



GEOGRAPHY
HIGHER LEVEL AND STANDARD LEVEL
PAPER 1

Tuesday 19 November 2002 (afternoon)

1 hour

Name

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Number

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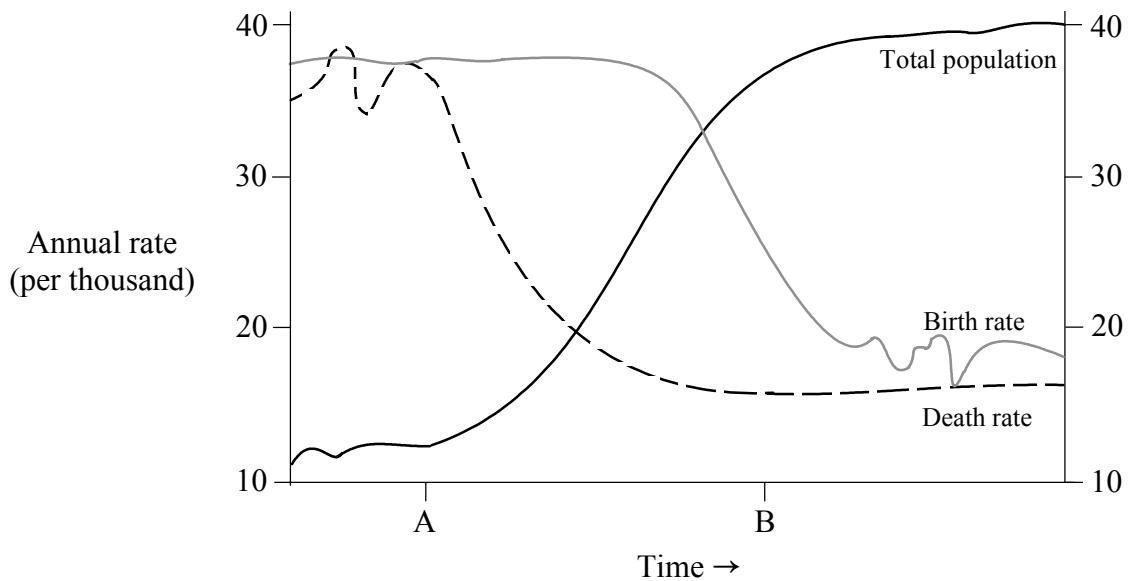
INSTRUCTIONS TO CANDIDATES

- 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.

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

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1. The diagram below shows demographic transition and the position of two countries, A and B in that transition.



- (a) Determine the rate of natural increase for countries A and B.

Country A:

[2 marks]

Country B:

- (b) Draw vertical lines on the diagram to show the point of division between stages 1, 2, 3 and 4.

[1 mark]

- (c) Mark (x) on the diagram at the point of **highest rate of natural increase**.

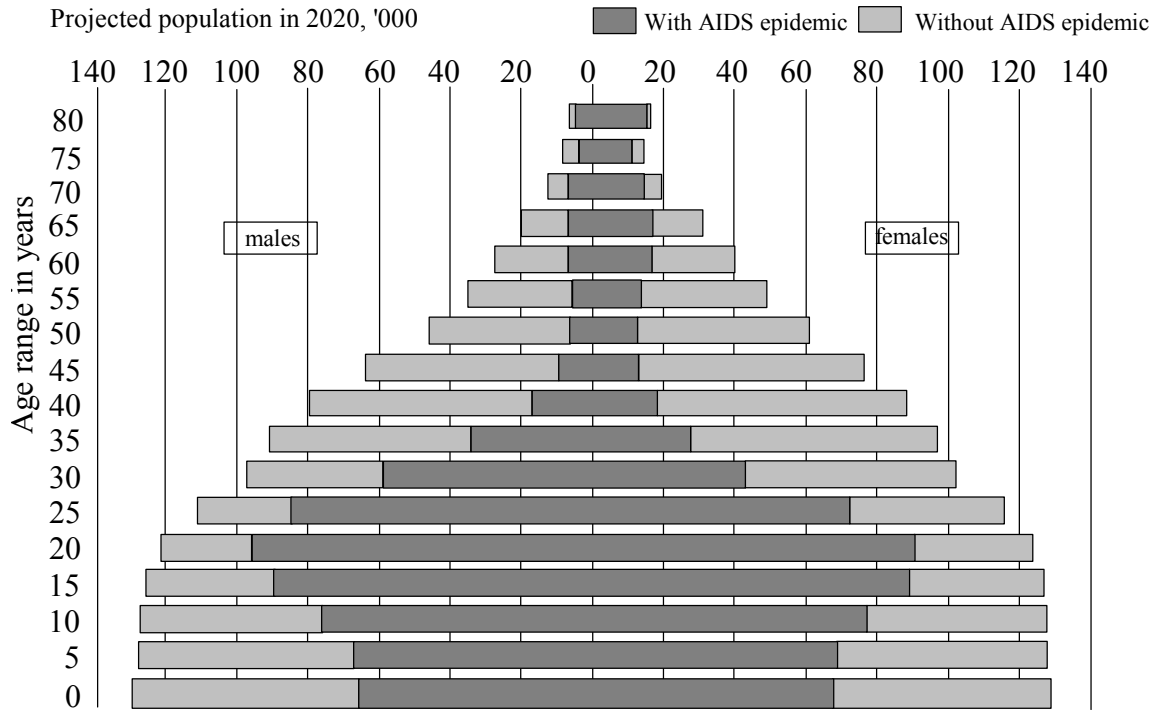
[1 mark]

- (d) Explain why there is a fluctuating **death rate** in stage 1 and a fluctuating **birth rate** in stage 4.

[4 marks]

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2. The diagram below shows a population pyramid projected for the year 2020. The diagram shows the population as it would have been without an AIDS epidemic and as it is now projected to be as the result of an AIDS epidemic.



[Source: The Economist, July, 2000]

- (a) Does the diagram refer to a more economically developed country (MEDC) or less economically developed country (LEDC). Give your reason.

[2 marks]

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- (b) What is the youngest age group in which there are fewer females than males as a result of the AIDS epidemic?

[1 mark]

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(Question 2 continued)

- (c) Name **three** effects of the AIDS epidemic on the population structure *(other than changes in sex ratios)*.

[3 marks]

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- (d) Describe **two** problems for the country arising from the dependency ratio that is projected for the year 2020.

[2 marks]

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3. The table below shows the impact of earthquakes and volcanoes on a less economically developed country (LEDC).

Damage due to disasters of 1990 and 1991

Sector	Damage by earthquake (million \$)	Damage by volcanic eruption (million \$)	Total damage (million \$)
Agriculture (crops, livestock, forestry, fisheries)	71.20	530.60	601.80
Private property	197.74	256.40	454.14
Infrastructure (roads, water services, schools and hospitals)	342.20	83.12	425.32
Industry and commerce	185.00	19.12	204.12
Total	796.14	889.24	1685.38

[Source: Adapted from Victoria Bishop, *Hazards and Responses*, Collins Educational, (1998), page 134]

- (a) Explain the reasons for the different costs in damage done to agriculture and private property by *[2 marks]*

(i) earthquakes

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(ii) volcanoes.

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(Question 3 continued)

- (b) Select **either** an earthquake **or** a volcanic hazard that has occurred in an LEDC. Name the LEDC and describe how housing, society and the economy are vulnerable to this hazard.

[3 marks]

Hazard: LEDC:

(i) Housing:

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(ii) Society:

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(iii) The economy:

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- (c) Select **one** of the following examples of **hazard management strategy** and explain what could be done to make it effective in the country you have chosen in 3(b).

- *Loss reduction techniques – acting to reduce loss before an event occurs*
- *Disaster management – during and after an event occurs*
- *Diversifying the economy – to reduce future loss*

[3 marks]

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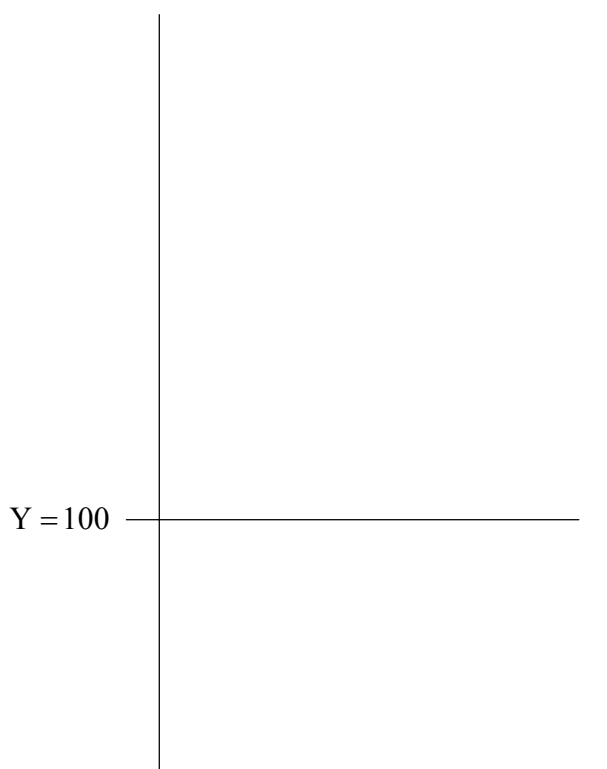
4. The table below shows the volume of production of cereals as a percentage of total consumption – a measure of self sufficiency.

	%
Sub-Saharan Africa	79
North Africa – South Europe	74
East Asia	96
Latin America	92
CIS (previously USSR)	88
North America	200
Western Europe	110
Australasia	280

[Source: Ian Seems, Cereal Self-sufficiency 1988, *Geography Collection worldwide; a core text for A level*, (1995)]

- (a) Plot the data in the table on the axes below.

[3 marks]



- (b) What does the value Y = 100 indicate?

[1 mark]

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(Question 4 continued)

- (c) Describe the distribution in the world of regions with a food surplus and those with a deficit in food sufficiency. Note any case or cases that do not fit the broad patterns of distributions.

[2 marks]

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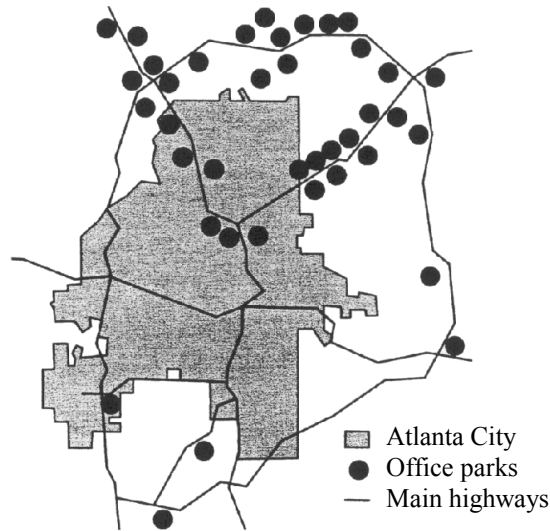
- (d) Briefly describe **two** factors that could have accounted for the levels of production in Sub-Saharan Africa?

[2 marks]

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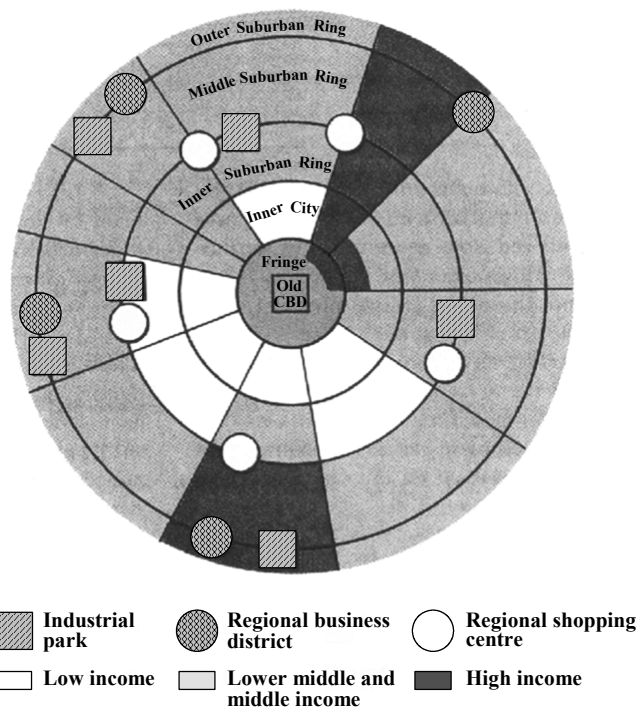
5. Below is a map of the United States of America city of Atlanta, Georgia in the 1970s and a diagram of metropolitan growth in United States cities in the 1980s.

**Development of office / business parks
in Atlanta, Georgia, in the 1970s**



[Source: Adapted from Hartshorn, *Journal of Geography*, 72, No 3]

**A diagram of metropolitan growth
in United States cities in 1980s**



[Source: Fellmann and Getis, *Human Geography: Landscapes of Human Activities*, McGraw Hill, (1999), page 423]

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(Question 5 continued)

- (a) Using the map and your own knowledge name **two** factors that influenced the locations of office / business parks in the Atlanta area during the 1970s.

[2 marks]

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- (b) Explain how office / business parks, such as those in Atlanta, influenced the development of other functions as shown in the diagram of metropolitan growth in United States cities in the 1980s.

[4 marks]

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- (c) Using the diagram of metropolitan growth in United States cities in the 1980s, explain the location of low income residents.

[2 marks]

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