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**GEOGRAPHY**

**9696/11**

Paper 1 Core Geography

**October/November 2016**

**3 hours**

No Additional Materials are required.

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**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.

The Photograph, Table and all the Figures 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.



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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 meandering river.

(a) Draw a labelled diagram of the main features of the meandering river shown in Photograph A. [4]

(b) Explain how meanders develop in a river channel. [6]

**Atmosphere and weather**

2 Table 1 shows a daily energy balance for a rural area and an urban area.

(a) Identify **four** differences between the daily energy balance of the rural area and the urban area shown in Table 1. [4]

(b) Explain **two** of the differences you identified in (a). [6]

**Rocks and weathering**

3 Fig. 1 shows some features associated with the movement of tectonic plates.

(a) Using Fig. 1, name:

(i) feature A; [1]

(ii) feature B; [1]

(iii) process C; [1]

(iv) process D. [1]

(b) With the aid of a diagram, explain how fold mountains can be formed by the convergence of an oceanic plate and a continental plate. [6]

### Population

- 4 Fig. 2 shows age/sex pyramids for Mexico, an LEDC in North America, in 1960 and 1990 and predicted for 2020.
- (a) Using Fig. 2, describe the shape of the age/sex pyramid for 1960. [2]
- (b) Identify **one** change to Mexico's population between 1960 and 1990, giving evidence from Fig. 2. [2]
- (c) Suggest reasons for the predicted changes between 1990 and 2020 shown in Fig. 2. [6]

### Population/Migration

- 5 Fig. 3 shows population change in the UK, an MEDC in Europe, by natural increase and net migration, 1978–2007.
- (a) State the year in Fig. 3 which shows:
- (i) the largest gain from net migration; [1]
- (ii) natural increase equal to net migration. [1]
- (b) Compare the trends in natural increase and net migration between 1978 and 1990, supporting your response with data from Fig. 3. [3]
- (c) Outline some of the problems which high levels of immigration can cause in a country. [5]

### Population/Migration/Settlement dynamics

- 6 Fig. 4 shows cities with over 10 million people in 1980 and 2010.
- (a) Describe the changes in the number, size and location of cities with over 10 million people between 1980 and 2010, supporting your response with data from Fig. 4. [5]
- (b) Explain the changes you described in (a). [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 hydrological terms *throughfall* and *percolation*. [4]  
(ii) Briefly explain how vegetation affects the shape of a storm hydrograph. [3]  
(b) With the aid of a diagram, explain how drainage basins operate as a system. [8]  
(c) To what extent are river floods the result of human activity? [10]

**Atmosphere and weather**

- 8 (a) (i) Define the terms *evaporation* and *sublimation*. [4]  
(ii) Describe the formation of frost. [3]  
(b) With the aid of diagrams, explain the differences between instability and conditional instability. [8]  
(c) Explain why it is important to understand the nature of greenhouse gases. [10]

**Rocks and weathering**

- 9 (a) (i) Define the terms *exfoliation* and *pressure release*. [4]  
(ii) Briefly describe the weathering process of wetting and drying. [3]  
(b) Describe the weathering processes hydrolysis and carbonation and explain how climate affects these processes. [8]  
(c) With the aid of diagrams, assess the extent to which mass movements can affect the shape of slopes. [10]

### Section C: The Human Core

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

#### Population

- 10 (a) (i) Define the population term *dependency*. [3]
- (ii) Outline **two** issues associated with ageing populations. [4]
- (b) Explain why life expectancy changes over time as countries develop. [8]
- (c) 'The demographic transition model is outdated and only applies to MEDCs.'
- How far do you agree? [10]

#### Migration

- 11 (a) Explain how age and family ties affect migration. [7]
- (b) Describe stepped migration and suggest reasons why it occurs. [8]
- (c) 'Deciding to migrate is more about perception than about reality.'
- How far do you agree? [10]

#### Settlement dynamics

- 12 (a) (i) Give the meaning of the term *functional zonation* in relation to urban land-use. [2]
- (ii) Draw and label a typical bid-rent diagram for an urban area. [5]
- (b) With the help of one or more examples, explain why residential segregation occurs within urban areas. [8]
- (c) Assess the advantages and disadvantages of a central urban location for retailing (shops and stores). [10]





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