

GEOGRAPHY

9696/13

Paper 1 Core Geography

October/November 2014

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 and the Tables 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 Fig. 1 shows storm hydrographs for a drainage basin before and after deforestation.
- (a) (i) Identify the hydrograph that has been affected by deforestation. [1]
- (ii) Identify **three** differences between the hydrographs. [3]
- (b) Explain how the differences you have identified in (a) have occurred. [6]

Atmosphere and weather

- 2 Fig. 2 shows night time temperatures for the city of Sydney, Australia, on the 6 February 2009.
- (a) Describe the pattern of temperatures shown in Fig. 2. [4]
- (b) Explain how the energy budgets (radiation balance and albedo) of urban areas and rural areas differ. [6]

Rocks and weathering

- 3 Fig. 3 shows the variation of temperature, precipitation and depth of weathering with latitude.
- (a) Name the most likely weathering process that occurs in low-latitude deserts. [1]
- (b) Briefly describe how the depth of weathering is related to temperature and precipitation. [3]
- (c) Explain how the properties of **either** granite **or** limestone affect the operation of physical and chemical weathering processes. [6]

Population

- 4 Tables 1A and 1B show the birth rates and death rates for selected countries in Western Europe and East Africa in 2010.
- (a) (i) Name the country in Table 1A that is experiencing natural increase. [1]
- (ii) Suggest the stage of the demographic transition reached by Malawi and justify your choice. [3]
- (b) Explain why birth rates are higher in LEDCs than in MEDCs. [6]

Migration

- 5 Fig. 4 shows the main source countries of refugees in 2011.
- (a) Describe the distribution of countries from which over 250 000 refugees migrated. [4]
- (b) Suggest reasons why large numbers of refugees migrate from some countries. [6]

Settlement dynamics

- 6 Figs 5A and 5B show the actual and projected rural and urban population percentages for two LEDCs in West Africa, Nigeria and Burkina Faso, 1970 to 2050.
- (a) (i) State the year in which the percentages of the rural population and the urban population in Nigeria were the same. [1]
- (ii) Using data from Figs 5A and 5B, compare the urban populations of Nigeria and Burkina Faso between 1970 and 2050. [3]
- (b) Explain why the percentage of population living in urban areas in LEDCs is increasing rapidly. [6]

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 fluvial terms *solution* and *suspension*. [4]
(ii) Briefly describe how saltation occurs in a river channel. [3]
- (b) Using a diagram, explain the formation of river floodplains and bluffs. [8]
- (c) Discuss the extent to which the Hjulstrom curve helps explain how a river erodes, transports and deposits sediment within its channel. [10]

Atmosphere and weather

- 8 (a) (i) Define the terms *sensible heat transfer* and *latent heat transfer*. [4]
(ii) Briefly describe atmospheric stability. [3]
- (b) Describe the distribution of global pressure belts and explain their seasonal variations. [8]
- (c) Describe the characteristics of a greenhouse gas. Explain how an increase in such gases can lead to changes in global climate. [10]

Rocks and weathering

- 9 (a) (i) Define the terms *heave* and *fall* as they apply to mass movement. [4]
(ii) Briefly describe how a mud flow can affect the shape of slopes. [3]
- (b) Explain how human activities may affect the type and intensity of mass movements on slopes. [8]
- (c) With the aid of diagrams explain how the movement of tectonic plates leads to the formation of ocean trenches and ocean ridges. [10]

Section C: The Human Core

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

Population

- 10 (a) (i) Define the term *optimum population*. [3]
- (ii) Briefly explain why optimum population is difficult to achieve. [4]
- (b) Explain the factors that cause food shortages. [8]
- (c) 'Population policy is not the only way to improve the balance between population and resources.' How far do you agree with this view? [10]

Migration

- 11 (a) (i) Define the term *international economic migration*. [3]
- (ii) Suggest **two** reasons why countries vary in their attraction for international economic migrants. [4]
- (b) Explain why age and gender influence international economic migration. [8]
- (c) How far do you agree that international economic migrants bring economic benefits both to the country they leave and the country to which they move? [10]

Settlement dynamics

- 12 (a) (i) Define the term *counterurbanisation*. [3]
- (ii) Suggest the impacts of counterurbanisation on services in rural settlements. [4]
- (b) Describe and explain the changing location of services in urban areas. [8]
- (c) Assess the success of schemes to reduce inner city problems in MEDCs. [10]

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Copyright Acknowledgements:

Question 2 Fig. 2	© City of Sydney Council; http://www.cityofsydney.nsw.gov.au/vision/sustainability/sustainable-city-living/urban-heat-island .
Question 3 Fig. 3	© http://www.geol.umd.edu/~piccoli/100/Image78.jpg .
Question 4 Tables 1A & 1B	© United Nations; www.un.org/esa/population/unpop.htm .
Question 5 Fig. 4	© UNHCR; http://www.unhcr.org/4fd6f87f9.html .
Question 6 Figs 5A & 5B	© United Nations; www.un.org/esa/population/unpop.htm .

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