
GEOGRAPHY

9696/13

Paper 1 Core Geography

October/November 2017

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 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 Fig. 1 shows two storm hydrographs for a drainage basin.
- (a) (i) Identify the storm hydrograph for the drainage basin after urbanisation. [1]
- (ii) Identify **three** differences between the storm hydrographs. [3]
- (b) Explain how **two** drainage basin characteristics influence the shape of storm hydrographs. [6]

Atmosphere and weather

- 2 Fig. 2 shows trends in carbon dioxide concentration and average global temperature change for the period 1860 to 1990.
- (a) Compare the trend in carbon dioxide concentration with the trend in average global temperature change shown in Fig. 2. [4]
- (b) Explain why there might be a relationship between average global temperature change and greenhouse gases such as carbon dioxide. [6]

Rocks and weathering

- 3 Fig. 3 shows two different mass movements.
- (a) Describe the main differences in the features of the landslide and the mudflow shown in Fig. 3. [4]
- (b) Explain why mudflows occur. [6]

Population

- 4 Table 1 shows total fertility rates for the world and for India, a country in South Asia, in 1970–74 and 2000–14 and predicted 2015–49.
- (a) (i) State the change in India's total fertility rate predicted in Table 1 between 1970–74 and 2015–19. [1]
- (ii) In which 5-year period is India's total fertility rate predicted to be at replacement level? [1]
- (b) Compare the trends in total fertility rates for India and the world between 2000–04 and 2045–49, using data from Table 1. [3]
- (c) Explain how increasing education for girls and women helps to lower fertility. [5]

Migration

- 5 Fig. 4 shows immigrants as a percentage of total population, by world region, in 1990, 2000 and 2010.
- (a) Using Fig. 4, name the world region which had no change in percentage immigrant population between 2000 and 2010. [1]
- (b) Describe the pattern of percentage immigrant population by world region in 2010, supporting your response with evidence from Fig. 4. [3]
- (c) Explain some of the **push** factors which cause international migration. [6]

Settlement dynamics

- 6 Fig. 5 shows the plan of Fulaishan Economic and Technical Development Zone (ETDZ), China.
- (a) Name the land-use along Fuhai Road inside the urban boundary shown in Fig. 5. [1]
- (b) Give **three** pieces of evidence from Fig. 5 which show that Fulaishan is a planned urban area. [3]
- (c) Explain some of the possible consequences of urban growth for surrounding rural settlements. [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 *traction*. [4]
- (ii) Briefly describe the features of a braided river channel. [3]
- (b) Describe and explain the formation of riffles and pools in the development of a meandering river channel. [8]
- (c) To what extent do climatic factors influence the annual hydrographs of rivers? [10]

Atmosphere and weather

- 8 (a) (i) Describe **two** components of the daytime energy budget. [4]
- (ii) Explain how dew is formed. [3]
- (b) Explain how environmental and adiabatic lapse rates influence weather. [8]
- (c) Assess the extent to which latitude influences global temperature patterns. [10]

Rocks and weathering

- 9 (a) (i) Define the terms *oxidation* and *solution*. [4]
- (ii) Briefly explain how organic action may lead to the weathering of rocks. [3]
- (b) With the aid of a diagram, describe and explain the processes and landforms associated with sea floor spreading. [8]
- (c) To what extent do human activities affect slopes? [10]

Section C: The Human Core

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

Population

- 10 (a) Give the meaning of the term *natural increase* and explain how a natural increase rate is calculated. [7]
- (b) Explain why it can be difficult to reduce the birth rate in LEDCs. [8]
- (c) Assess the usefulness of the demographic transition model (DTM) for understanding population change. [10]

Population/Migration/Settlement dynamics

- 11 (a) (i) Define the term *population structure*. [3]
- (ii) Draw a labelled diagram to show the effects of outmigration on the population structure of a rural area in an LEDC. [4]
- (b) Explain why urban-rural migration occurs in MEDCs. [8]
- (c) Evaluate the role of information in making the decision to migrate. [10]

Settlement dynamics

- 12 With reference to one or more named shanty towns (squatter settlements) in an LEDC:
- (a) explain the difficulties experienced by the people who live there; [7]
- (b) describe the attempt(s) made to improve living conditions; [8]
- (c) evaluate the success of the attempt(s) you described in (b). [10]

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