



GEOGRAPHY
HIGHER LEVEL AND STANDARD LEVEL
PAPER 1

Wednesday 22 May 2002 (afternoon)

1 hour

Name

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Number

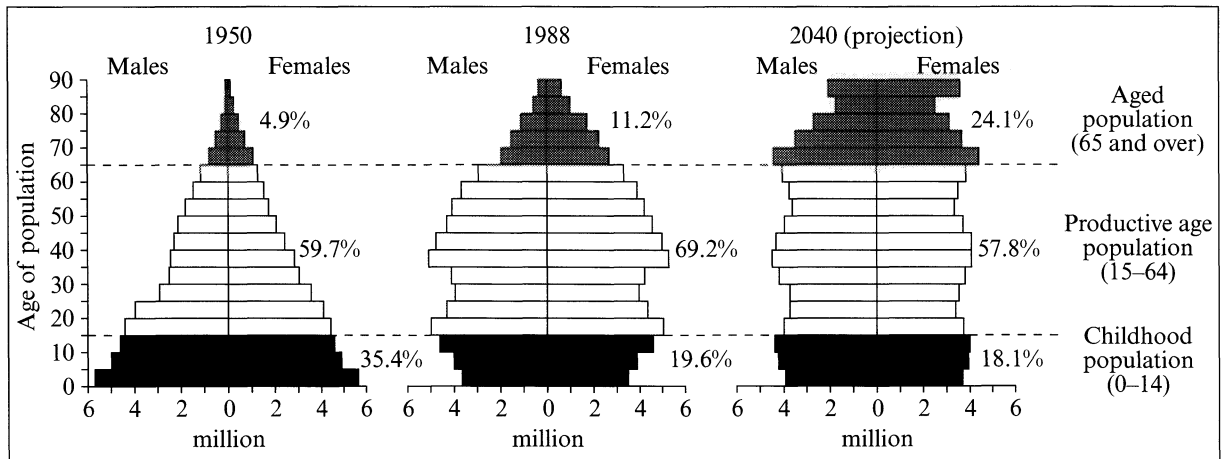
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INSTRUCTIONS TO CANDIDATES

- Write your candidate name and number in the boxes above.
- Do not open this examination paper until instructed to do so.
- Answer all the questions in the spaces provided.

EXAMINER	TEAM LEADER	IBCA
TOTAL /40	TOTAL /40	TOTAL /40

1. The three population pyramids below show changes in the Japanese population from 1950 through to 1988 and projected to the year 2040.



Source: Ministry of Health and Welfare; Geofile 255, January 1995, p.4

- (a) The number of nurses needed in Japan is expected to double by the year 2005. With reference to the population pyramids, explain why this should be the case.

[1 mark]

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- (b) Name a group of migrants, other than nurses, that Japan might need by 2040. Give reasons for your choice.

[2 marks]

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- (c) Explain how the changing dependency ratio will affect Japan's economy by 2040.

[3 marks]

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- (d) Name **two** disadvantages or problems that migrant workers might face in any host country.

[2 marks]

- (i)
- (ii)

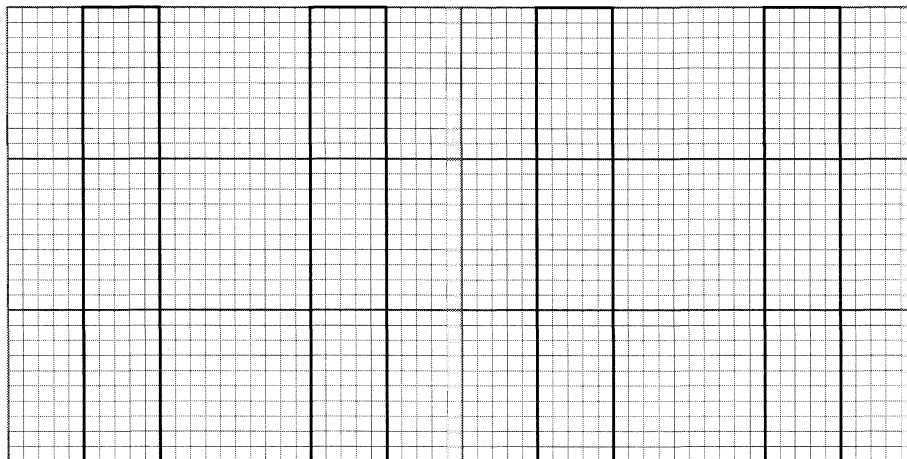
2. The table below shows human development indicators for two unspecified countries. The Human Development Index (HDI) employs three indicators: life expectancy, educational attainment (and adult literacy), and standard of living (income).

	Income GNP per capita (US\$)	Life Expectancy (years)	Adult literacy rate (per cent)	Human Development Index
Country A	800	73.1	90.7	0.721
Country B	710	46.7	42.6	0.422

Source: United Nations Human Development Report 1997

- (a) Plot the data in the table for Country A and Country B on the columns/bars provided below.

[4 marks]



- (b) Which country has been more successful in converting income into human development for its people, and why?

[2 marks]

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- (c) What has been the most important factor in converting that income into human development? Justify your answer.

[2 marks]

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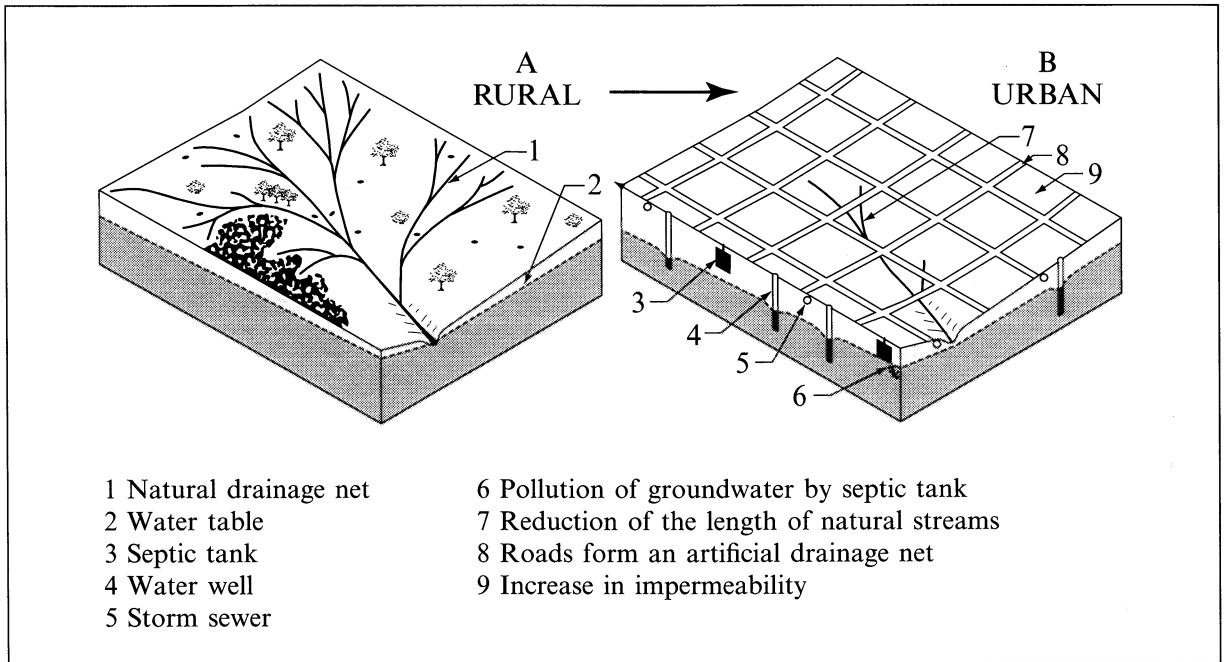
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3. Urban flooding is a serious problem in parts of the world. The two diagrams below show a rural drainage basin in A, and how urbanization in B changes the basin, increasing its vulnerability to flooding, a natural hazard.



Source: **The urbanization of a rural watershed.** From M. C. Roberts, 1972, Watersheds in the Rural-Urban Fringe, *National Symposium on Watersheds in Transition*, AWRA, Fort Collins, Colorado, pp. 388-93

- (a) With reference to diagram A (rural) above, describe **one** effect of a rising water table in a rural drainage basin.

[1 mark]

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- (b) Explain how urban development of a drainage basin, in diagram B (urban), can contribute to urban flooding.

[2 marks]

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- (c) Using a named settlement, describe three measures that have been taken to make it less vulnerable to urban flooding.

[3 marks]

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- (d) Using the diagrams, name **two** other problems that may affect people living in a drainage basin that is being urbanised. Explain how these problems might be issues of economic growth and development.

[2 marks]

(i) Problem

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(ii) Problem

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4. The Green Revolution refers to the use of high-yielding varieties of crops (HYVs) in economically less developed countries (ELDCs) to increase crop output.

The table below shows some effects of the Green Revolution in South India.

Changes in South India: the effects of the Green Revolution	
Use of fertiliser	+138%
Human labour	+111%
Paddy rice	+91%
Sugar cane	+41%
Income	+20%
Subsistence food	-90%
Energy efficiency	-25%

Source: Garret Nagle & Kris Spencer, *Advanced Geography through Diagrams*, Oxford University Press

- (a) Using the information in the table, group the seven elements shown into either positive or negative effects and justify your classification.

[3 marks]

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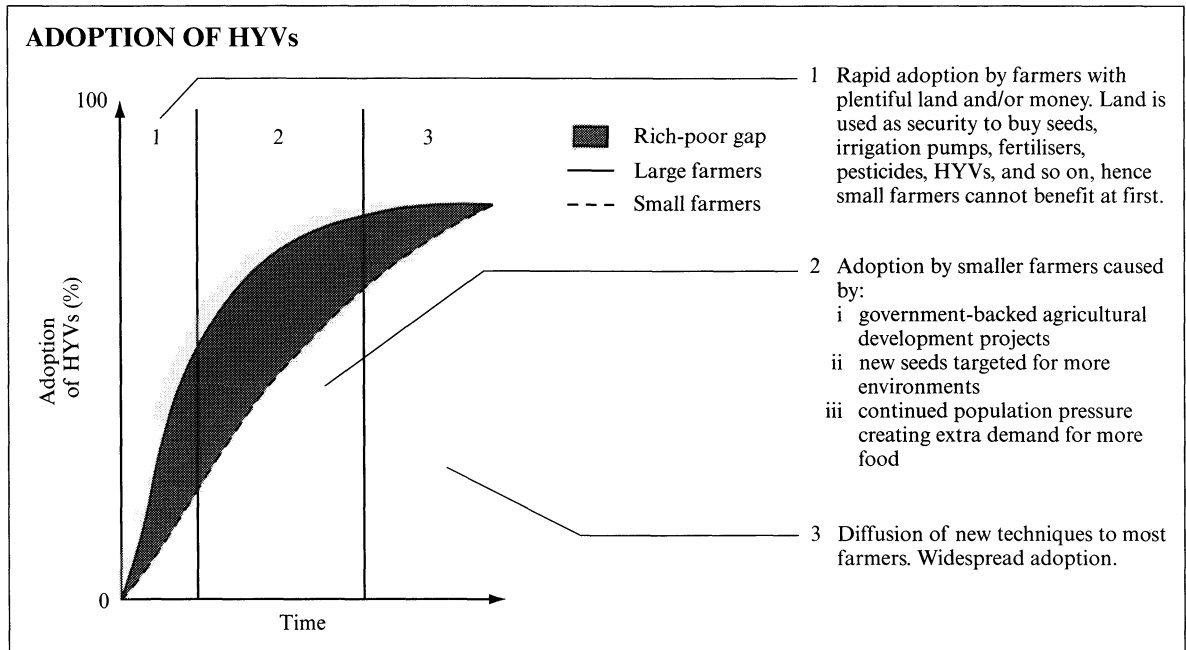
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The diagram below shows adoption rates of HYVs.



Source: Garret Nagle & Kris Spencer, *Advanced Geography through Diagrams*, Oxford University Press

(b) In the above diagram showing adoption rates of the HYVs, identify and explain which stage would have seen the greatest number of farmers adopting the new techniques.

[1 mark]

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(c) Briefly discuss **two** disadvantages that the table and diagram do **not** reveal.

[4 marks]

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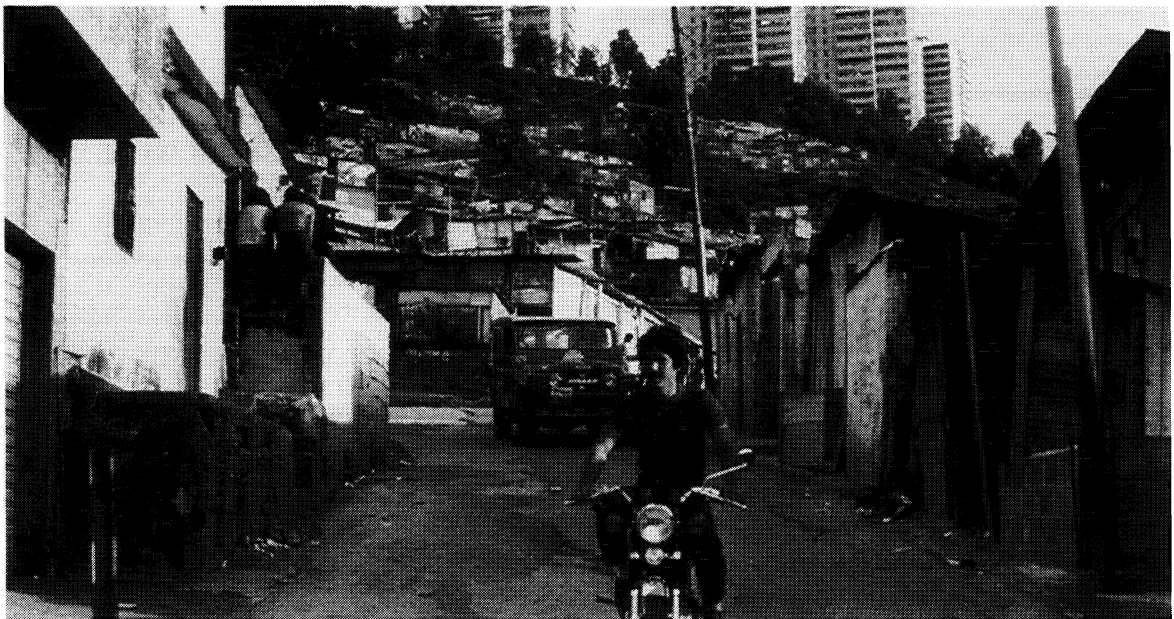
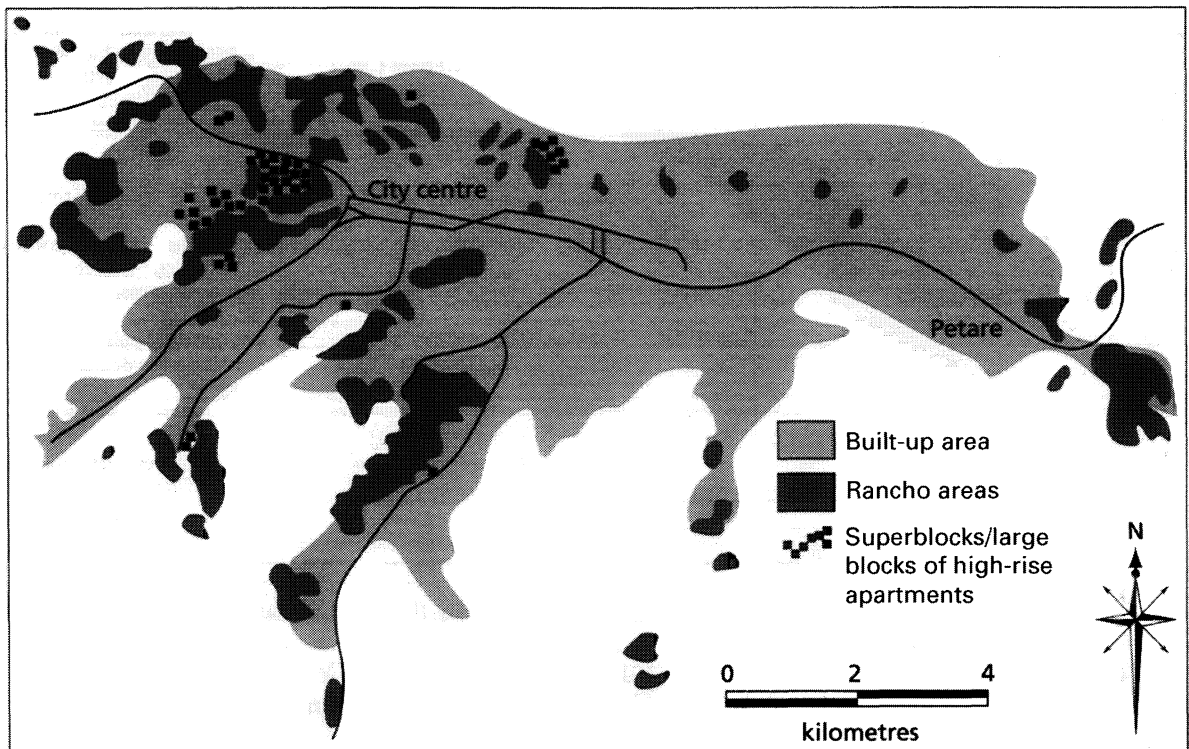
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5. Caracas is the primate and capital city of Venezuela. It is located in a narrow valley running east-west and parallel to the Caribbean Sea. The building of squatter or shanty dwellings (*ranchos*) has been a feature of its rapid growth. Groups of *ranchos* are known as *barrios*.

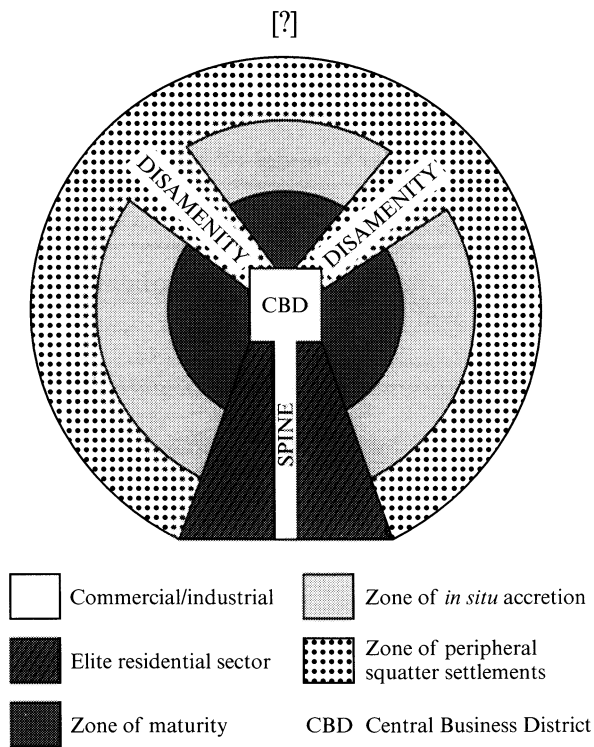


Source: Geography and Development, P. Courtenay, 1994, Longman

(a) Mark (X), on the map on page 10, a site similar to the one shown in the photograph. [1 mark]

(b) Orientate the model of a Latin American city to the map of Caracas by stating whether the top of the model marked [?] should point in the direction of north, south, east or west. [1 mark]

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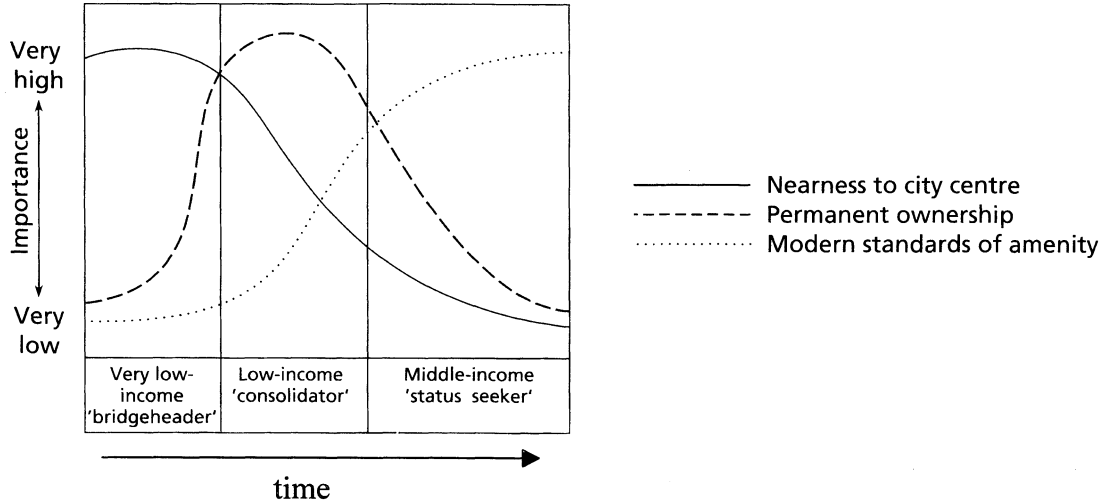
Generalised model of Latin American city

Source: Geography and Development, P. Courtenay, 1994, Longman

(This question continues on the following page)

(Question 5 continued)

Study the diagram below of housing needs for three urban groups in ELDCs. *Bridgeheaders* are new migrants to the urban area. *Consolidators* have lived in the city for some time and wish to be permanently there.



A simplified representation of John Turner's model of housing needs and groups in Third World cities

Source: Geography and Development, P. Courtenay, 1994, Longman

(c) Describe, in rank order, the factors that consolidators consider important in deciding where they will live.

[3 marks]

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- (d) Using the photograph on page 10, name **two** things that indicate people in the squatter settlements are permanent residents.

[2 marks]

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- (e) Name **two** conditions that could present a risk to the health of people living in squatter settlements similar to the one in the photograph.

[1 mark]

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