



**GEOGRAPHY
HIGHER LEVEL
PAPER 2**

Friday 7 May 2010 (morning)

2 hours 30 minutes

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 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.

A1. Drainage basins and their management

Either

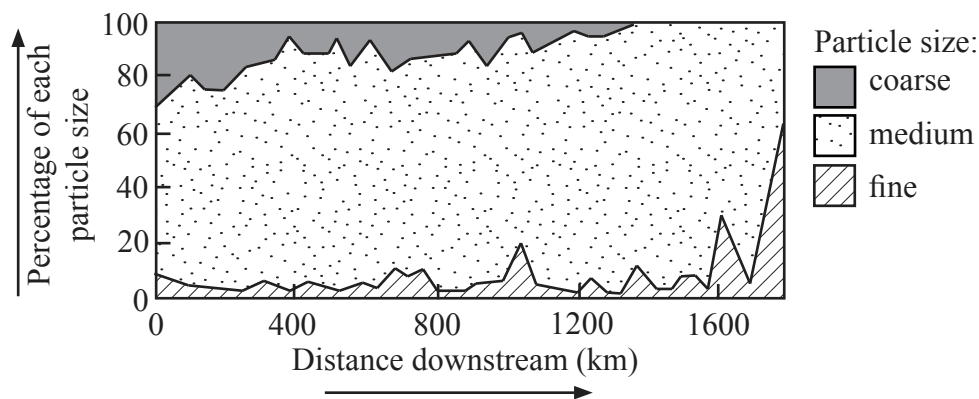
(a) Essay

Referring to specific case studies, discuss the factors affecting river flooding. [20 marks]

Or

(b) Structured question

The graph shows the changes in particle size downstream in a river.



- (i) Referring to the graph, describe how particle size changes downstream. [4 marks]
- (ii) Explain why particle size and shape vary with distance downstream. [4 marks]
- (iii) Briefly explain what is meant by the competence of a river. [2 marks]
- (iv) Referring to examples, compare the issues of water utilization at **two** different scales (local, regional, national or international). [10 marks]

A2. Coasts and their management

Either

(a) Essay

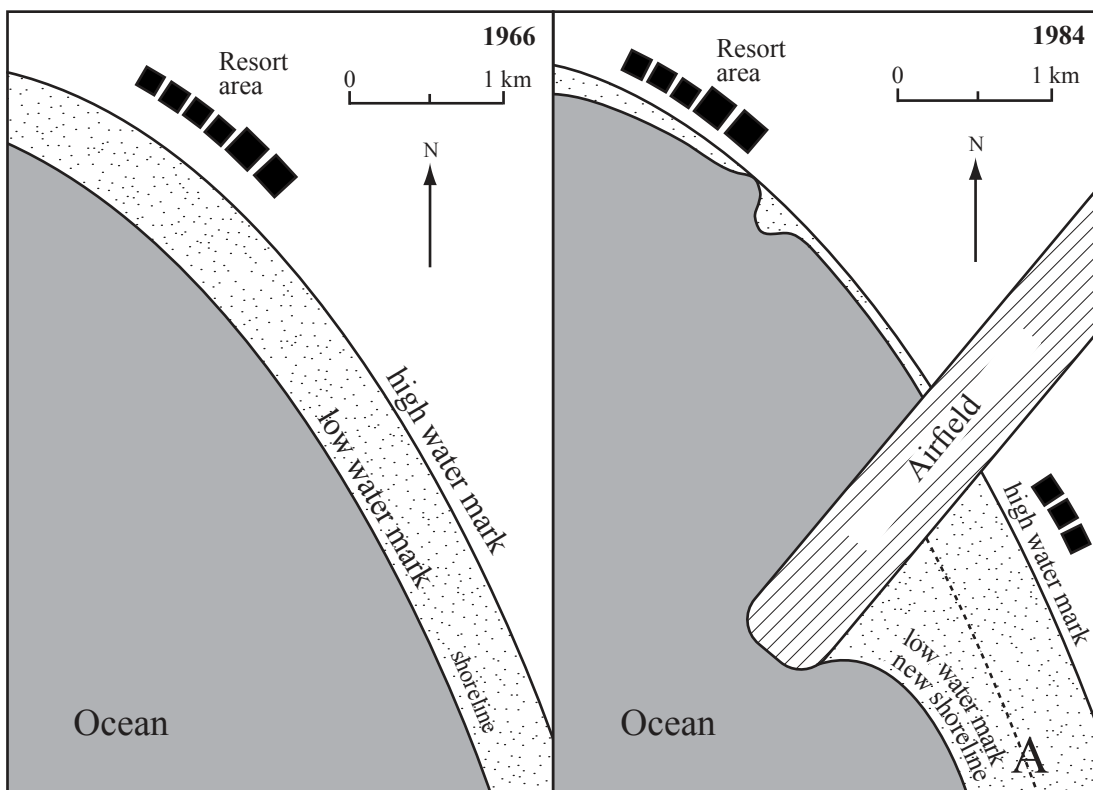
Discuss the causes and effects of changes in sea level on coastlines.

[20 marks]

Or

(b) Structured question

The diagrams show the changes resulting from the construction of an airfield.



[Source: Copyright P D Nunn. Reproduced with permission]

- (i) (a) Briefly describe the changes in the width of the beach at point A between 1966 and 1984. [2 marks]
- (b) Identify **two** other ways in which the construction of the airfield has changed the shape of the coastline. [2 marks]
- (ii) Explain the coastal processes which might have caused the changes you have described in (i). [6 marks]
- (iii) Referring to examples, examine the physical and human factors which determine whether a coastline is protected or not. [10 marks]

A3. Arid environments and their management

Either

(a) Essay

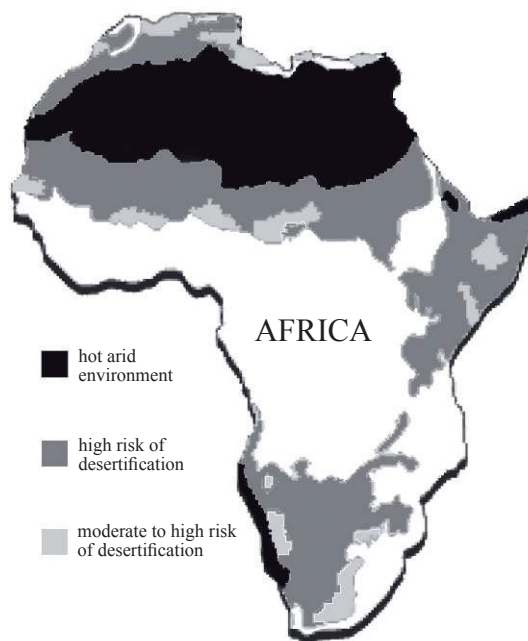
Referring to named and located examples, examine the responses of people to the challenges presented by arid and/or semi-arid areas.

[20 marks]

Or

(b) Structured question

This map shows the arid regions and areas at risk of desertification in Africa.



[Source: Reproduced from <http://www.mindfully.org/Heritage/2003/Desertification-Poverty-Annan12jun03.htm>]

(i) Define the following terms:

(a) hot arid environment,

(b) desertification.

[2+2 marks]

(ii) Referring to the map, suggest **three** reasons for the location of areas with a high risk of desertification.

[6 marks]

(iii) Examine why the landscape of hot arid environments is so distinctive.

[10 marks]

A4. Lithospheric processes and hazards

Either

(a) Essay

Discuss the factors, other than distance from the epicentre, that determine the impacts of an earthquake.

[20 marks]

Or

(b) Structured question

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

The map shows the location of volcanoes in part of Africa.

(i) Describe the pattern of volcanoes shown on the map.

[3 marks]

(ii) Using **only** an annotated diagram, explain the formation and features of constructive plate margins.

[7 marks]

(iii) “Rapid mass movements cause more problems for people than slow mass movements.” Discuss this statement.

[10 marks]

A5. Ecosystems and human activity

Either

(a) Essay

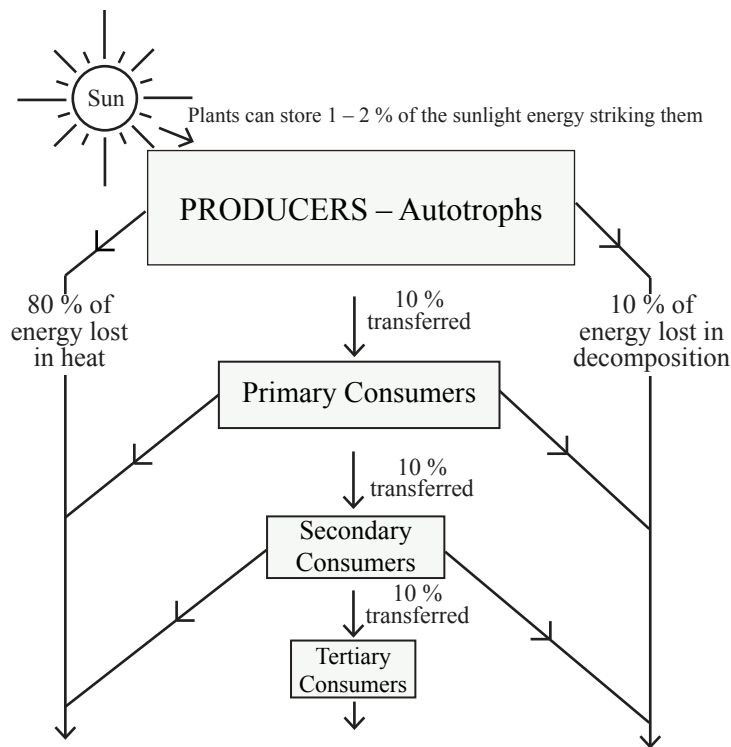
Using specific case studies, examine the differences in human impacts upon **one** grassland and **one** forest ecosystem.

[20 marks]

Or

(b) Structured question

Below is a food chain showing changes in biomass and energy flow.



- (i) Briefly describe the difference between producers and consumers. [2 marks]
- (ii) Explain the energy flows on the diagram. [3 marks]
- (iii) Explain how negative and positive feedback affect the stability of an ecosystem. [5 marks]
- (iv) Discuss how people can manage a named and located ecosystem to increase its sustainability. [10 marks]

A6. Climatic hazards and change

Either

(a) Essay

Examine the reasons for variations in the impacts of tropical cyclones (hurricanes).

[20 marks]

Or

(b) Structured question

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

The maps show the concentration of ozone over Antarctica for three different years.

- (i) Briefly explain what is meant by a “hole in the ozone layer”. *[2 marks]*
- (ii) Describe the trend shown by the maps. *[2 marks]*
- (iii) Explain **three** effects of the trend identified in (ii). *[6 marks]*
- (iv) Examine the local, national and international responses to ozone depletion. *[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

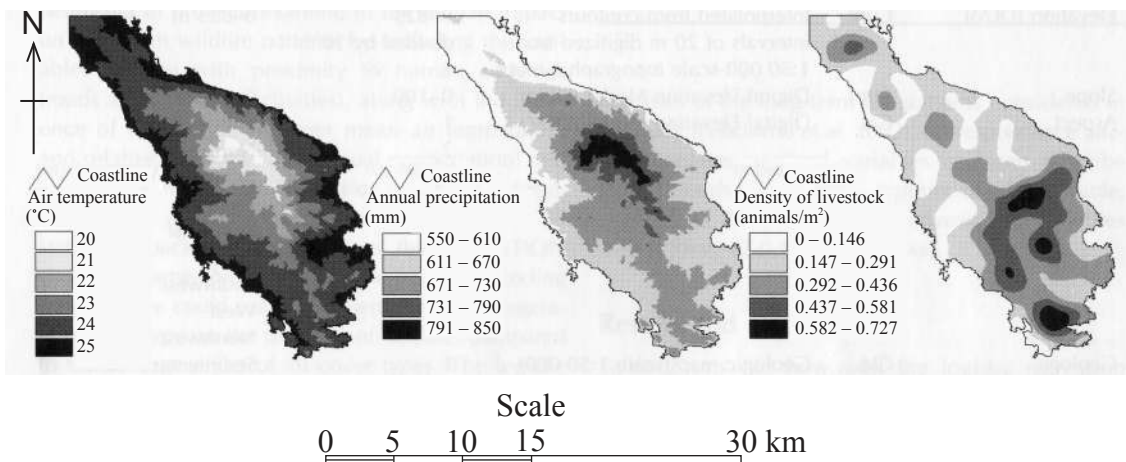
Referring to specific examples, discuss whether or not a place may belong to more than one region at the same time.

[20 marks]

Or

(b) Structured question

The maps show several characteristics of the Sithonia peninsula in Greece.



[Source: Kostas D Kalabokidis, et al., (2007), Multivariate analysis of landscape wildfire dynamics in a Mediterranean ecosystem of Greece. Area, volume 39, issue 3, pages 392-402. Reproduced with permission.]

- (i) Referring to the maps, describe the connections between livestock and climate in this region. [4 marks]
- (ii) Suggest **two** other characteristics of the peninsula which could be mapped using isoline (isopleth) maps and explain how they might help to describe the geographical character of this region. [3+3 marks]
- (iii) Analyse the contemporary geographical issues of your local region. [10 marks]

B8. Settlements

Either

(a) Essay

Using named and located examples, evaluate the effectiveness of urban management strategies.

[20 marks]

Or

(b) Structured question

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

Figure 1, Figure 2 and Figure 3 show industrial, commercial and residential land use in New York.

(i) Describe the distribution in New York of:

(a) industrial land use,

(b) commercial land use.

[2+2 marks]

(ii) Suggest reasons for the distribution in New York of:

(a) industrial land use,

(b) commercial land use.

[3+3 marks]

(iii) For a named city, to what extent does present day land use match an urban land use model?

[10 marks]

B9. Productive activities: aspects of change

Either

(a) Essay

Referring to examples, examine the benefits and problems resulting from recent technological innovations in agriculture.

[20 marks]

(This question continues on the following page)

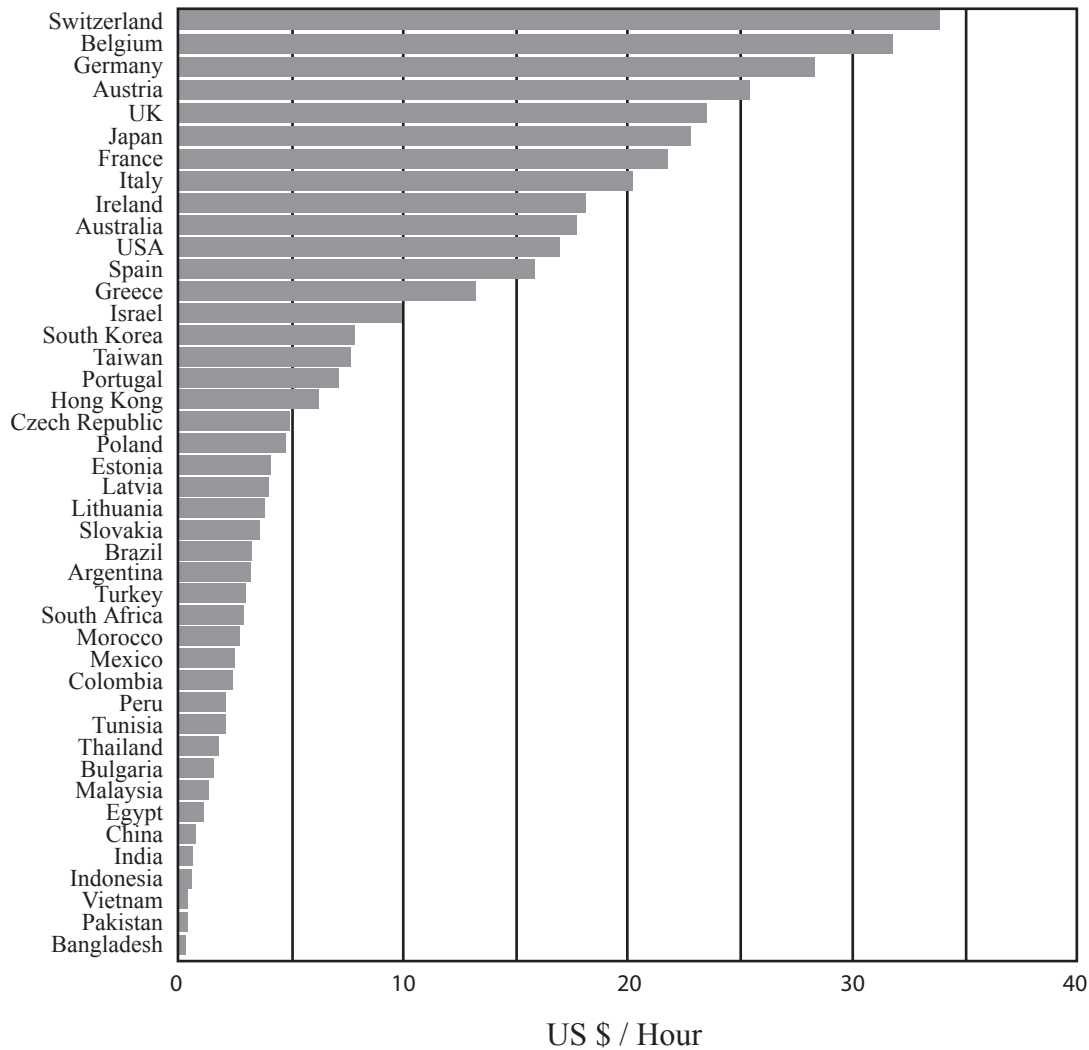
(Question B9 continued)

Or

(b) Structured question

The graph shows labour costs per hour in the textile industry in US\$ for selected countries.

Labour costs in the textile industry 2007



[Source: Labour costs in the textile industry 2007, New Twist journal. Vol 3. Reproduced with permission.]

- (i) Briefly describe the geographical pattern in labour costs in the textile industry shown in the diagram. [4 marks]
- (ii) Using named examples, explain the effects that differences in labour costs have on the location of manufacturing industry. [6 marks]
- (iii) Examine the factors other than labour costs that influence the location of manufacturing industry. [10 marks]

B10. Globalization

Either

(a) Essay

“Global economic integration has reduced international disparities in wealth.”
Discuss this statement with reference to examples.

[20 marks]

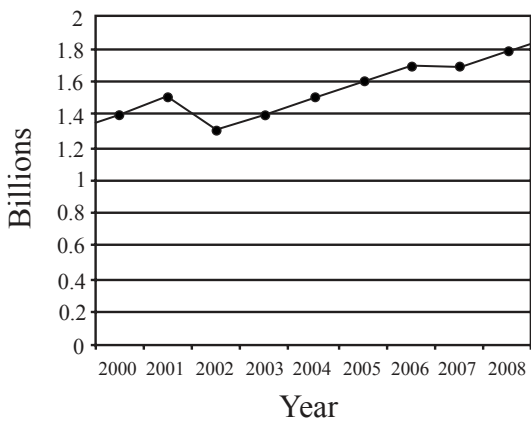
Or

(b) Structured question

The graphs show the number of international tourist arrivals worldwide and in the small island nation of the Maldives from 2000 to 2008.

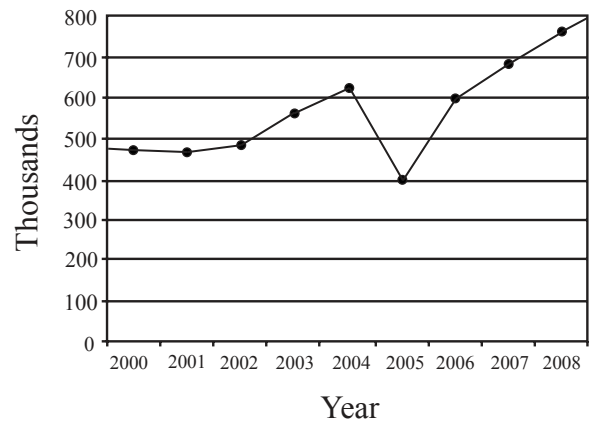
Graph A

International Tourist Arrivals – Worldwide



Graph B

International Tourist Arrivals – Maldives



[Source: Reproduced with permission of the World Travel & Tourism Council]

- (i) Describe **two** main differences between the graphs. [3 marks]
- (ii) Suggest **three** possible reasons for the differences you have described in (i). [3 marks]
- (iii) Explain **one** positive and **one** negative impact of a decline in tourist arrivals in a small island nation such as the Maldives. [4 marks]
- (iv) Describe and evaluate the attempts that have been made to regenerate a named declining tourist destination. [10 marks]

SECTION C

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

C11. Topographic mapping

The map shows the district of St-Paul on the island of La Réunion in the Indian Ocean (21°S 58°E). The scale of the map is 1:25 000 and the contour interval is 10 metres.

- (a) Briefly describe **three** characteristics of slope XY shown on the map. *[3 marks]*

 - (b) Using **only** an annotated sketch map, divide the whole area into distinct physical regions and briefly describe each one. *[6 marks]*

 - (c) Explain **two** advantages and **two** disadvantages of locating a campsite at point A. *[4 marks]*

 - (d) Analyse the settlement pattern shown on the map. *[7 marks]*
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