'
- How far do you agree with this view? [20]

[Total: 30]

### 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 global distribution of hot arid areas.
- (a) Describe the distribution of hot arid areas shown in Fig. 10.1. [4]
- (b) Briefly explain the possible causes of aridity at location **Y** and location **Z** in Fig. 10.1. [6]
- 11 Assess the extent to which the landforms of hot arid environments are features of past climates. [20]
- 12 Describe the problems of sustainably managing **either** a hot arid **or** a semi-arid environment and evaluate solutions to these problems. [20]

[Total: 30]

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