

**GEOGRAPHY**

**9696/22**

Paper 2 Advanced Physical Options

**May/June 2016**

**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.

Answer **two** questions only. Each question answered **must** be from a different topic.

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 Figures and the Photograph 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.



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

### Tropical environments

Only **one** question may be answered from this topic.

- 1 (a) Fig. 1 shows climate graphs for humid and seasonally humid tropical environments.
- Using Fig. 1, describe the climatic characteristics of each environment and explain their differences. [10]
- (b) For **one** tropical ecosystem, explain how nutrient cycling occurs and discuss how human activity impacts on soil fertility. [15]
- 2 (a) Describe and explain the development of a deep weathering profile in a humid tropical environment. [10]
- (b) For **one** tropical ecosystem, explain how vegetation is adapted to climate. To what extent does climate affect the sustainable management of vegetation in your chosen tropical ecosystem? [15]

### Coastal environments

Only **one** question may be answered from this topic.

- 3 (a) Photograph A shows some coastal landforms.
- Describe the coastal landforms shown in Photograph A and explain the processes of coastal erosion that contribute to their formation. [10]
- (b) Describe the conditions required for coral growth and development. To what extent are these conditions threatened by human activities? [15]
- 4 (a) With the aid of diagrams, describe and explain the formation of beach profiles. [10]
- (b) For a stretch or stretches of coastline, outline the main problems of sustainable management and assess possible solutions to these problems. [15]

### Hazardous environments

Only **one** question may be answered from this topic.

- 5 (a) Fig. 2 shows the distribution of tectonic plate margins.

With reference to Fig. 2, describe the differences between convergent and divergent plate margins and explain why volcanoes occur at **one** of these plate margins. [10]

- (b) Explain the techniques used to monitor earthquakes and assess the extent to which prediction can reduce the hazardous impact of earthquakes. [15]

- 6 (a) Describe the causes of instability on slopes. With the aid of diagrams, explain how instability can result in **two** different types of mass movement. [10]

- (b) Describe and explain the hazards caused by tropical storms (cyclones) and assess the impacts of these hazards on lives and property. [15]

### Arid and semi-arid environments

Only **one** question may be answered from this topic.

- 7 (a) Describe and explain how plants are adapted to extremes of temperature and drought in arid environments. [10]

- (b) Fig. 3 shows landforms in an arid environment.

Describe the characteristics of **three** landforms shown in Fig. 3 and assess the contribution of water to the development of these landforms. [15]

- 8 (a) Describe and explain processes of erosion, transportation and deposition by wind in arid environments. [10]

- (b) For **either** an arid **or** a semi-arid environment, describe the problems of sustainable management and evaluate possible solutions to these problems. [15]

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