



**GEOGRAPHY  
HIGHER LEVEL  
PAPER 2**

Friday 23 May 2008 (morning)

2 hours 30 minutes

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**INSTRUCTIONS TO CANDIDATES**

- Do not open this examination paper until instructed to do so.
- Answer four questions:
  - two from Section A;
  - one from Section B;
  - one other from any Section (A, B or C).
- Each question must be selected from a different theme.

## SECTION A

*Answer at least **two** questions from this section and each question must be selected from a different theme. (Do not answer both an essay and a structured question on the same theme.)*

*Case studies and examples should be used to illustrate answers and where appropriate, they should be specifically located. Include well drawn, large, relevant maps, sketches, tables and diagrams as often as applicable.*

### **A1. Drainage basins and their management**

*Either*

#### **(a) Essay**

Examine how variations in fluvial processes along the courses of rivers affect basin management strategies.

*[20 marks]*

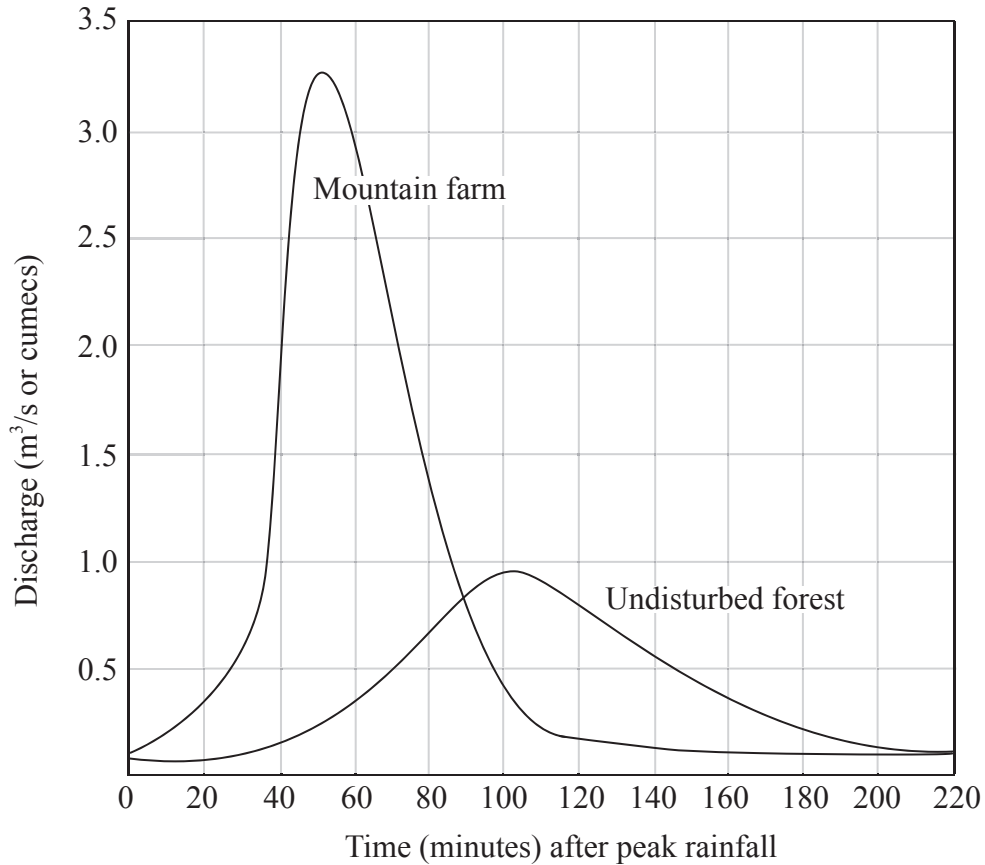
*(This question continues on the following page)*

(Question A1 continued)

Or

**(b) Structured question**

The diagram illustrates two storm hydrographs for the same rainfall event in two areas of contrasting land use.



- (i) Describe the characteristics of the hydrograph for the mountain farm. *[3 marks]*
  
- (ii) Suggest possible reasons for the differences between the two hydrographs. *[7 marks]*
  
- (iii) Examine how urbanization affects the intensity of flooding and how urban flooding can be reduced. Use one or more examples in your answer. *[10 marks]*

### A2. Coasts and their management

*Either*

**(a) Essay**

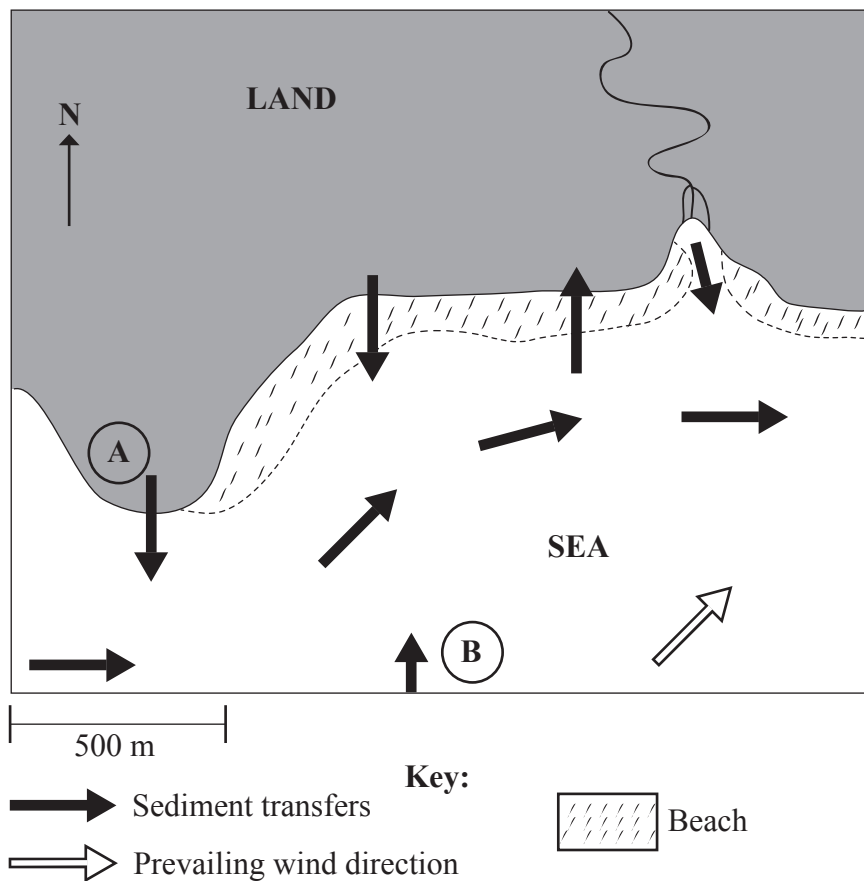
Explain the effect of variations in wave energy upon coastal processes and features.

[20 marks]

*Or*

**(b) Structured question**

The diagram shows a stretch of coastline as a system with its sediment transfers.



(i) Explain the sediment transfers marked A and B.

[2+2 marks]

(ii) Suggest why it is important to maintain a balance between the inputs and outputs of sediment in a coastal system such as this one.

[6 marks]

(iii) Explain the development of **either** salt marshes **or** sand dunes and the reasons why they should be managed.

[10 marks]

**A3. Arid environments and their management**

*Either*

**(a) Essay**

“The factors responsible for the formation and location of deserts are always the same.” Discuss this statement, with reference to examples.

*[20 marks]*

*Or*

**(b) Structured question**

*If you choose to answer this question use the photograph in the Resources Booklet.*

(i) Identify the landform labelled A on the photograph and, using only an annotated diagram (or diagrams), describe and explain the formation of this landform.

*[1+4 marks]*

(ii) Explain the role of intense but infrequent rainstorms in the formation of **one** other fluvial landform in arid and semi-arid areas.

*[5 marks]*

(iii) Discuss conflicts in arid environments arising from urbanization **and/or** tourism.

*[10 marks]*

**A4. Lithospheric processes and hazards**

*Either*

**(a) Essay**

“Volcanic eruptions are easier to predict but more difficult to respond to than earthquakes”. Discuss this statement, with reference to examples. *[20 marks]*

*Or*

**(b) Structured question**

The table below shows some of the factors that affect the probability of rapid mass movements.

<b>Natural Factors</b>	<b>Human Factors</b>
Snowmelt	Deforestation
Weathering	Traffic vibration
Slope angle	Road construction
Rock type / structure	Loading slopes with waste material
Seismic activity	Addition of water
Factor A	Factor B

- (i) Identify factors A and B. *[2 marks]*
- (ii) Select **one** natural and **one** human factor from the table (excluding factors you chose for A and B) and explain how each contributes to slope instability. *[2+2 marks]*
- (iii) Explain how biological factors influence weathering. *[4 marks]*
- (iv) Using a specific case study, examine the causes, consequences and responses to a rapid mass movement influenced by human activity. *[10 marks]*

**A5. Ecosystems and human activity**

*Either*

**(a) Essay**

With reference to a specific ecosystem, examine how human activity has affected the relationships between climate, vegetation and soils.

*[20 marks]*

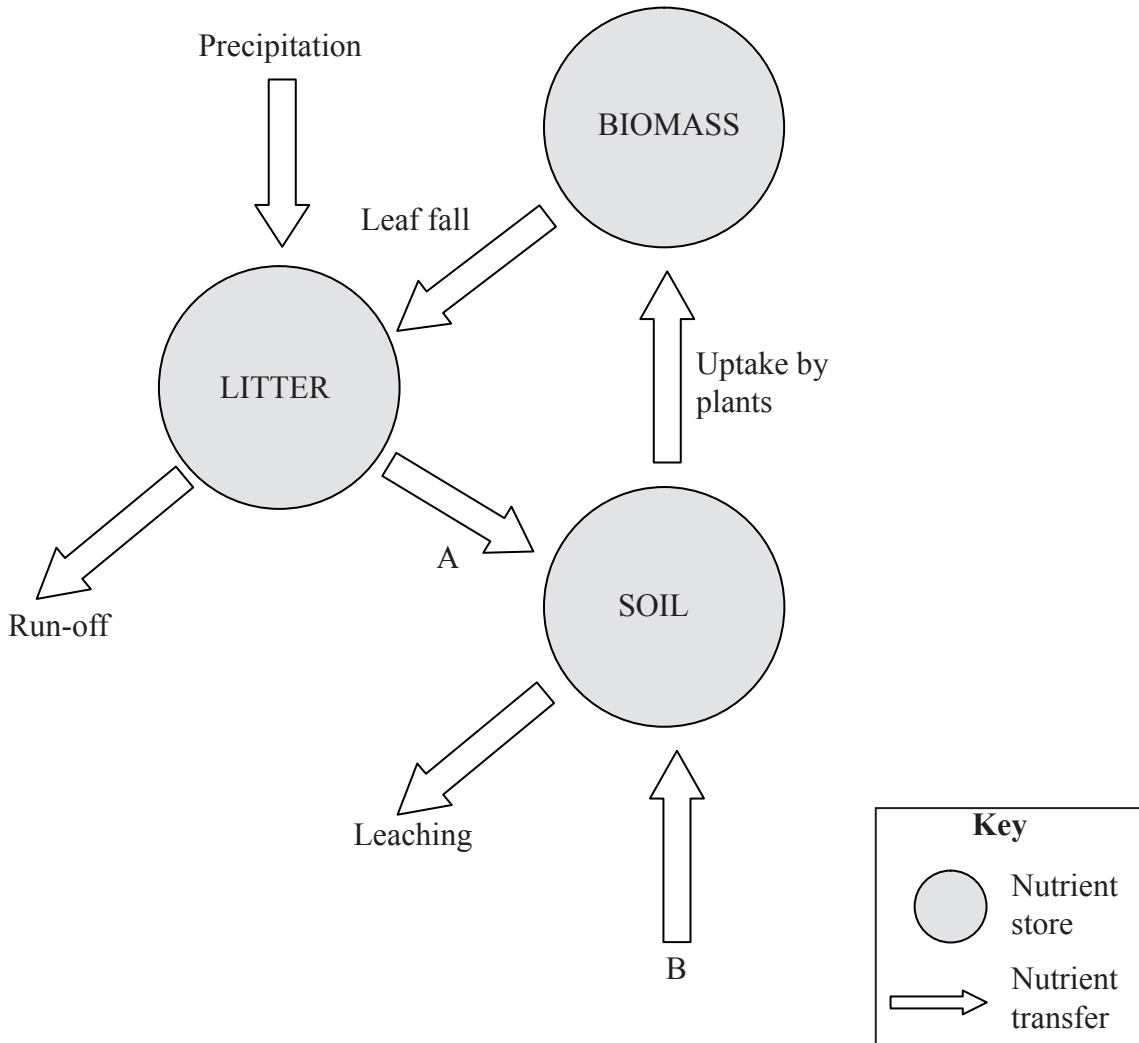
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(Question A5 continued)

Or

**(b) Structured question**

The diagram shows the transfer and storage of nutrients in a generalized ecosystem.



- (i) Name the two nutrient transfers A and B. [2 marks]
  
- (ii) Explain how vegetation succession may cause the biomass nutrient store to increase over time. [3 marks]
  
- (iii) Explain how positive and negative feedback affect the stability of an ecosystem. [5 marks]
  
- (iv) Examine the human impacts on the structure and processes in one ecosystem of your choice. [10 marks]



**A6. Climatic hazards and change**

*Either*

**(a) Essay**

“Long-term droughts and short-term dry seasons have similar causes and result in similar effects”. To what extent do you agree with this statement? *[20 marks]*

*Or*

**(b) Structured question**

*If you choose to answer this question use the maps in the Resources Booklet.*

Map A shows ocean temperatures for the period January–March of an unspecified year. Map B shows the ocean temperature anomalies\* for the same period.

- (i) Describe the pattern of ocean temperatures shown on Map A. *[3 marks]*
- (ii) Name the weather event responsible for the patterns shown on these maps. *[1 mark]*
- (iii) Using only an annotated diagram, describe the oceanic and atmospheric circulation in the equatorial Pacific under normal conditions. *[6 marks]*
- (iv) Discuss the suggestion that the benefits of global warming will outweigh any problems it causes. *[10 marks]*

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\* anomalies: departure from the mean temperature

## SECTION B

*Answer at least **one** question from this section. If more than one question is selected from this section, each must be taken from a different theme. (Do not answer both an essay and a structured question on the same theme.)*

*Case studies and examples should be used to illustrate answers and, where appropriate, they should be specifically located. Include well drawn, large, relevant maps, sketches, tables and diagrams as often as applicable.*

### **B7. Contemporary issues in geographical regions**

*Either*

#### **(a) Essay**

For any **two** multi-feature regions you have studied, compare their geographic similarities and differences.

*[20 marks]*

*(This question continues on the following page)*

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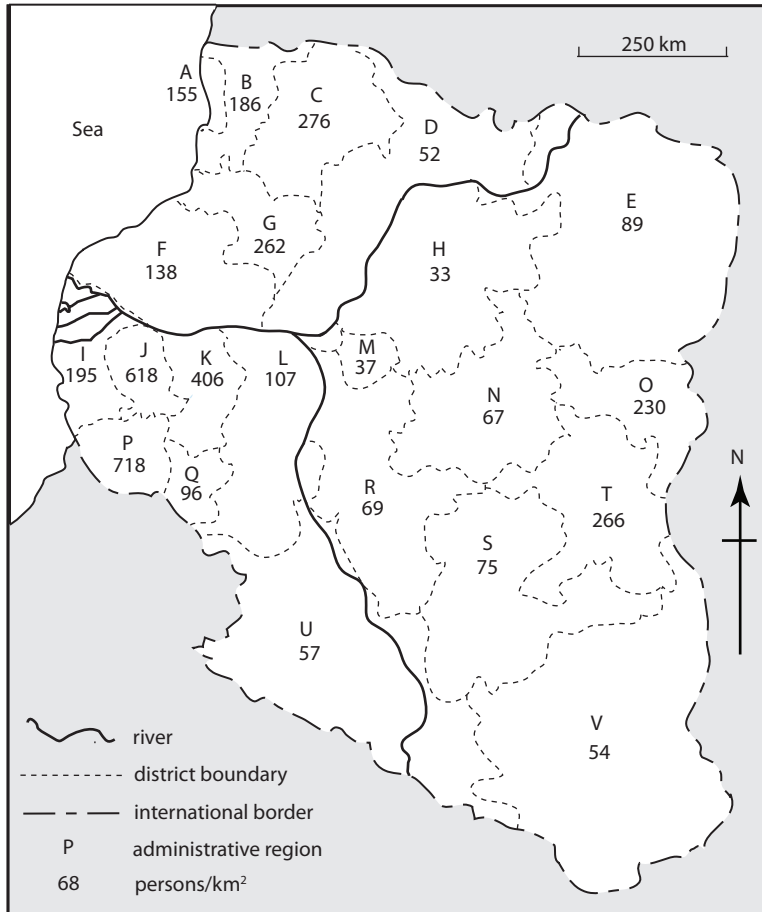
(Question B7 continued)

Or

**(b) Structured question**

Study the maps which depict two alternative regional divisions of an unnamed country.

Map A: administrative areas and population density

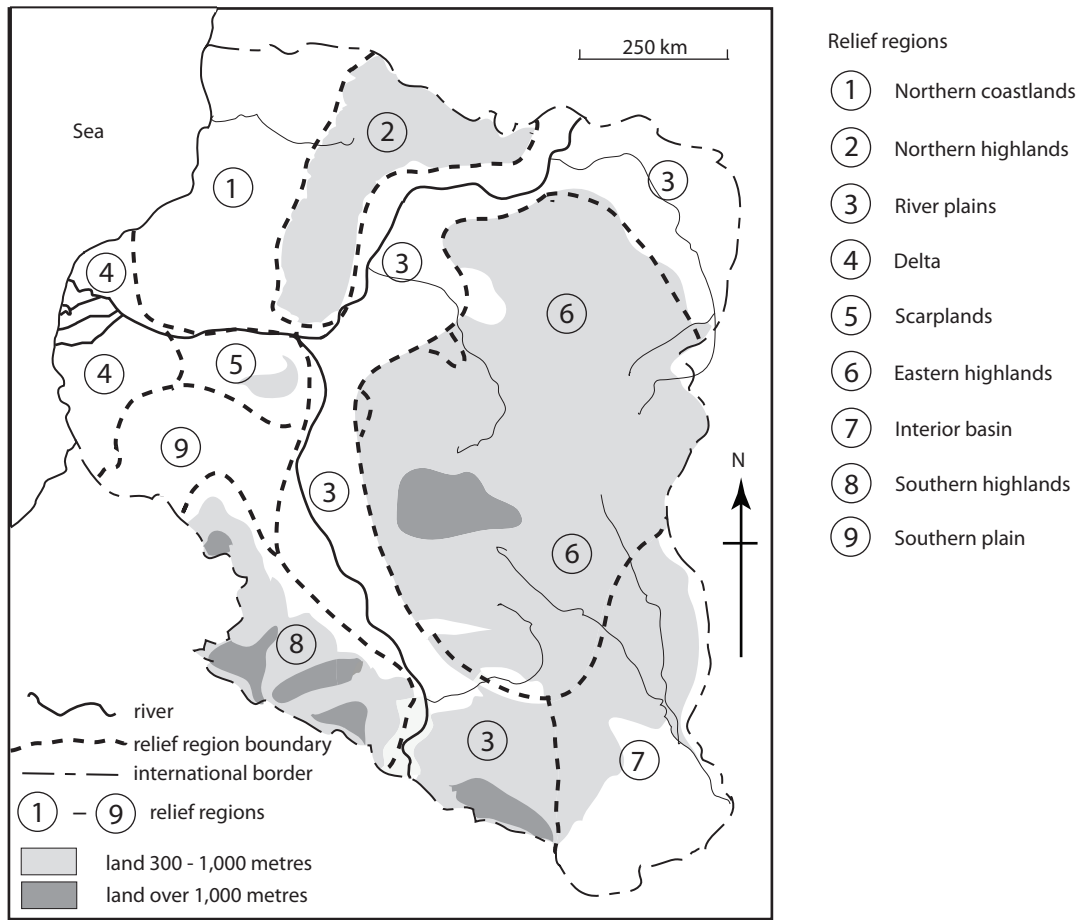


[Source: Helmer & Hespanhol, (1997), *Water Pollution Control - A guide to the Use of Water Quality Management Principles*. WHO/UNEP]

(This question continues on the following page)

(Question B7 continued)

Map B: relief regions



[Source: Illoeje, (1972), *A New Geography of West Africa*, Longman]

- (i) Identify the state which has the highest density of population. [1 mark]
- (ii) Using Map A (administrative areas and population density) draw a map of the country, dividing it into a minimum of four distinct regions, based on population density. [5 marks]
- (iii) Analyse the relationships between the population density regions you have drawn in (ii) and the relief regions shown on Map B. [4 marks]
- (iv) Examine the importance of physical geography in defining the boundaries of a local region you have studied in detail. [10 marks]

**B8. Settlements**

*Either*

**(a) Essay**

Referring to examples, describe and explain the problems found in one or more LEDC cities and evaluate the strategies designed to solve them.

*[20 marks]*

*Or*

**(b) Structured question**

*If you choose to answer this question refer to the map in the Resources Booklet.*

The map shows land use in a city in Central Europe.

(i) Referring to two of the areas (A–D) shown on the map, name and explain the location of one different functional zone in each area.

*[2+2 marks]*

(ii) Using **only** a labelled diagram, describe the core-frame model.

*[6 marks]*

(iii) Referring to one or more examples, describe and evaluate the strategies designed to regenerate inner-city areas in MEDCs.

*[10 marks]*

**B9. Productive activities: aspects of change**

*Either*

**(a) Essay**

“Local factors are more important than regional factors in determining the location of industry”. Discuss this statement.

*[20 marks]*

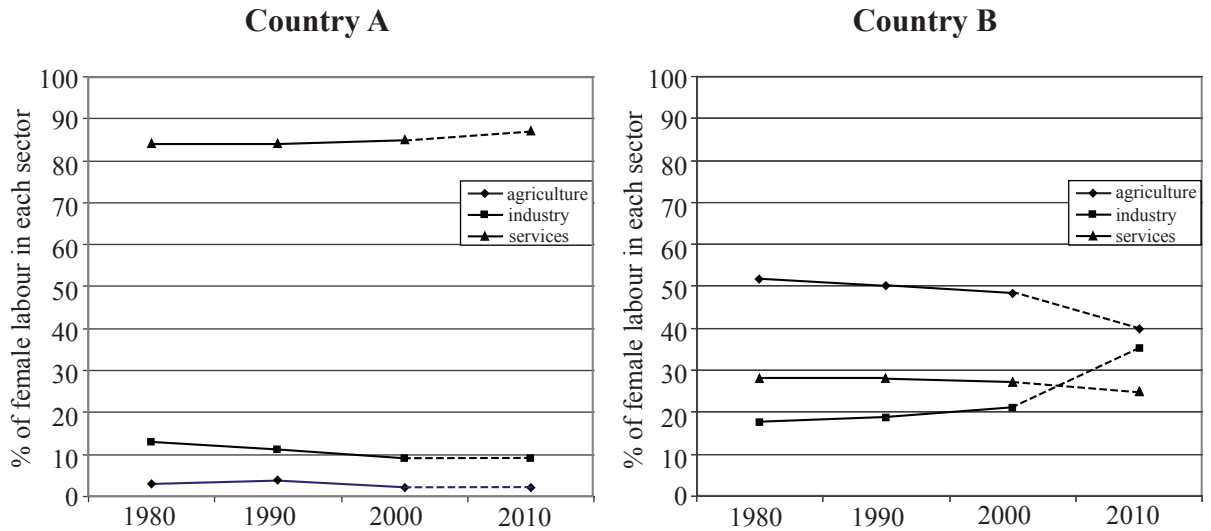
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(Question B9 continued)

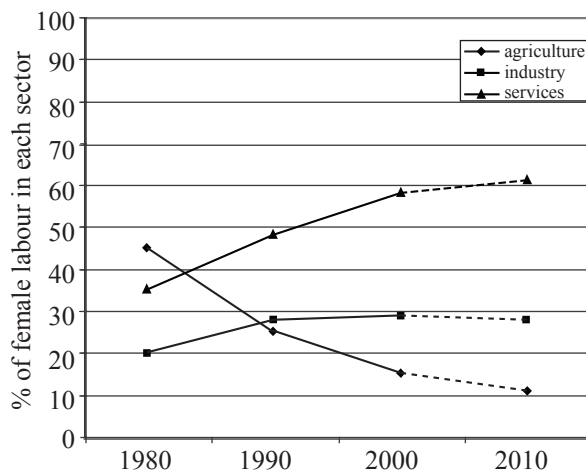
Or

(b) Structured question

The diagrams show changes in the female labour force from 1980 to 2010 for three unidentified countries.



Country C



[Source: <http://genderstats.worldbank.org>]

- (i) Describe the changes in the proportion of female labour in different sectors of industry in Country C. [4 marks]
- (ii) Identify the **most** and the **least** economically developed country and justify your choice. [2+4 marks]
- (iii) Explain why transnational firms may relocate their industrial processes. [10 marks]



**B10. Globalization**

*Either*

**(a) Essay**

“The growth of international tourism has brought global benefits, but local problems.” Discuss this statement. *[20 marks]*

*Or*

**(b) Structured question**

The map shows the annual flow of inter-continental calls by fixed line telephones\* in both directions in 2005.

\*fixed line telephones: land lines, not cell phones



**Key:**

3000 1500 750 200 millions of minutes per year by fixed line telephones



[Source: adapted from www.telegeography.com]

- (i) Describe the global pattern of telephone traffic. *[4 marks]*
- (ii) Suggest three factors which influence the volume and pattern of telephone traffic between countries. Justify your choice of each factor. *[3+3 marks]*
- (iii) Examine the effects Information and Communications Technology (ICT) may have on the processes of cultural integration. *[10 marks]*

**SECTION C**

*If you choose to answer this question, use the topographic map extract and the aerial photograph in the Resources Booklet to answer **all** parts.*

**C11. Topographic mapping**

The map extract and the photograph show part of the island of Martinique, in the Caribbean. The scale of the map is 1:25 000 and the contour interval is 10 metres. The island's major physical feature is Montagne Pelée, which can be seen in the photograph.

- (a) (i) Explain what is meant by a scale of 1:25 000. *[1 mark]*
- (ii) State the area of land in square kilometres represented by each complete grid square. *[1 mark]*
- (b) Describe the relief and drainage of the area north of northing 12. *[3+3 marks]*
- (c) Name the main settlement shown on the photograph and describe its situation. *[1+3 marks]*
- (d) Referring to map evidence, explain how physical features have influenced
- (i) the road network; *[4 marks]*
- (ii) the pattern of land use and human activity. *[4 marks]*
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