



Cambridge International AS & A Level

GEOGRAPHY

9696/03

Paper 3 Advanced Physical Geography Options

For examination from 2020

SPECIMEN PAPER

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.

This document has 4 pages. Blank pages are indicated.

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 is a photograph which shows a tropical limestone (tower karst) landscape.
 - (a) With the aid of a labelled diagram, describe the landforms shown in Fig. 1.1. [4]
 - (b) Explain the roles of rock type and rock structure in the development of the landforms you described in (a). [6]
- 2 'Sustainable management in tropical environments is difficult.'

For **either** the rainforest ecosystem **or** the savanna ecosystem, how far do you agree? [20]
- 3 For **one** tropical ecosystem, describe the nature of the vegetation and assess how far factors other than climate have influenced the nature of the vegetation. [20]

Coastal environments

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

- 4 Fig. 4 shows a stretch of coastline before and after disturbance of a sediment cell.

Fig. 4.1 shows an undisturbed sediment cell and Fig. 4.2 shows the sediment cell after disturbance.

 - (a) Describe the changes shown in Fig. 4.2. [4]
 - (b) Explain how the changes you have identified in (a) have affected the operation of the sediment cell shown in Fig. 4.1. [6]
- 5 Assess the relative importance of marine erosion and sub-aerial processes in shaping the landforms of rocky coastlines. [20]
- 6 With the aid of one or more examples, assess the extent to which soft engineering approaches have more advantages than hard engineering approaches when managing a coastline sustainably. [20]

Hazardous environments

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

- 7** Fig. 7.1 shows the vertical drop and horizontal travel distance of two volcanic hazards.
- (a) Compare the relationship between vertical drop and horizontal travel distance of the volcanic hazards shown in Fig. 7.1. [4]
- (b) Outline how the information shown in Fig. 7.1 can be used to predict the potential impacts of the **two** hazards on lives and property. [6]
- 8** 'Hazard mapping is the most effective way of reducing the impact of earthquakes on lives and property.'
- How far do you agree with this view? [20]
- 9** Assess the extent to which the hazardous effects of tornadoes are different from those of tropical cyclones. [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 areas at high risk from desertification.
- (a) Describe the distribution of areas with high risk of desertification shown in Fig. 10.1. [4]
- (b) Outline possible reasons for the distribution of areas with a high risk of desertification that you have described in (a). [6]
- 11** Evaluate the importance of the role of Pleistocene pluvials in the development of desert landforms. [20]
- 12** 'Humans can effectively manage arid environments.'
- How far do you agree? [20]

BLANK PAGE

Copyright Acknowledgements:

Question 1 © www.fotogeographic.de/thema_kaust/images/tk_moon1a.jpg; 6 April 2011.

Question 7 © A J Gerrard; Mountain Environments: *An Examination of the Physical Geography of Mountains*; The MIT Press; 1990.

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

Cambridge Assessment International Education is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate (UCLES), which itself is a department of the University of Cambridge.