



**GEOGRAPHY  
HIGHER LEVEL  
PAPER 2**

Tuesday 13 November 2007 (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**

Analyse the natural and human factors that affect the movement of water in river channels.

[20 marks]

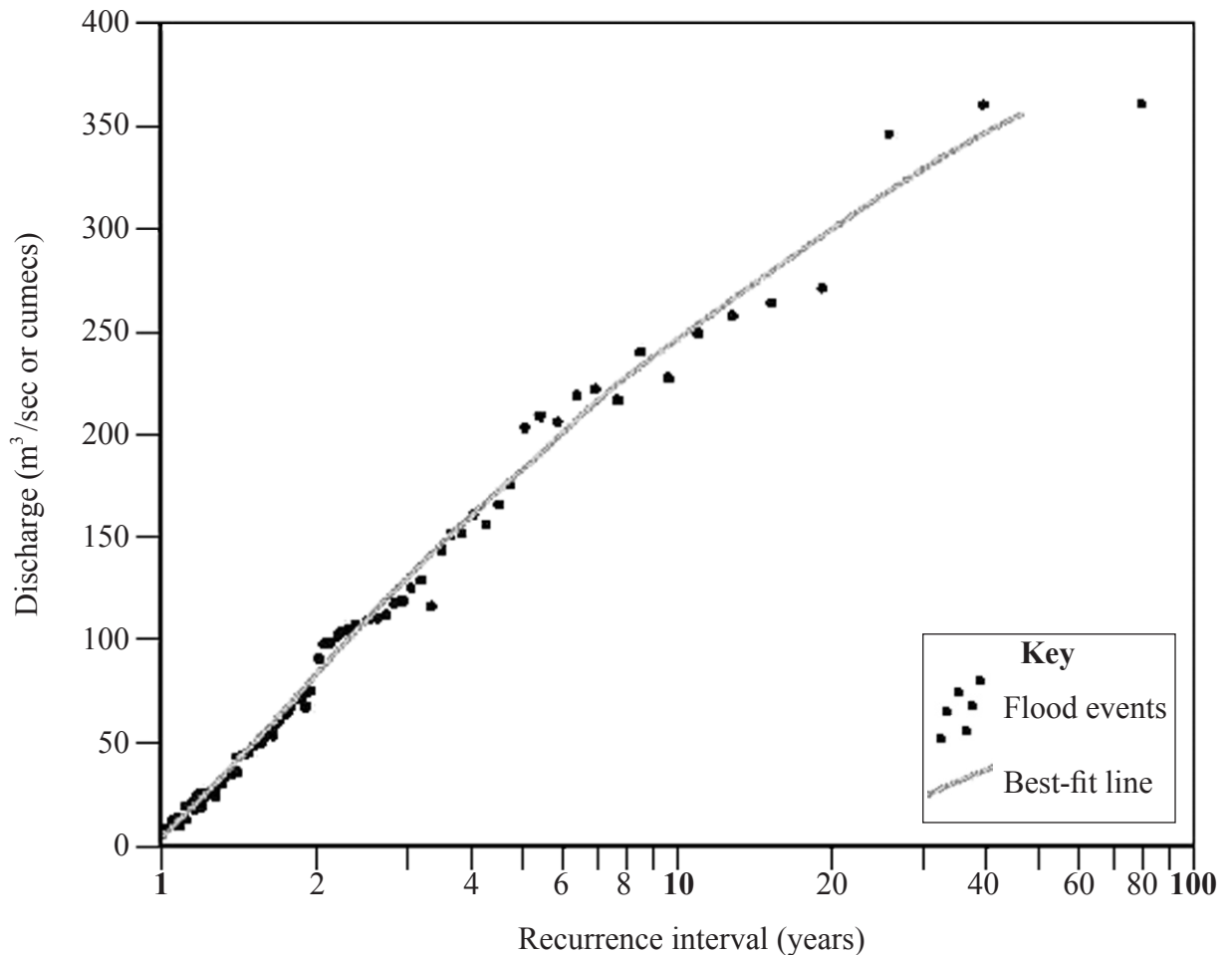
*(This question continues on the following page)*

(Question A1 continued)

Or

**(b) Structured question**

The diagram shows the recurrence interval for all flood events recorded at a location on an unnamed river. Floods occur at this location when the discharge is above 10m<sup>3</sup>/sec.



[Source: Brooks/Cole – Thomson Learning (2001)]

- (i) Define the term *discharge*. [2 marks]
- (ii) Comment on the relationship between the discharge and the recurrence interval shown in the diagram. [4 marks]
- (iii) Explain how the information shown in the diagram helps in developing a flood management plan. [4 marks]
- (iv) Describe the different methods used to prevent river floods and briefly evaluate their success. Refer to one or more named examples in your answer. [10 marks]

**A2. Coasts and their management**

*Either*

**(a) Essay**

“Coastlines and their features result from an uneven balance between erosion and deposition.” Discuss this statement.

*[20 marks]*

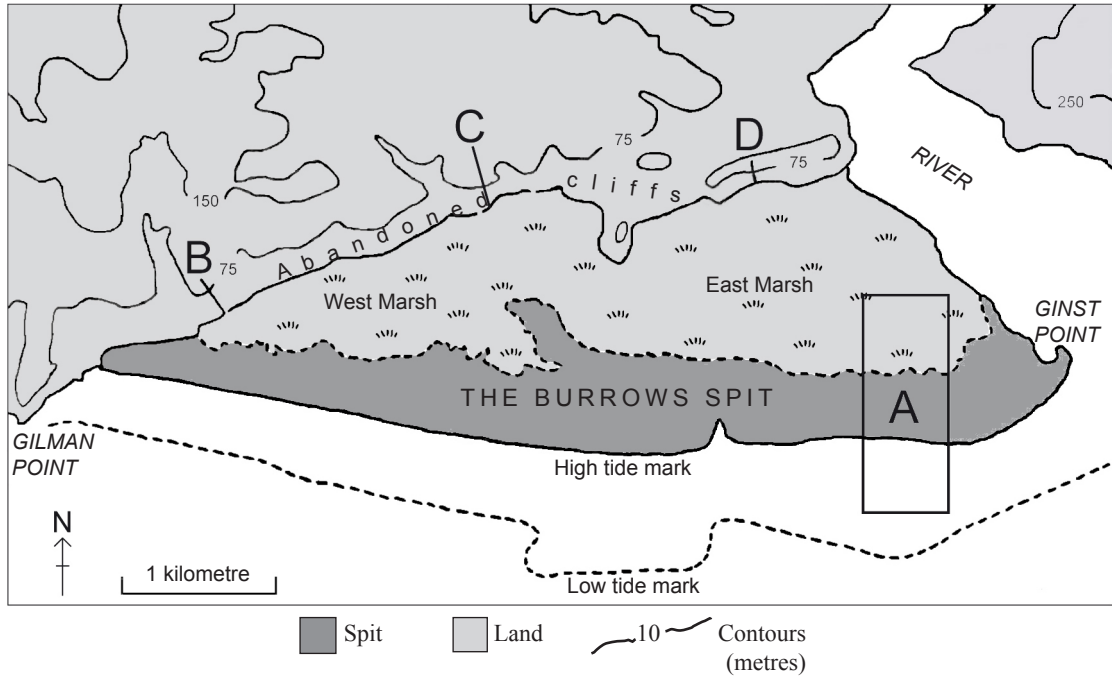
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(Question A2 continued)

Or

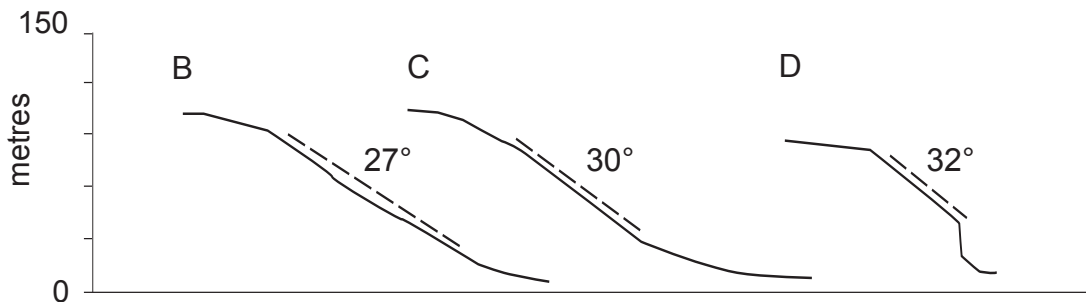
(b) Structured question

The map shows a coastal area.



[Source: Adapted from "Some observations on slope development in South Wales", Savigear (1952)]

The diagram shows the cliff profiles for three places marked on the map. (These cliff profiles are enlargements of B, C and D shown on the map.)



- (i) Name, and briefly describe, **three** landforms you would expect to find in the area marked A on the Burrows spit. [3 marks]
- (ii) Explain the likely processes responsible for the formation of this spit. [4 marks]
- (iii) Referring to both the map and the diagram, describe and suggest reasons for the differences in the profiles of the abandoned cliffs at B, C and D. [6 marks]
- (iv) Describe the human responses to **one** hazard affecting a named stretch of coastline and briefly evaluate their success. [7 marks]

**A3. Arid environments and their management**

*Either*

**(a) Essay**

Examine the role of intense and irregular precipitation in the development of landforms in arid and semi-arid areas.

*[20 marks]*

*Or*

**(b) Structured question**

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

The photograph shows the landscape of part of Monument Valley in Arizona, USA.

(i) Draw a labelled sketch of the photograph, identifying the **three** main landforms.

*[5 marks]*

(ii) Describe and explain the processes involved in the formation of this type of landscape.

*[7 marks]*

(iii) Discuss the conflicts that arise from tourism in arid and semi-arid areas.

*[8 marks]*

**A4. Lithospheric processes and hazards**

*Either*

**(a) Essay**

Examine whether violent volcanic activity is found only at destructive plate margins. Refer to named examples in your answer.

[20 marks]

*Or*

**(b) Structured question**

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

The map shows variations in the thickness of the Earth's crust.

(i) Describe the distribution of areas with a crustal thickness of

(a) **more than** 40 km

(b) **less than** 10 km.

[4 marks]

(ii) Select and name **one** area with a crustal thickness of over 60 km. Using **only** an annotated diagram explain why the crust is so thick at this location.

[6 marks]

(iii) Examine whether the impacts of secondary earthquake hazards are more serious than those of primary hazards.

[10 marks]

**A5. Ecosystems and human activity**

*Either*

**(a) Essay**

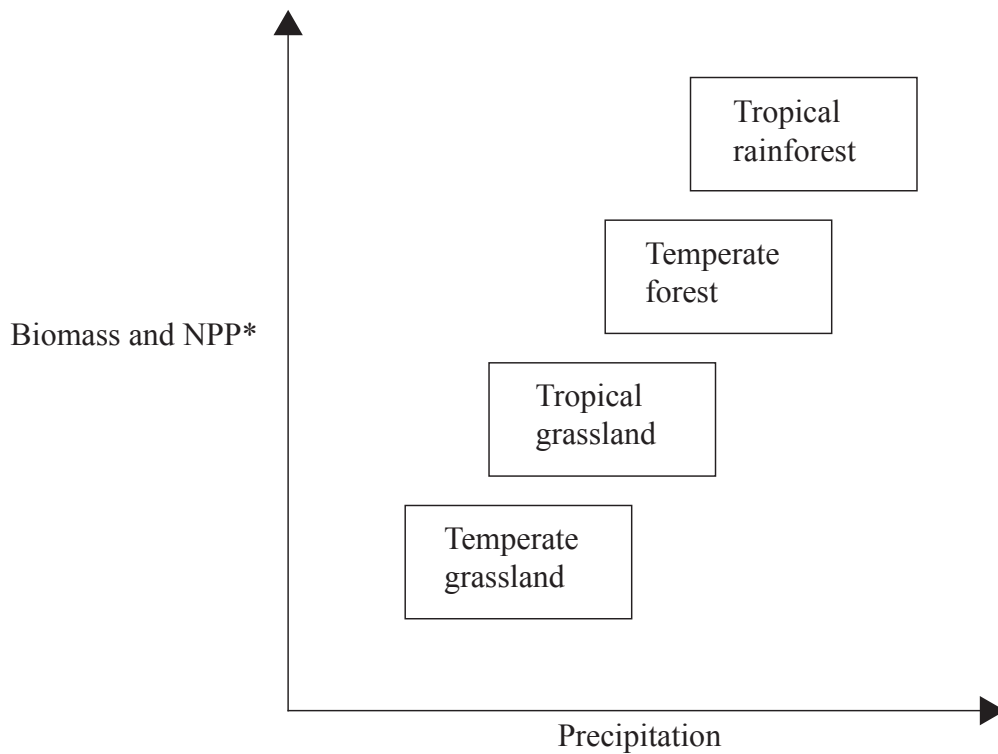
Referring to a case study, examine the value of a named ecosystem and discuss the conservation strategies that are in place to protect it.

[20 marks]

*Or*

**(b) Structured question**

The diagram shows the relationship between precipitation, biomass and NPP for four biomes.



\* NPP: Net Primary Productivity

- (i) Define *NPP*. [2 marks]
- (ii) Describe and explain the relationship shown on the diagram. [4 marks]
- (iii) Draw a labelled diagram to illustrate the nutrient stores and transfers of **one** biome you have studied. [4 marks]
- (iv) Referring to any **one** named biome or ecosystem, examine the ways in which human activity has disturbed its natural equilibrium. [10 marks]



**A6. Climatic hazards and change**

*Either*

**(a) Essay**

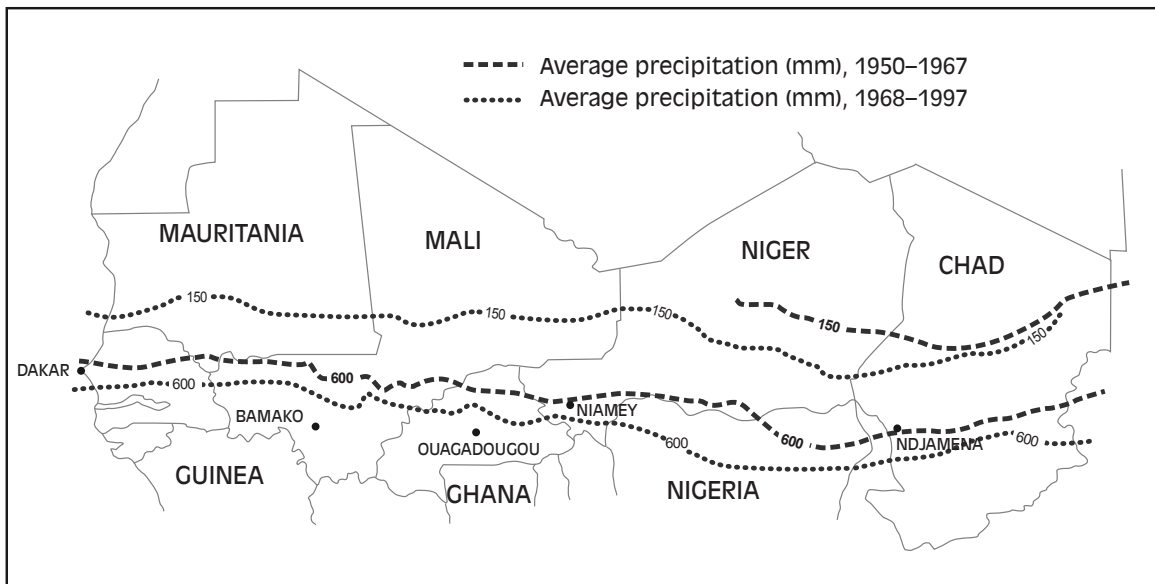
Analyse the causes and consequences of changing concentrations of ozone in the atmosphere.

[20 marks]

*Or*

**(b) Structured question**

The map shows isohyets for the Sahel region for the periods 1950–1967 and 1968–1997. (An isohyet is a line that joins places of equal amounts of annual precipitation.)



[Source: Adapted from the UNESCO FRIEND Report (2002)]

- (i) Define the term *drought*. [2 marks]
- (ii) Referring to the map, describe the pattern of precipitation for the period 1950–1967. [4 marks]
- (iii) How does the pattern of annual precipitation shown on the map indicate that the Sahel region has experienced a drought since 1968? [4 marks]
- (iv) Examine whether the impacts of a long-term drought are more severe than the impacts of a short-term tropical cyclone. [10 marks]

**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**

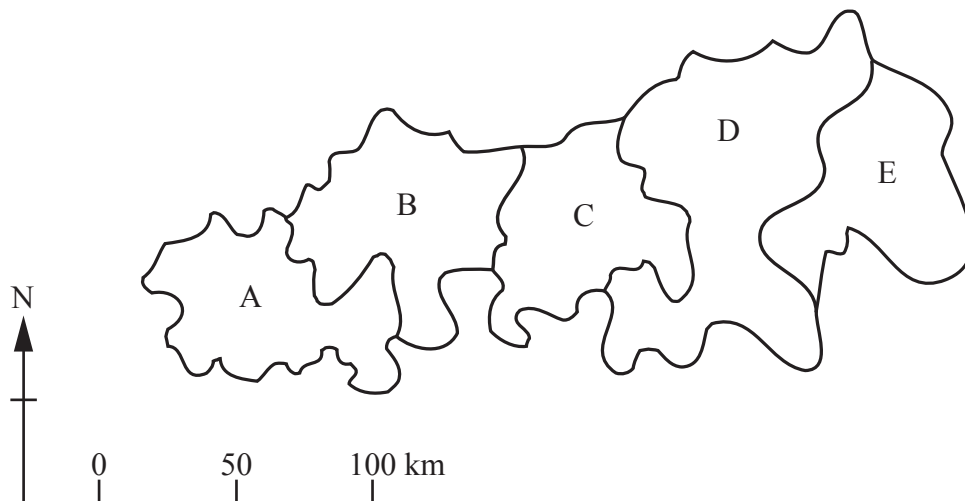
Discuss whether physical **and** human factors are necessary to define and explain the limits, character and contemporary geographical issues of your local region.

[20 marks]

*Or*

**(b) Structured question**

The map shows a theoretical country and its five regions.



*(This question continues on the following page)*

(Question B7 continued)

The table provides some data about each of the five regions.

Measure	A	B	C	D	E
Population (millions)	8	20	2	4	1
Population Growth Rate (annual %)	1.5	0.8	1.5	3.1	3.5
Life Expectancy (years)	60	74	64	52	48
% Urban Population	40	70	45	20	15
GNP/person (US \$)	6000	30000	12000	500	300
Infant Mortality (/1000 live births)	17	10	20	90	110
% of Workforce in Primary Sector	30	2	20	75	80

- (i) Name **one** region shown on the map that is a peripheral region. Justify your choice. *[1+2 marks]*
  
- (ii) Using the map and table, briefly describe the pattern of development in the country. *[3 marks]*
  
- (iii) Describe the characteristics that define your local region. *[4 marks]*
  
- (iv) Examine the extent to which the contemporary geographical issues of your local region are influenced by physical geography. *[10 marks]*

**B8. Settlements***Either***(a) Essay**

Referring to **one or more** examples, discuss whether urbanization in LEDCs has more positive than negative consequences.

*[20 marks]**Or***(b) Structured question**

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

The graph shows changes in land use along an urban transect of a large town in Western Europe.

(i) State the distance from the town centre that you would find the following and in each case justify your answer:

(a) the outer boundary of the CBD

*[2 marks]*

(b) a retail and business park/centre.

*[2 marks]*

(ii) Describe and suggest reasons for **three** major changes in the pattern of land use from the town centre to the end of this transect.

*[6 marks]*

(iii) Examine the conflicts that arise on the rural–urban fringe of some towns and cities.

*[10 marks]*

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

*Either*

**(a) Essay**

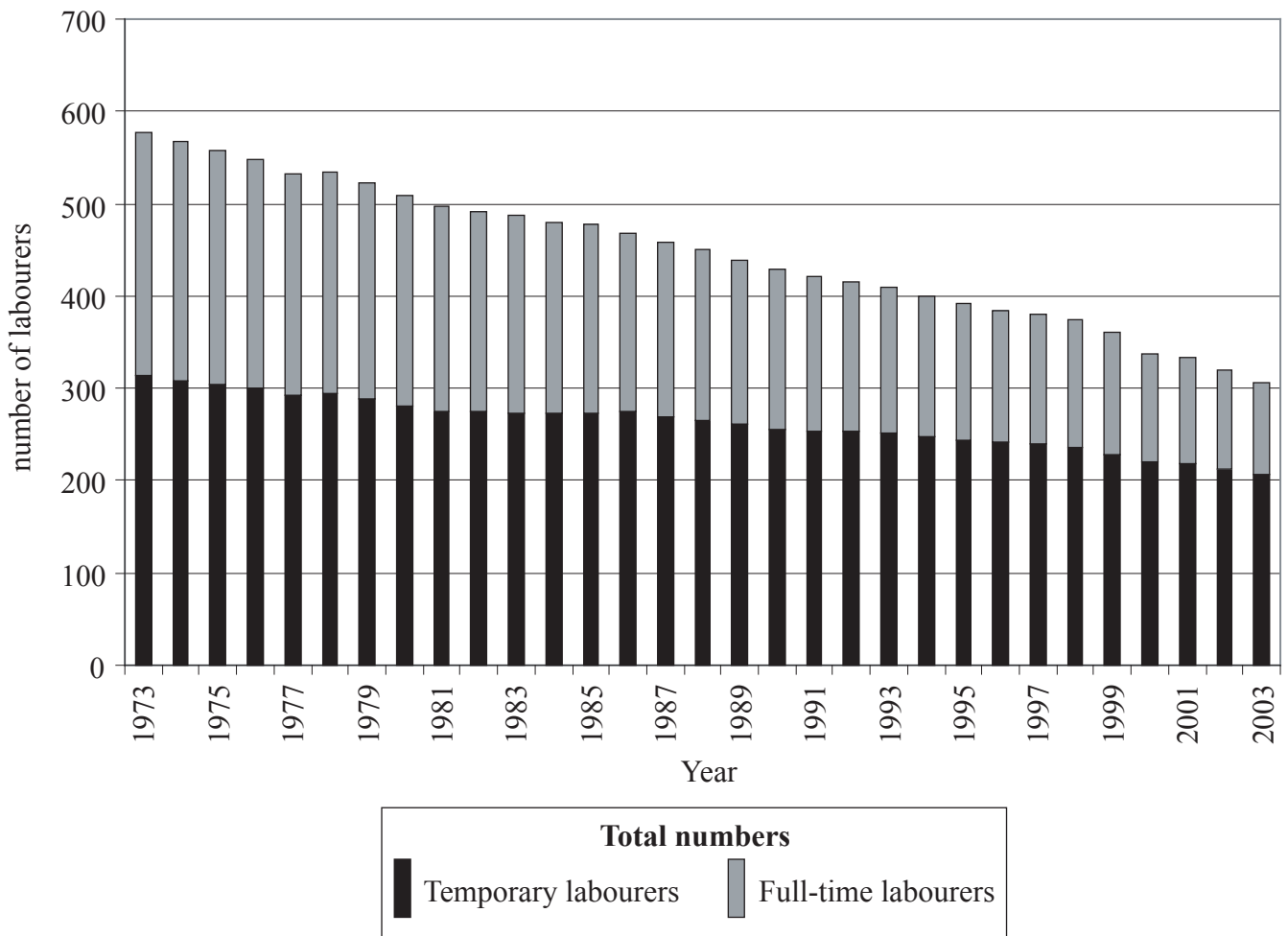
Examine the factors which have influenced the distribution and rapid growth of service industries. Refer to named examples in your answer.

[20 marks]

*Or*

**(b) Structured question**

The diagram shows the changes in the agricultural labour force in a MEDC.



[Source: DEFRA]

- (i) Describe the trends in labour shown in the diagram. [3 marks]
- (ii) Provide possible explanations for the trends identified in part (i). [7 marks]
- (iii) Referring to **one** type of industry, assess the impact of rising labour costs on its location. [10 marks]

**B10. Globalization**

*Either*

**(a) Essay**

Referring to examples, explain why tourism has grown rapidly in many less economically developed countries in recent years.

*[20 marks]*

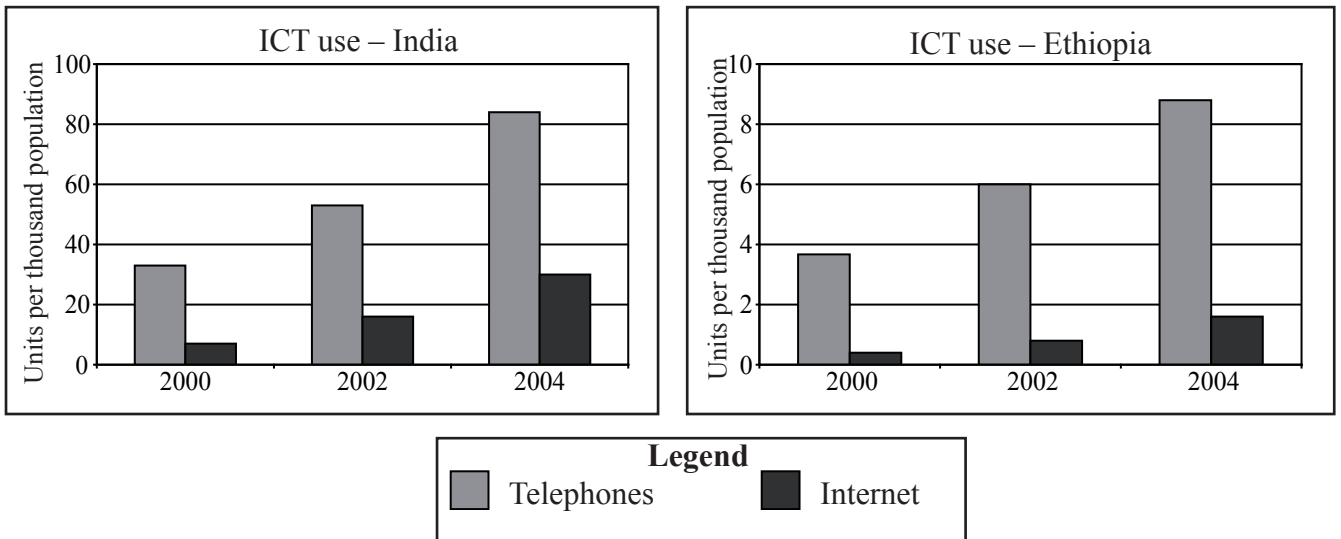
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(Question B10 continued)

Or

**(b) Structured question**

The diagrams show the use of information communications technology (ICT) for India and Ethiopia.



[Source: International Telecommunications Union]

- (i) Compare the trends in the use of telephones and the Internet for India and Ethiopia between 2000 and 2004. [4 marks]
- (ii) Describe **three** factors that have led to global economic integration. [6 marks]
- (iii) Examine the reasons why some countries do not benefit from globalization. [10 marks]

**SECTION C**

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

**C11. Topographic mapping**

The map and photograph show the area around Clermont-Ferrand, an industrial city in the Massif Central, France. The photograph was taken from the eastern slope of Puy de Dôme towards Clermont-Ferrand. The scale of the map is 1:100 000.

- (a) Referring to the map, state the straight-line distance in kilometres from the cathedral in the centre of Clermont-Ferrand to the summit of Puy de Dôme to the west. *[1 mark]*
- (b) Referring to the photograph, answer the following.
- (i) Estimate the time of day the photograph was taken. Justify your answer. *[2 marks]*
- (ii) Describe **two** ways in which the map is better than the photograph in showing physical features. *[2 marks]*
- (iii) Describe **two** ways in which the photograph is better than the map in showing human features. *[2 marks]*
- (c) (i) Draw an annotated sketch map of the whole area and divide it into geographical regions. *[5 marks]*
- (ii) Using only annotations on your map, describe the distinctive features of each region. *[3 marks]*
- (d) Explain the distribution of different types of tourist activities in the whole region. *[5 marks]*
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