



Cambridge International AS & A Level

GEOGRAPHY

9696/13

Paper 1 Core Physical Geography

October/November 2020

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:
Section A: answer **all** questions.
Section B: answer **one** question.
- 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.

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.

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Section A

Answer **all** questions in this section. All questions carry 10 marks.

Hydrology and fluvial geomorphology

1 Fig. 1.1 shows a hydrograph for two storm events.

- (a) (i) State the maximum precipitation for Storm 2. [1]
- (ii) Calculate the lag time for Storm 1. Show your working. [2]
- (b) Describe the hydrograph shown in Fig. 1.1 for the two storm events. [4]
- (c) Suggest reasons for the differences in response of the hydrograph shown in Fig. 1.1. [3]

Atmosphere and weather

2 Fig. 2.1 shows major pressure systems and wind belts at the Earth's surface in January and July.

- (a) Using Fig. 2.1:
 - (i) State the major pressure system over east Africa in January. [1]
 - (ii) Name the major wind belt over the North Atlantic Ocean in July. [1]
- (b) Describe the main differences in pressure systems and wind belts between January and July shown in Fig. 2.1. [4]
- (c) Suggest **two** reasons for the main differences in pressure systems and wind belts you described in (b). [4]

Rocks and weathering

3 Fig. 3.1 is a photograph which shows an eroded landscape in Kenya.

- (a) Draw a labelled diagram to show **two** landforms shown in Fig. 3.1. [3]
- (b) Explain the formation of the landscape shown in Fig. 3.1. [3]
- (c) Explain the mass movement process of heave. [4]

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Section B

Answer **one** question from this section. All questions carry 30 marks.

Hydrology and fluvial geomorphology

- 4 (a) (i) Define the fluvial terms *abrasion* and *hydraulic action*. [4]
- (ii) Describe how percolation occurs in a drainage basin system. [3]
- (b) Explain how levées and deltas are formed. [8]
- (c) 'The processes and landforms of a braided channel and of a meandering channel are different.'
- With the aid of examples, how far do you agree? [15]

Atmosphere and weather

- 5 (a) (i) Define the atmospheric terms *sublimation* and *evaporation*. [4]
- (ii) Briefly explain longwave radiation. [3]
- (b) Describe the possible atmospheric impacts of global warming. [8]
- (c) Using **one** example of an urban area, assess the local climatic effects of human activity. [15]

Rocks and weathering

- 6 (a) (i) Define the tectonic terms *sea floor spreading* and *subduction*. [4]
- (ii) Briefly explain the weathering process of carbonation. [3]
- (b) Explain the effects of the mass movement processes of slides and flows on the shape of slopes. [8]
- (c) 'Temperature is the most important factor in the weathering of rocks.'
- With the aid of examples, how far do you agree? [15]

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