UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

GEOGRAPHY
0460/12
Paper 1
May/June 2009
1 hour 45 minutes

Additional Materials: Answer Booklet/Paper
Ruler

READ THESE INSTRUCTIONS FIRST

If you have been given an Answer Booklet, follow the instructions on the front cover of the Booklet.
Write your Centre number, candidate number and name on all the work you hand in.
Write in dark blue or black pen.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer three questions.
Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.
The Insert contains Photographs A, B and C for Question 2, Photograph D for Question 3 and Photograph E for Question 4.

At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [ ] at the end of each question or part question.

This document consists of 12 printed pages and 4 blank pages and 1 Insert.
1 (a) Study Fig. 1, which shows the number of international migrants to the USA from selected countries in 2000.

Fig. 1

(i) What is meant by *international migration*? [1]

(ii) Using Fig.1 only, name:

A a country from which there were more than 40 000 migrants to the USA in the year 2000; [2]

B a country from which there were fewer than 20 000 migrants to the USA in the year 2000.

(iii) Describe three pull factors of MEDCs to migrants from LEDCs. [3]

(iv) Many people from LEDCs who have migrated to MEDCs still end up with a poor quality of life. Suggest reasons for this. [4]
Study Fig. 2, which shows information about internal migration in the USA.

Fig. 2

(i) Describe the distribution of states where there are high rates of migration into the state. [3]

(ii) New York, New Jersey and Massachusetts are states with large urban areas. Suggest why many people are migrating away from urban areas in MEDCs. [5]

(c) For a named area which you have studied, explain why it has a low population density. [7]

[Total: 25 marks]
(a) Study Fig. 3, a simplified land use map of Wroclaw, a city in Poland (an MEDC in Europe).

![Map of Wroclaw with land use key]

**Fig. 3**

(i) Name **one** residential area in Wroclaw. [1]

(ii) What is the distance and direction of the main railway station from the main square in the CBD? [2]

(iii) Use the key of Fig. 3 to compare land use in squares B3 and C2. [3]

(iv) Suggest reasons for the location of the industrial zones in Wroclaw. [4]
(b) Study Photographs A, B and C (insert) which show apartment blocks in different residential areas in Wroclaw. The location of each photograph is shown on Fig. 3.

    Use evidence from the photographs and Fig. 3 to:

(i)  describe the differences between the apartment blocks shown in Photographs A and B;  

       [3]

(ii) suggest the likely benefits and problems of living in the apartment blocks shown in Photograph C.  

       [5]

(c) In many urban areas there are problems of traffic congestion. Name an urban area which you have studied where there is traffic congestion. Describe:

    •  the causes of this problem

    •  attempts which have been made to solve the problem  

       [7]

[Total: 25 marks]
3 (a) Study Photograph D (insert), which shows an area of coastline in southern Portugal.

(i) What type of coastal landform is labelled $X$ on Photograph D? [1]

(ii) Coastal landform $X$ has been formed by marine erosion processes such as hydraulic action and corrosion. What is meant by:

A  hydraulic action;

B  corrosion? [2]

(iii) Using evidence from Photograph D, describe the main features of landform $X$. [3]

(iv) A headland is marked by $Y$ on Photograph D. Explain how marine processes could form a natural arch in this headland. [4]

(b) Study Fig. 4, which is a beach profile.

![Diagram of a beach profile with labels P, Q, cliff, pebbles, shingle, sand, high tide mark, low tide mark]

Fig. 4

(i) Describe **three** differences between the beach at positions P and Q on the profile. [3]

(ii) Explain how constructive waves may form beaches such as the one shown by Fig. 4. [5]

(c) Name an area which you have studied where a coral reef has formed. Describe the conditions which have led to its formation. [7]

[Total: 25 marks]
4 (a) Study Figs 5A, 5B and 5C, which show types of weathering processes.

**Fig. 5A**

**FREEZE – THAW**

- Rainwater fills a crack in a rock.
- Water freezes and the crack is made wider.
- Rock breaks into pieces.

**Fig. 5B**

**EXFOLIATION**

- Hot sun causes outer layer of rock to expand during day.
- Cold nights cause outer layer to contract.
- Outer layer peels off.

**Fig. 5C**

**BIOLOGICAL WEATHERING**

- Plant roots and microorganisms break down rock and soil.
(i) What is meant by weathering?

(ii) Which figure, 5A, 5B or 5C, shows the type of weathering most likely to take place in:

A  tropical desert areas;  
B  temperate mountainous areas?

(iii) Explain how biological weathering may help to break down rocks.

(b) Study Photograph E (Insert), which shows a landscape formed in an area of limestone rocks.

(i) Describe the appearance of the landscape shown in Photograph E.

(ii) Explain how chemical processes cause weathering of limestone.

(iii) Suggest how areas of natural environment, such as that shown in Photograph E, may offer opportunities to people.

(c) In many parts of the world the natural environment presents hazards to people. Choose an example of one of the following:

•  tropical storm 
•  flooding 
•  drought

For a named area, explain the causes of the hazard which you have chosen and describe its impacts on people living there.

[Total: 25 marks]
(a) Study Fig. 6, which shows changes to the employment structure as a country develops economically.

Fig. 6

(i) What is meant by employment structure? [1]

(ii) Give one example of each of the following:

A primary employment;

B tertiary employment. [2]

(iii) Using evidence from Fig. 6 only, describe the changes to the employment structure which take place as a country develops economically. [3]
(b) Study Fig. 7, which is a flow diagram showing information about a meat processing factory in Lobatse, an urban settlement in Botswana.

![Flow diagram]

Fig. 7

(i) Using the information in Fig. 7, identify an input, a process and an output of the meat processing factory. [3]

(ii) Describe the likely benefits to the people of Lobatse of the development of manufacturing industry in the area. [4]

(iii) Describe the problems which manufacturing industries, such as the meat processing factory, might cause for the natural environment in and around Lobatse. [5]

(c) High technology industries are science-based industries such as aerospace, pharmaceuticals, computers, and manufacture of communication equipment and scientific instruments.

For a named country or area which you have studied, explain why high technology industries were located there. [7]

[Total: 25 marks]
6 (a) Study Fig. 8, which shows information about a farm in the Gambia (an LEDC in Africa).

**Growing groundnuts**

Groundnuts are small, bushy plants. The seeds grow under the soil. Groundnuts are also called peanuts. They need temperatures of around 26°C and rainfall over 500 mm during the four to five months when the crop is growing. They grow best on light, well-drained soils.

**Growing rice**

Rice is an important grain or cereal crop. It needs temperatures of over 21°C during the five-month growing season, followed by a dry, sunny period for the crop to ripen. It needs a high rainfall, or large amounts of irrigation water. It grows best in rich, muddy soil.

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**Fig. 8**

(i) The farmer who uses the land in Fig. 8 grows some subsistence crops. What is a subsistence farmer? [1]

(ii) The farmer who uses the land shown in Fig. 8 grows groundnuts and rice on his farm. Suggest one reason to explain why:

A groundnuts are grown at X;

B rice is grown at Y. [2]

(iii) Give three reasons why many people in some LEDCs suffer from food shortages. [3]

(iv) Explain how farmers in LEDCs might increase their production of food. [4]
(b) Study Fig. 9, which shows the location of tourist hotels and market gardens in part of the Gambia.

Fig. 9

(i) In the market gardens, local women work together in co-operatives to grow vegetables. Explain how the development of tourism in the area might benefit these women. [3]

(ii) Describe the possible disadvantages of tourism for people who live in LEDCs. [5]

(c) For a named area which you have studied, explain why the tourist industry has developed there. You should refer to the area's physical and human attractions. [7]

[Total: 25 marks]