IB DIPLOMA PROGRAMME
PROGRAMME DU DIPLÔME DU BI
PROGRAMA DEL DIPLOMA DEL BI

GEOGRAPHY
STANDARD LEVEL
PAPER 2

Monday 7 November 2005 (morning)

1 hour 30 minutes

INSTRUCTIONS TO CANDIDATES

• Do not open this examination paper until instructed to do so.
• Answer two questions, each one must be selected from a different theme.

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

SECTION A

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

Describe and evaluate the success of the water management strategies of **one** named drainage basin.   *[20 marks]*

Or

(b) Structured question

If you choose to answer this question, use the two photographs in the Resources Booklet.

The two photographs (A and B) illustrate river processes, which are typical in areas of fluvial (river) deposition, erosion and transport.

 (i) Explain the development of the fluvial landscape shown in each photograph
      (A and B). Use diagrams to illustrate your answer.   *[5+5 marks]*

 (ii) Using examples, explain how human activity affects the risk of river floods
       in low lying areas.   *[10 marks]*

A2. **Coasts and their management**

Either

(a) **Essay**

Wave action is the main cause of coastal landforms. Discuss this statement and use examples in your answer. *[20 marks]*

Or

(b) **Structured question**

If you choose to answer this question, use the diagram in the Resources Booklet.

 (i) Choose **two** of the coastal landforms labelled on the diagram and explain their formation. Illustrate your answer with diagrams. *[2+2 marks]*

(ii) Explain the causes of coastal submergence and emergence. *[2+2 marks]*

(iii) Briefly explain the formation of **one** coastal landform that results from coastal submergence and **one** that results from coastal emergence. *[2+2 marks]*

(iv) Using examples, evaluate the effectiveness of "soft"* coastal management strategies. *[8 marks]*

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* "Soft" strategies are strategies that do not involve major engineering or construction work.

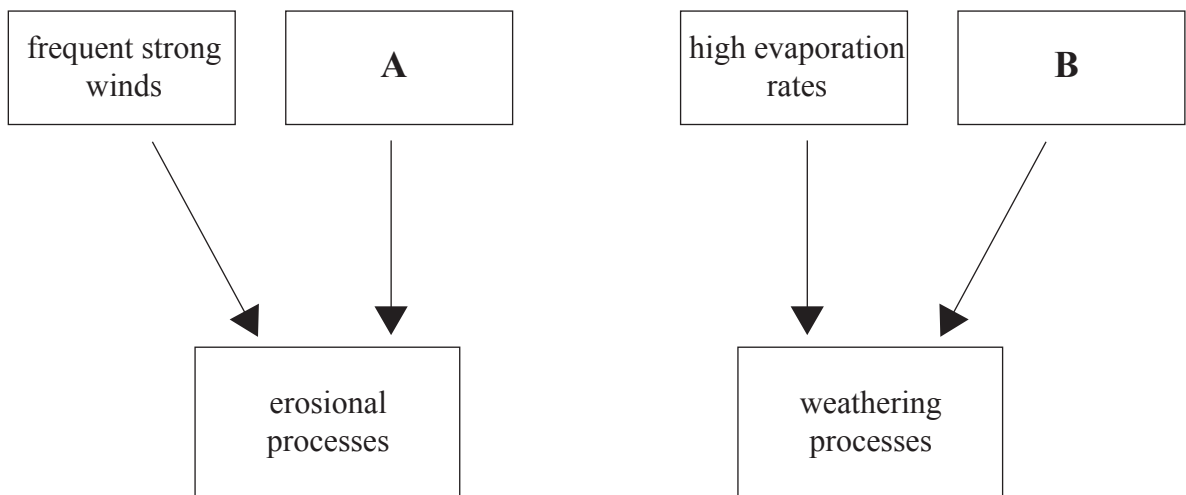**A3. Arid environments and their management**

Either

(a)   Essay

Competition for water is a major cause of international conflicts in arid areas. Using examples, explain why such conflicts exist.   *[20 marks]*

Or

(b)   Structured question

The diagram below shows some of the climatic factors responsible for erosion and weathering in arid areas.

| frequent strong winds | A | | high evaporation rates | B |

| erosional processes | | | weathering processes |

(i)   Identify and briefly describe the climatic factors labelled **A** and **B** on the diagram.   *[2+2 marks]*

(ii)   Using diagrams, explain the formation of **one** desert landform caused by strong winds and **one** desert landform caused by weathering.   *[8 marks]*

(iii) Using examples, explain why there are high concentrations of people in some desert areas.   *[8 marks]*

A4. Lithospheric processes and hazards
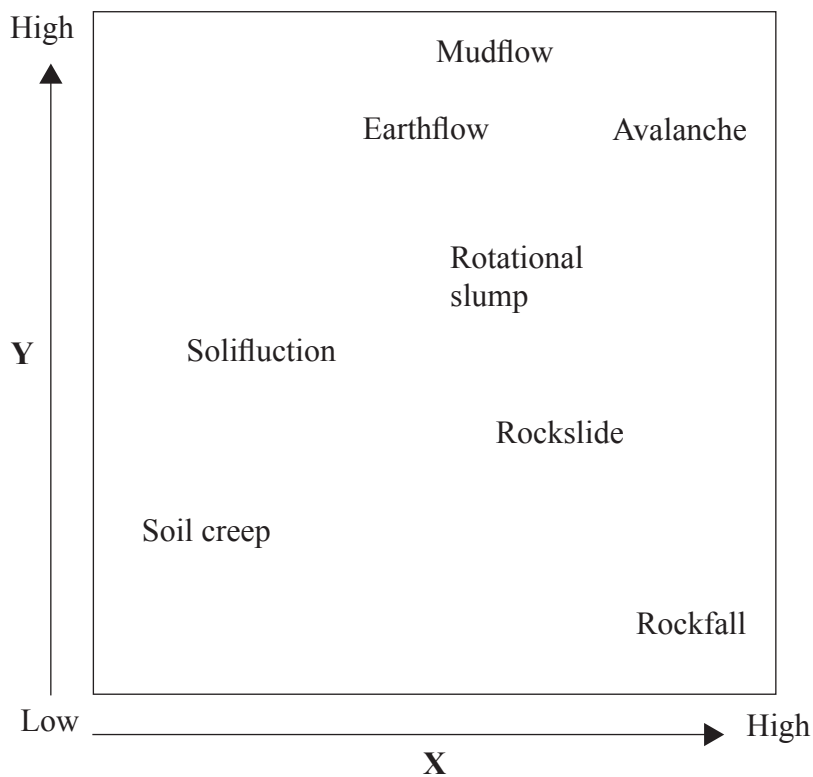
Either

(a) Essay

Using examples, examine the long-term socio-economic and environmental consequences of earthquake and volcanic activity.   *[20 marks]*

Or

(b) Structured question

The diagram classifies mass movements using variables **X** and **Y**.

(i)   Name the variables **X** and **Y** shown on the diagram.   *[2 marks]*

(ii)   Examine the importance of temperature change in **two** of the mass movement processes shown on the diagram.   *[2+2 marks]*

(iii) Identify and describe **three** natural* types of weathering that help to cause mass movement processes.   *[6 marks]*

(iv) Using examples, examine the ways that humans can influence weathering and mass movement processes.   *[8 marks]*

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*   Natural types of weathering are types of weathering that do not result from human activity.

A5. Ecosystems and human activity

Either

(a) Essay

With reference to **one** ecosystem at any scale, describe how it has been altered by human activity. Discuss the importance of conserving it for future generations.   *[20 marks]*

Or

(b) Structured question

The table below shows net primary production* and biomass for selected ecosystems.

Ecosystem	Net Primary Production (kcals / m² / year)	Biomass (kg / m²)
Tropical rainforest	9000	45
Estuaries	9000	1
Swamps and marshes	9000	15
Deciduous temperate forest	6000	30
Boreal forest	3500	20
Savanna	3000	4
Temperate grasslands	2000	1.6
Polar tundra	600	0.6
Desert	< 200	0.02

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*   Net Primary Production (NPP): the amount of energy made available by plants to animals at the herbivore level

(i) Referring to the ecosystems shown in the table, describe the relationship between NPP and biomass.   *[4 marks]*

(ii) Select **one** ecosystem with NPP below 3500 kcals / m² / year and account for this value.   *[6 marks]*

(iii) Examine the positive and negative impacts of agriculture on a forest ecosystem that you have studied.   *[10 marks]*

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A6. Climatic hazards and change

Either

(a) Essay

Describe how oceanic and atmospheric conditions change during El Niño events.
Examine the consequences of El Niño events.   *[20 marks]*

(This question continues on the following page)

(Question A6 continued)

Or

(b) Structured question

If you choose to answer this question, use the satellite image of hurricane Isabel in the Resources Booklet and the table below.

The table below shows the characteristics and development of hurricane Isabel (September 2003), a tropical cyclone.

Date (Time 12:00)	Position (centre of storm) Latitude ° N	Longitude ° W	Surface air pressure (mb)	Surface wind speed (knots)
06 September	13.6	33.9	1003	40
07 September	14.4	37.3	987	65
08 September	17.1	42.0	952	110
09 September	19.4	46.3	948	115
10 September	21.1	50.4	948	115
11 September	21.4	54.0	925	135
12 September	21.6	57.4	920	140
13 September	22.1	61.0	935	135
14 September	23.5	65.8	935	135
15 September	24.8	69.4	946	120
16 September	26.8	70.9	959	95
17 September	29.7	72.5	957	90
18 September	33.7	75.2	956	90

(i)   Referring to the satellite image and the table above, estimate the date when the satellite image was taken and briefly explain how you determined this date.   *[2 marks]*

(ii) Draw a labelled sketch of this hurricane identifying **three** features that are visible on the satellite image.   *[4 marks]*

(iii) Describe and briefly explain the changing relationship between surface air pressure and surface wind speeds between 06 September and 18 September.   *[4 marks]*

(iv) Referring to contrasting examples, discuss human responses to hurricanes.   *[10 marks]*

SECTION B

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

One definition of a region is "an area of the earth's surface differentiated (from adjoining areas) by one or more features or characteristics which give it a measure of unity."*

To what extent do you agree with this definition? Refer to any **two** named regions of similar scale in your answer.   *[20 marks]*

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*   Geographical Glossary Committee of the British Association

(This question continues on the following page)

(Question B7 continued)

Or

(b) Structured question

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

Map 1 shows some basic geographical features of north-west France. Maps 2 and 3 show alternative regional divisions of the same area.

(i) Referring to the maps, distinguish between the terms *functional region* and *multi-feature region*. *[2 marks]*

(ii) Describe, and attempt to explain, the influence of physical features (shown on Map 1) on the form of the regions of north-west France (shown on Map 3). *[4 marks]*

(iii) Draw a large, neatly annotated map to show the distinctive geographical features of your local region. *[7 marks]*

(iv) To what extent can the concept of distance decay be used to define the extent of your local region? *[7 marks]*
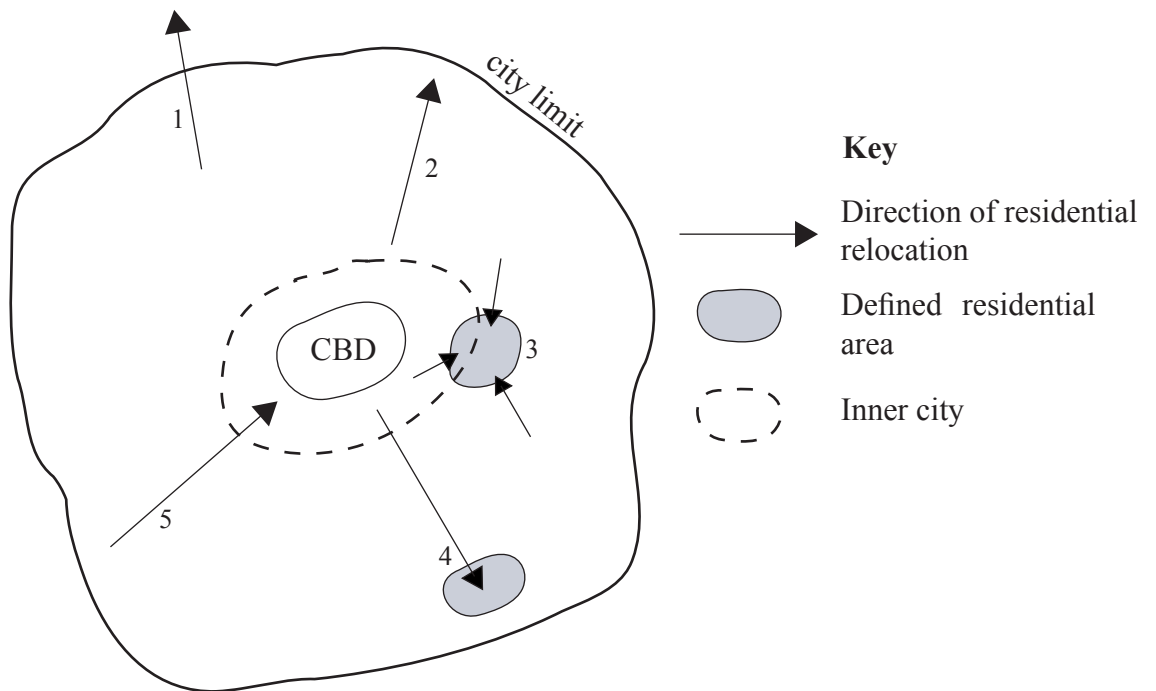
B8. Settlements

Either

(a) Essay

Describe and explain the causes and consequences of recent changes in the location of shops and offices in large urban areas in MEDCs. Use **at least two** examples in your answer. *[20 marks]*

Or

(b) Structured question

The diagram below shows residential relocation (change of residence) in a large urban area in a MEDC.

(i)   Identify and briefly describe **four** of the residential relocations shown in the diagram. *[4 marks]*

(ii) Draw a labelled diagram showing land use in a LEDC city. *[6 marks]*

(iii) Discuss the effects of transport on urban land-use patterns. You should refer to **at least one** example of a named city in your answer. *[10 marks]*

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

Either

(a) **Essay**

Evaluate the positive and negative impacts of the industrialization of agriculture (agribusiness) in **either** LEDCs **or** MEDCs. *[20 marks]*
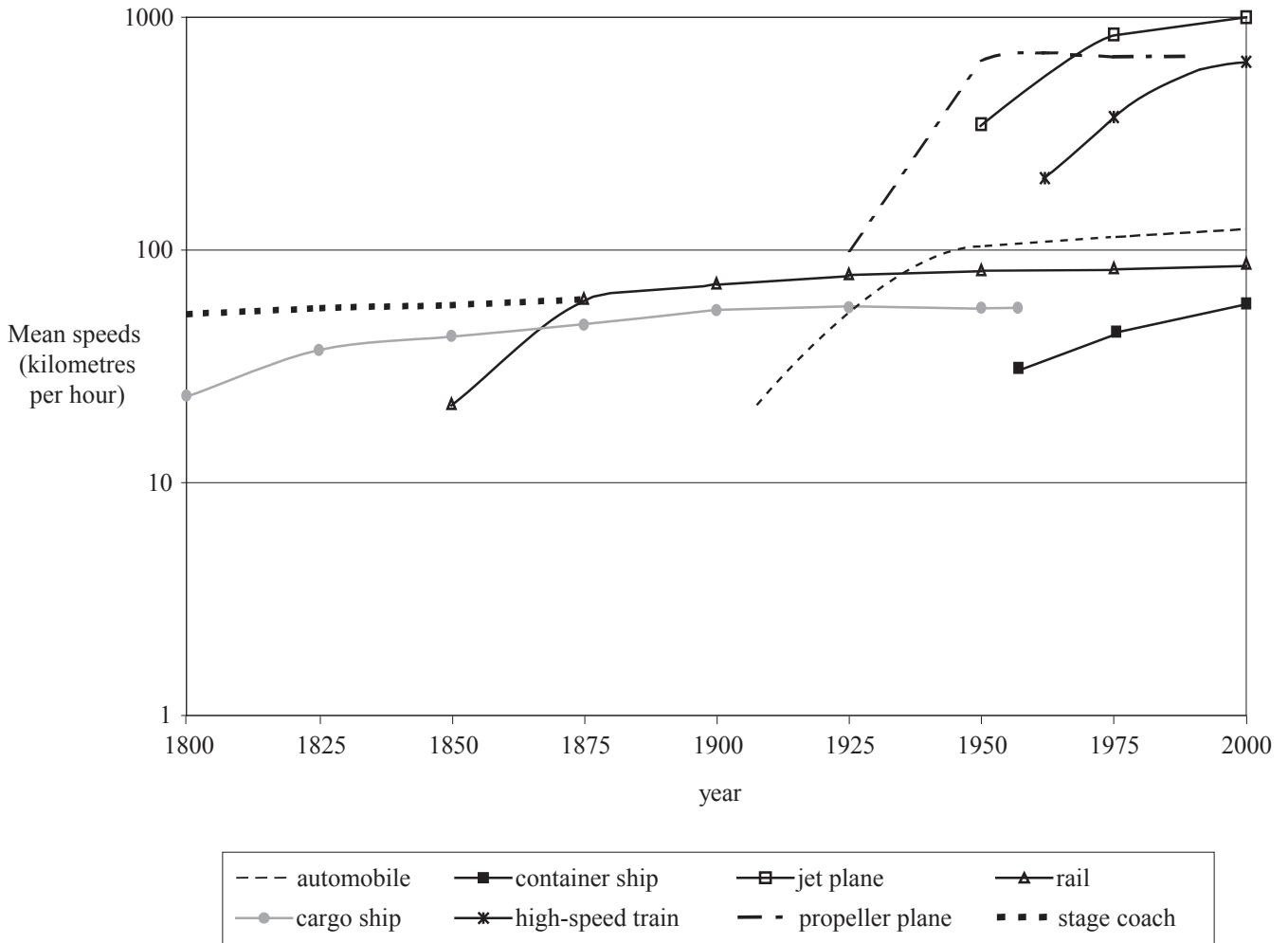
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B9. **Productive activities: aspects of change**

(Question B9 continued)

Or

(b) Structured question

The graph shows changes in the mean speed of different types of transport.

[Source: Dr Jean-Paul Rodrigue (1998-2004) Department of Economics and Geography, Hofstra University]

(i) Describe the trends in the graph. *[4 marks]*

(ii) Examine the ways in which developments in transport and information communications technology (ICT) have reduced the friction of distance. *[6 marks]*

(iii) Discuss the factors (other than transport and ICT) that have caused a global shift in the distribution of manufacturing industry during the last 30 years. You should refer to **at least one** type of manufacturing industry in your answer. *[10 marks]*

B10. Globalization

Either

(a) Essay

Explain how world economic activity has become increasingly integrated. Refer to examples in your answer. *[20 marks]*
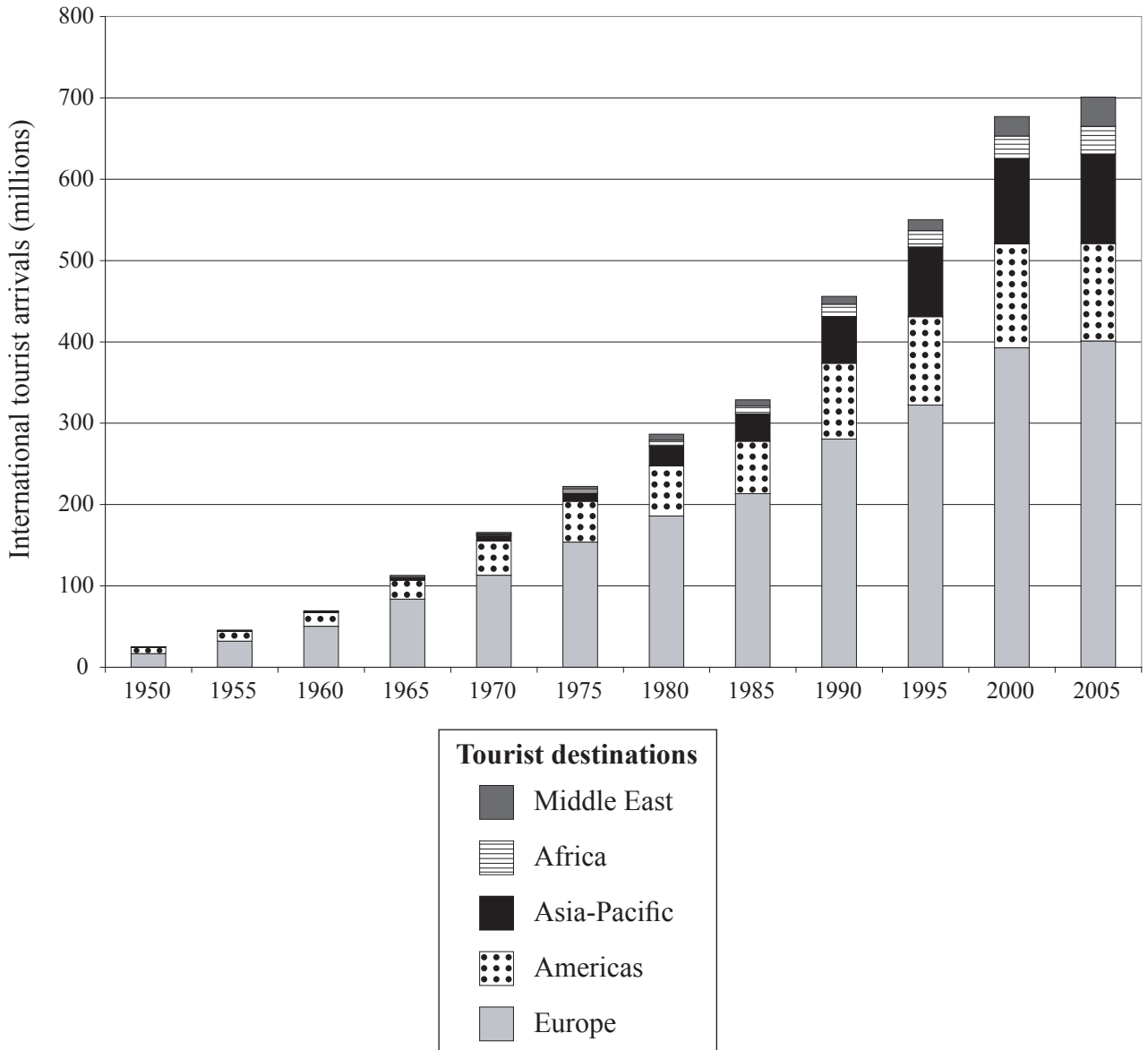
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B10. Globalization

(Question B10 continued)

Or

(b) Structured question

The graph below shows the number of international tourists arriving in each of the world's five regions.

(i) Describe the changes in the number of international tourist arrivals shown on the graph. *[4 marks]*

(ii) Explain the changes in the number of international tourist arrivals in **one** of the world regions shown on the graph. *[6 marks]*

(iii) Using examples, discuss the economic costs and benefits of tourism to LEDCs. *[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 aerial photograph show an area of Mayotte, an island in the Mozambique Channel in the Indian Ocean. Mayotte has a tropical, humid climate with monsoon rains from November to May.

(a)   Name the two places **A** and **B** shown on the photograph and the map.   *[1+1 marks]*

(b)   Using the map, give the grid reference for point **C** shown on the photograph.   *[1 mark]*

(c)   Using both the map and the photograph, describe the physical landscape of the island of Petite-Terre.   *[5 marks]*

(d)   Describe the transport network shown on the whole area of the map and identify the factors that influence it.   *[5 marks]*

(e)   Compare and contrast Plages de Moya (31 87) with the headland at Ironi Be (20 81) as potential locations for a large-scale hotel complex.   *[7 marks]*