

GEOGRAPHY

9696/11

Paper 1 Core Geography

May/June 2015

3 hours

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.

Section A

Answer **five** questions.

Section B

Answer **one** question.

Section C

Answer **one** question.

Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.

All the Figures, Photographs and the Table 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 **5** printed pages, **3** blank pages and **2** Inserts.

Section A

Answer **five** questions from this section. All questions carry 10 marks.

Hydrology and fluvial geomorphology

- 1 Photograph A shows a river channel.
- (a) Name the type of river channel shown in Photograph A. [1]
 - (b) Draw a labelled diagram of the river channel in Photograph A showing the line of the fastest flow (thalweg). [3]
 - (c) Explain how the river channel shown in Photograph A developed and describe how it might change in the future. [6]

Atmosphere and weather

- 2 Fig. 1 shows the concentration of carbon dioxide (CO₂) and the average annual surface temperature of the Earth, 1880–2005.
- (a) Compare the trend in carbon dioxide concentration with the trend in the average annual surface temperature of the Earth shown in Fig. 1. [4]
 - (b) Describe the causes of the increase of carbon dioxide in the atmosphere and explain how this increase could bring about changes in the surface temperature of the Earth. [6]

Rocks and weathering

- 3 Fig. 2 shows some types of mass movement.
- (a) (i) Name the type of mass movement shown in Fig. 2 that has the slower movement and the highest water content. [1]
 - (ii) Name the type of mass movement shown in Fig. 2 that has the faster movement and the lowest water content. [1]
 - (b) Explain how heave might contribute to soil creep. [3]
 - (c) Explain how a rotational slide, such as in Fig. 2, occurs and describe its effect upon slope shape. [5]

Population/Migration

- 4 Fig. 3 shows projected population growth for countries in South-east Asia, 2010–30.
- (a) Name the country shown in Fig. 3 which has:
- (i) the lowest projected rate of population growth, [1]
 - (ii) the highest projected increase in total population. [1]
- (b) Suggest **two** reasons why it is difficult to predict population growth accurately. [3]
- (c) Using one or more examples, explain why life expectancy is increasing in many **LEDCs**. [5]

Migration

- 5 Table 1 gives information about immigration to Germany from selected countries of the European Union (EU) in 2011–12.
- (a) With the help of data from Table 1, compare immigration to Germany from Greece with immigration from Portugal. [2]
- (b) Describe **two main** features of the immigration shown, supporting your answer with evidence from Table 1. [2]
- (c) Briefly explain the role of **pull** factors in economic migration. [6]

Settlement dynamics

- 6 Photograph B shows part of a shanty town (squatter settlement) in a city in Africa in 2011.
- (a) Describe the buildings shown in Photograph B. [3]
- (b) With reference to Photograph B, outline **two** ways in which quality of life could be improved for the residents. [2]
- (c) Suggest reasons why solving the problems of shanty towns (squatter settlement) can be difficult. [5]

Section B: The Physical Core

Answer **one** question from this section. All questions carry 25 marks.

Hydrology and fluvial geomorphology

- 7 (a) (i) Define the terms *lag time* and *peak discharge*. [4]
- (ii) Briefly explain how overland flow occurs. [3]
- (b) Using diagrams, explain how (i) rock type and (ii) vegetation can affect the storm hydrographs of a drainage basin. [8]
- (c) Explain why rivers flood. To what extent is it possible to predict floods and to prevent rivers from flooding? [10]

Atmosphere and weather

- 8 (a) (i) Define the terms *temperature inversion* and *dew*. [4]
- (ii) Briefly explain how fog is formed. [3]
- (b) Using diagrams, explain why the amount of incoming solar radiation received at the Earth's surface changes with latitude. [8]
- (c) Explain how atmospheric stability and atmospheric instability occur. How can these conditions produce different weather? [10]

Rocks and weathering

- 9 (a) (i) Define *sea floor spreading* and *ocean ridge*. [4]
- (ii) Describe an island arc. [3]
- (b) Draw a labelled diagram showing the convergence of an oceanic plate and a continental plate. Explain the processes occurring and the types of landforms produced. [8]
- (c) Explain the factors and processes that are most effective in the weathering of granite and limestone. [10]

Section C: The Human Core

Answer **one** question from this section. All questions carry 25 marks.

Population

- 10 (a) (i) Explain the meaning of the term *infant mortality rate*. [3]
- (ii) Give **two** reasons why infant mortality rates are very low in **MEDCs**. [4]
- (b) Explain why improving the education of women helps to reduce their fertility rate. [8]
- (c) With the help of an example, assess the success of **one** attempt to manage natural increase. [10]

Migration/Settlement dynamics

- 11 (a) (i) With the help of a diagram, explain the term *stepped migration*. [4]
- (ii) Give **two** reasons why stepped migration occurs. [3]
- (b) Outline the impacts of rural-urban migration on the rural areas which the migrants leave. [8]
- (c) 'The effects of counterurbanisation in MEDCs are positive.' How far do you agree? [10]

Settlement dynamics

- 12 (a) Describe what functional zonation is and explain why it occurs in urban areas. [7]
- (b) With the help of examples, explain why retailing and other services may move out from the CBD to locations near the edge of the urban area. [8]
- (c) Assess the success of **one** attempt to provide infrastructure (power, water, sanitation, transport) for a city. [10]

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