

**GEOGRAPHY**

**9696/32**

Paper 3 Advanced Physical Geography Options

**October/November 2019**

**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.

## 2

Answer questions from **two** different options.

**Tropical environments**

If answering this option, answer Question 1 and **either** Question 2 **or** Question 3.

- 1 Table 1.1 shows some characteristics of humid tropical and seasonally humid tropical climates.
  - (a) Compare the characteristics of the humid tropical and seasonally humid tropical climates shown in Table 1.1. [4]
  - (b) Explain the characteristics of the **seasonally** humid tropical climate shown in Table 1.1. [6]
- 2 Assess the roles of weathering and other factors in the formation of tropical karst landforms. [20]
- 3 Describe the vegetation characteristics of the savanna ecosystem. Assess the role of climate and other physical factors in the development of its characteristics. [20]

**Coastal environments**

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

- 4 Fig. 4.1 shows a simplified distribution of coastal wave energy.
  - (a) Describe the distribution of wave energy shown in Fig. 4.1. [4]
  - (b) Explain how differences in wave energy affect the cross section (profile) of beaches. [6]
- 5 Assess the influence of sea-level change in the formation of coastal landforms. [20]
- 6 Describe the characteristics of coastal dunes. Assess the factors involved in the formation of coastal dunes. [20]

### Hazardous environments

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

**7** Fig. 7.1 shows some types of mass movement.

(a) Describe the characteristics of the debris flows and the mudflow shown in Fig. 7.1. [4]

(b) Explain why the hazardous nature of the types of mass movements shown in Fig. 7.1 varies. [6]

**8** Explain the formation of tsunamis. Evaluate the extent to which the hazardous impacts of tsunamis may be reduced. [20]

**9** With the aid of a case study of a hazardous environment, assess how prediction and preparedness can reduce the impacts of the hazard(s) on lives and property. [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 level of soil degradation in hot arid and semi-arid areas of Mexico.

(a) Contrast the level of soil degradation in hot arid and semi-arid areas shown in Fig. 10.1. [4]

(b) Suggest **two** reasons why the level of soil degradation is greater in semi-arid areas than in hot arid areas. [6]

**11** 'Wind is the most important factor in the shaping of landforms in hot arid and semi-arid environments.'

How far do you agree? [20]

**12** With the aid of a case study from **either** a hot arid **or** a semi-arid environment, assess the view that the problems found there make sustainable management very difficult. [20]

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