



**GEOGRAPHY  
HIGHER LEVEL  
PAPER 2**

Wednesday 17 November 2010 (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 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**

Using examples, examine how erosion and deposition have created distinctive fluvial landforms.

[20 marks]

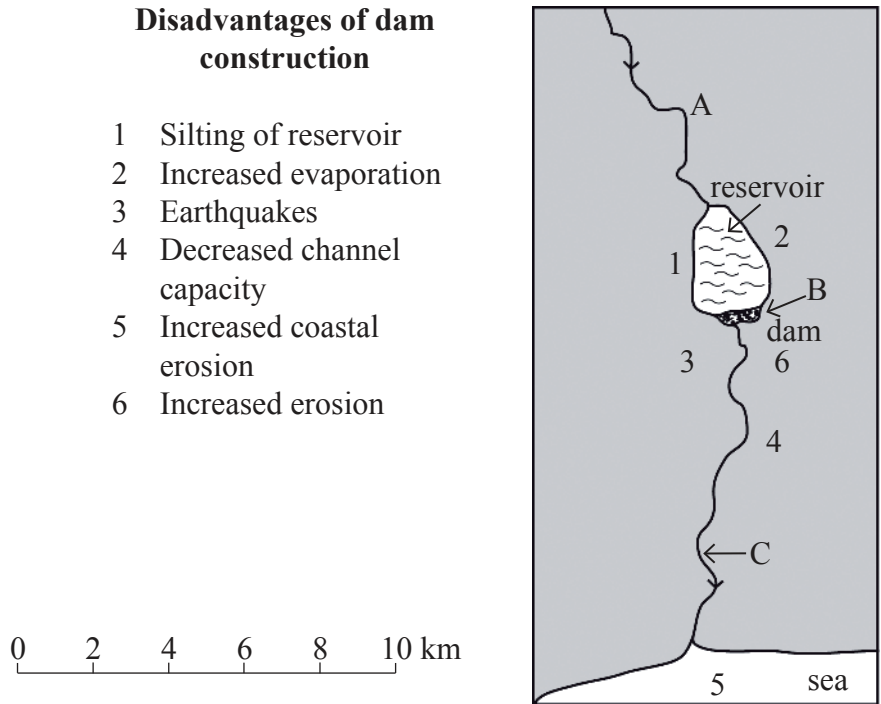
*(This question continues on the following page)*

(Question A1 continued)

Or

**(b) Structured question**

The diagram shows the possible impacts of dam construction on the environment.



(i) Identify the place (A, B or C) where each of the following impacts occur and justify your choice:

(a) reduction of flood risk,

(b) hydro-electricity (HEP).

[2+2 marks]

(ii) Explain **two** of the six disadvantages of dam construction shown on the diagram.

[3+3 marks]

(iii) Referring to specific case studies, discuss how drainage basins can be managed to provide water for different types of users.

[10 marks]

**A2. Coasts and their management**

*Either*

**(a) Essay**

Referring to one or more examples, examine the physical and human factors that determine the management strategies adopted in a coastal zone.

*[20 marks]*

*Or*

**(b) Structured question**

The photograph shows a section of coastline in southwest England in the summer.



[Source: © Rob Hine]

- (i) Referring to the photograph, briefly describe **two** physical factors that have affected this cliff-face. *[2+2 marks]*
  
- (ii) Describe and explain the variation in the size of particles found on beaches. *[2+4 marks]*
  
- (iii) Using examples, examine the impacts made by humans upon the natural processes and features of coastlines. *[10 marks]*

**A3. Arid environments and their management**

*Either*

**(a) Essay**

Examine the relationship between vulnerability to desertification and levels of development.

*[20 marks]*

*Or*

**(b) Structured question**

The photographs show two desert landforms of similar scale.

**Photograph A**



**Photograph B**



[Source: [www.coleimages.org](http://www.coleimages.org)]

- (i) Name and briefly describe these **two** arid landforms. *[4 marks]*
- (ii) Explain the natural processes responsible for the transport of weathered materials in deserts. *[6 marks]*
- (iii) Examine the conflicts arising from **either** mineral extraction **or** tourism in specific arid **or** semi-arid regions. *[10 marks]*

**A4. Lithospheric processes and hazards**

*Either*

**(a) Essay**

Examine how the locations of volcanoes affect human responses to 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 the liquefaction hazard in the communities of Alameda, Berkeley, Emeryville, Oakland, and Piedmont for a magnitude 7.1 earthquake on the Hayward fault (West Coast of the USA).

- (i) Describe the pattern of the liquefaction hazard shown on the map. *[2 marks]*
- (ii) Define and briefly explain *liquefaction*. *[4 marks]*
- (iii) Distinguish between primary and secondary earthquake hazards. *[2+2 marks]*
- (iv) Compare human responses to earthquakes in countries with contrasting levels of development. *[10 marks]*

**A5. Ecosystems and human activity**

*Either*

**(a) Essay**

Examine the relationships between climate and structure, function and human activity in **one** specific ecosystem.

*[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 changes in vegetation cover which have taken place over a 33 year period in one area in Mediterranean France.

(i) Describe the changes in vegetation cover in the area shown. *[4 marks]*

(ii) Explain how the concepts of invasion, competition and dominance may have played a role in the changes which have taken place. *[2+2+2 marks]*

(iii) Discuss the differences in the conservation strategies used in **one** grassland ecosystem and **one** forest ecosystem. *[10 marks]*

**A6. Climatic hazards and change**

*Either*

**(a) Essay**

“Droughts are more predictable, but their impacts are less serious than tropical cyclones (hurricanes).” Discuss this statement.

*[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 pattern of wet acid deposition (the higher the value of sulfate units, the more acidic the deposition) for the eastern USA for three different three-year periods.

- (i) Describe the pattern shown on the map for 1983–85. *[3 marks]*
- (ii) Suggest **three** reasons for the trend shown by the three maps. *[3 marks]*
- (iii) Explain how a volcanic eruption may cause **temporary** changes in global climate. *[4 marks]*
- (iv) Examine the reasons for variations in the intensity of urban heat islands. *[10 marks]*



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## 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**

“The contemporary geographical issues of regions are usually caused by their physical geography.” Referring to examples, discuss this statement. *[20 marks]*

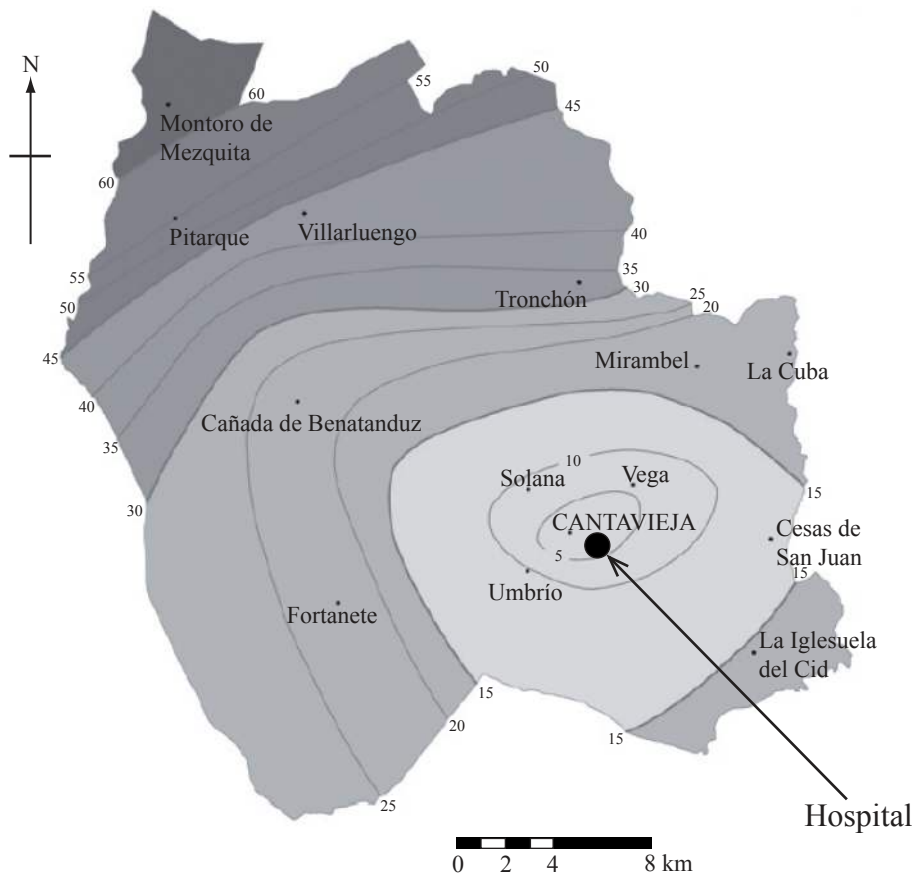
*(This question continues on the following page)*

(Question B7 continued)

Or

**(b) Structured question**

The map shows a (health) region in Spain, and the travel time in minutes to the regional hospital in Cantavieja.



[Source: Ana Isabel Escalona-Orcao and Carmen Díez-Cornago, (2007), Accessibility to basic services in one of the most sparsely populated areas in Europe: the province of Teruel (Spain). *Area*, volume 39, issue 3, pages 295–309]

- (i) State how many minutes travel time is required to travel to the hospital from Villarluengo. [1 mark]
- (ii) Describe the pattern of accessibility to the hospital shown on the map. [4 marks]
- (iii) By means of an annotated map **only**, identify the defining characteristics of your local region and its boundaries. [5 marks]
- (iv) Discuss the essential differences between a geographical region and a geographical place. [10 marks]

**B8. Settlements**

*Either*

**(a) Essay**

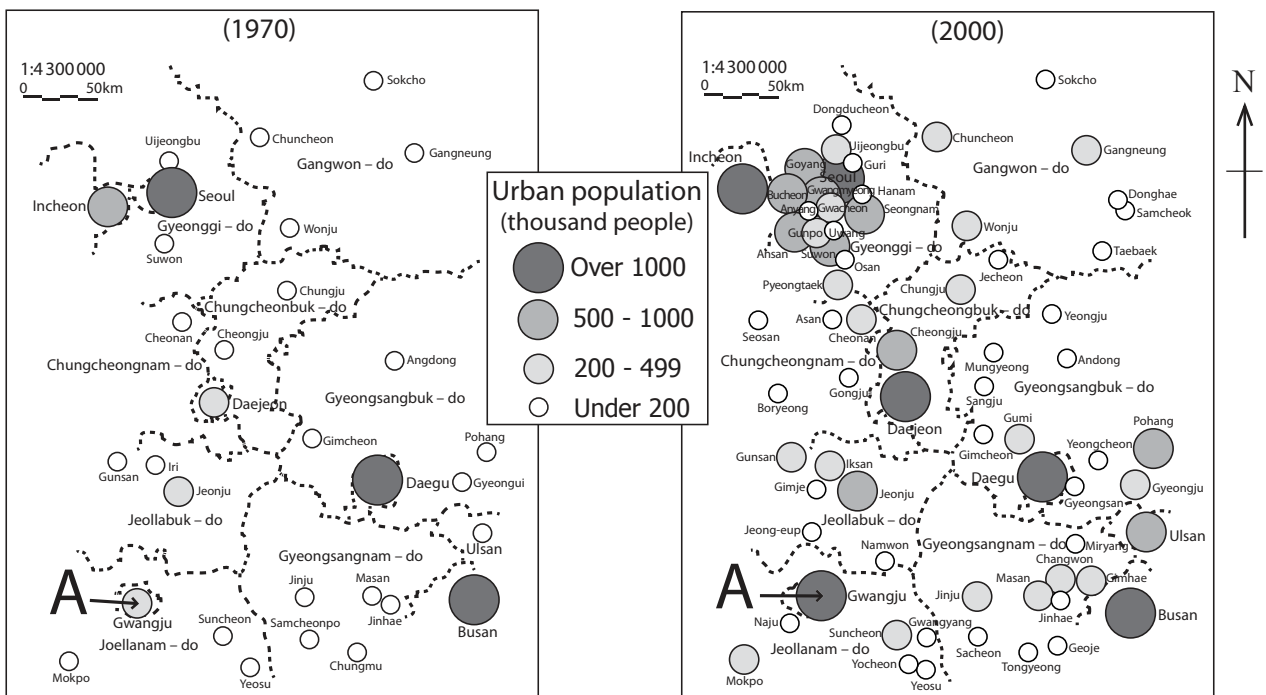
“Urban areas in countries with different levels of development share similar problems.” Discuss this statement.

[20 marks]

*Or*

**(b) Structured question**

The diagrams below show the changes in urban populations in South Korea for 1970 and 2000.



[Source: Redrawn from *Atlas of Korea*, page 24]

(i) State the minimum urban population of settlement A in:

(a) 1970,

(b) 2000.

[1+1 marks]

(ii) Define the following terms:

(a) urban growth,

(b) urbanization.

[1+1 marks]

(This question continues on the following page)

*(Question B8 continued)*

- (iii) Using evidence from the diagrams, describe **three** changes relating to urban settlements in South Korea between 1970 and 2000. *[6 marks]*
- (iv) Referring to located examples, discuss the changes that are taking place on the periphery of cities. *[10 marks]*

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

*Either*

**(a) Essay**

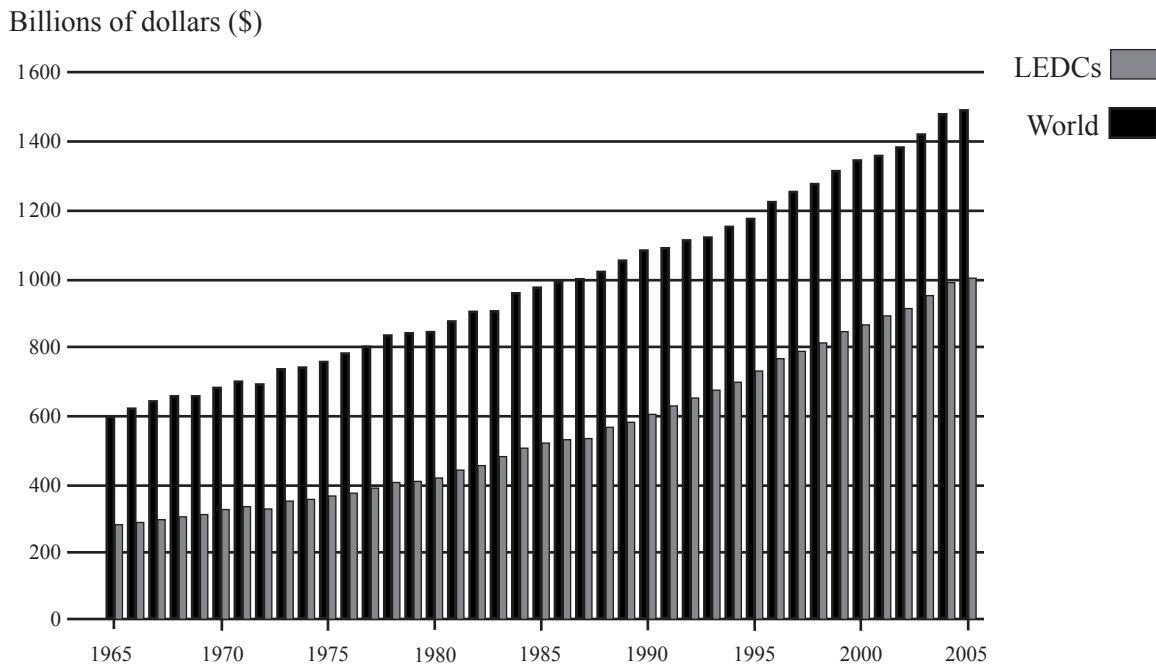
Using examples, analyse the emergence of high wage core areas and low wage periphery areas at a global scale.

[20 marks]

*Or*

**(b) Structured question**

The diagram shows the value of agricultural production in billions of dollars for the world and for developing countries (LEDCs) between 1965 and 2005.



[Source: [http://earthtrends.wri.org/images/agricultural\\_production\\_trends.jpg](http://earthtrends.wri.org/images/agricultural_production_trends.jpg)]

- (i) Describe **one** similarity and **one** difference in the value of agricultural production for the world and LEDCs from 1965 to 2005. [2+2 marks]
- (ii) Explain **three** reasons for the rise in agricultural production in developing countries. [2+2+2 marks]
- (iii) Evaluate the need for more sustainable agriculture in MEDCs. [10 marks]

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**B10. Globalization**

*Either*

**(a) Essay**

“The growth of international tourism in LEDCs brings short-term benefits, but long-term problems.” Discuss this statement with reference to examples. *[20 marks]*

*(This question continues on the following page)*

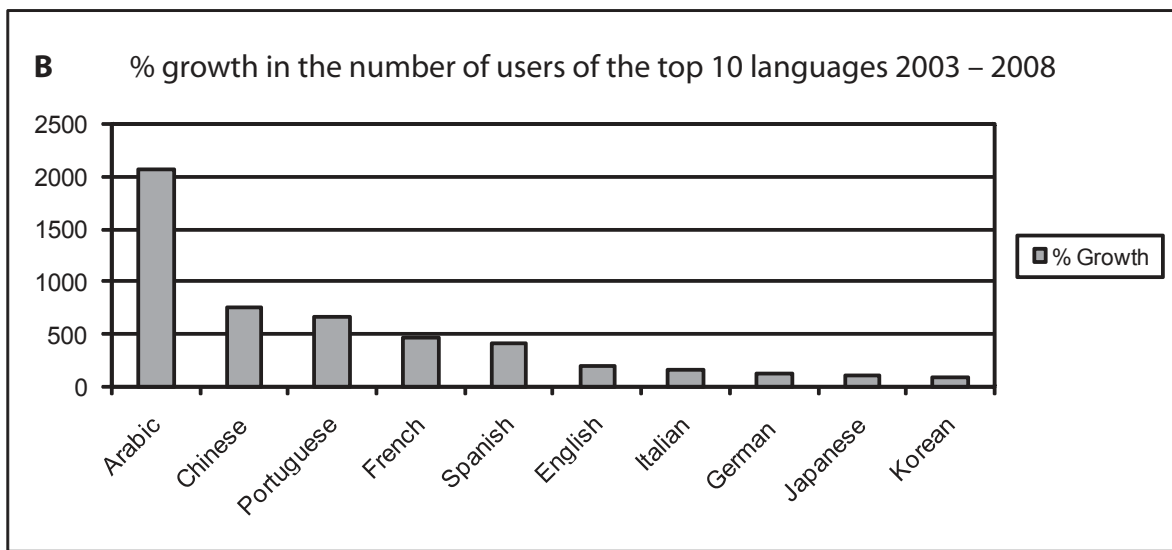
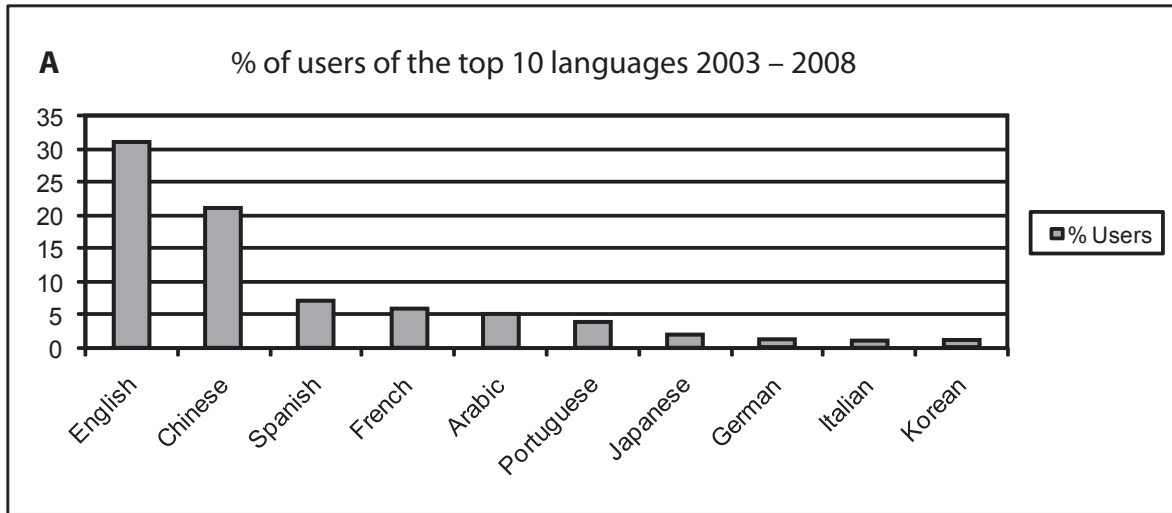


(Question B10 continued)

Or

**(b) Structured question**

The graphs below show the relative importance of different languages used on the internet.



[Source: Internet World Stats 2008, <http://www.internetworldstats.com>, Miniwatts Marketing Group]

- (i) State the **two** languages which show the greatest difference in ranking between the two graphs. [2 marks]
- (ii) Suggest **two** reasons why the rate of growth of some languages used on the internet is greater than others. [4 marks]
- (iii) Explain how the actions of government can limit cultural integration. [4 marks]
- (iv) Examine the importance of economic agreements and trading blocs in the integration of world economic activity. [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 shows the area around Zeebrugge; a commercial port in Belgium.

The scale of the map is 1:50 000 and the contour interval is 2.5 metres. The map is dated 2002 and the satellite photograph is dated 2005.

- (a) Using the map, identify point A on the photograph. *[1 mark]*
- (b) The scale of the map is 1:50 000. Estimate the scale of the photograph. *[1 mark]*
- (c) Describe and suggest reasons for the pattern of settlement shown on the map. *[6 marks]*
- (d) Describe **three** advantages of the aerial photo over the map in showing human geography. *[2+2+2 marks]*
- (e) Compare the advantages and disadvantages of sites X and Y for the location of a large shopping centre. *[6 marks]*
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