

MARKSCHEME

November 1999

GEOGRAPHY

Higher and Standard Level

Paper 1

GEOGRAPHY HIGHER / STANDARD LEVEL PAPER 1

Notes on individual questions

1. This question requires candidates to display skill in compiling tables, transforming data into diagrammatic form, interpreting graphs, and demonstrating neatness as an essential quality in graphical work. It is based on the Lorenz curve which geographers use to show inequalities in distributions.

Note to examiners:

The present *Vade Mecum* does not permit the use of calculators at examinations in geography. In light of earlier feedback, therefore, calculations have been kept to a minimum, involving simple addition in a cumulative sequence. The question has been designed to test candidates' knowledge of the *procedures* required for the correct answer.

- (a) Complete the following table of projected populations for the year 2025 by inserting names at the top of Columns C and D and providing figures in Column D.

[3 marks]

To obtain [2 marks] candidates must correctly label the two columns C and D respectively as 'Population (%)' and 'Population (Cumulative %)', either with or without reference to the world total.

To obtain a further [1 mark], candidates must correctly calculate the cumulative percentages in Column D from the data in column C. The correct cumulative percentages are:

59.8 77.7 86.7 95 99.5 100

(No mark can be awarded unless all above cumulative percentages are correct.)

- (b) Using data in the table above, draw a *second* Lorenz curve for the year 2025 on the diagram below. Place the names of the continents to the *right* of this second curve.

[2 marks]

Candidates are to be awarded [1 mark] for positioning the continents on the diagram correctly according to their 2025 projected populations and joining those positions to produce a Lorenz curve.

A second mark [1 mark] may be awarded for correct *labelling* of the continental points on the graph *and* their positioning to the right of the curve. Examiners may withhold this second mark in the case of untidiness which impairs the effectiveness of the diagram.

- (c) According to the data given in 1(a) and 1(b) above, which continent in 2025 is likely to have the greatest number of people in proportion to its area?

[1 mark]

The correct answer is Asia and merits [1 mark].

- (d) Describe *one difference* between the Lorenz curve for 1960 and 2025. [1 mark]

Candidates may offer a variety of responses to this question and examiners should be prepared to give appropriate credit of [1 mark] for answers that are plausible. Among these will be the juxtaposition of Africa and Europe / CIS on the two curves, the growing disparity between Africa, Asia, and other continents, and the relationship of the curve to the North-South (Brandt) line between countries of the globe.

2. This question requires candidates' understanding of a compound bar graph, skill in constructing it, and ability in interpreting the information it displays.

- (a) In the space below, construct a *compound bar graph* to display the Distribution of Domestic Supply by Utilisation contained in the above table. [4 marks]

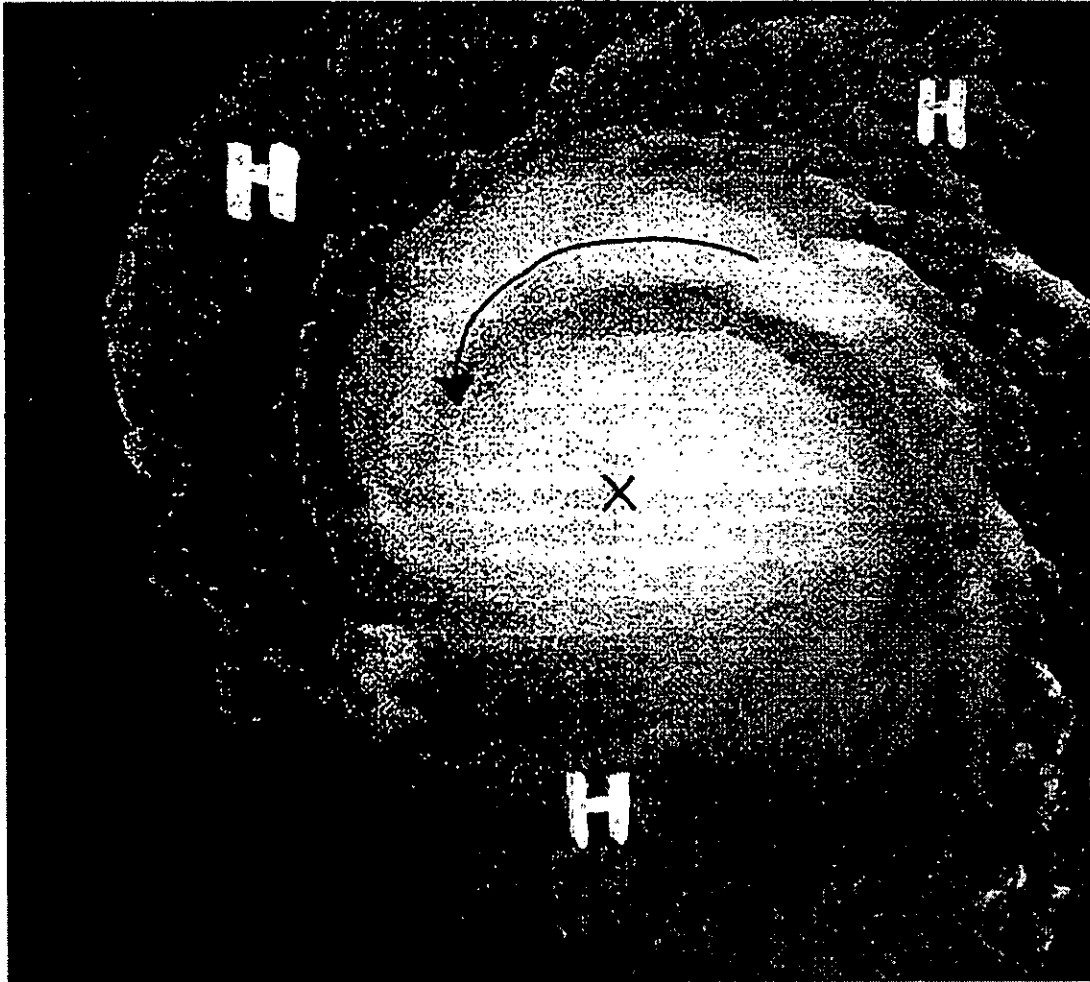
A total of [4 marks] may be awarded for this question: [1 mark] should be allowed for correct labelling of the graph, [1 mark] for key and effectiveness of symbolisation, and [1 mark] respectively for each graph accurately plotted.

- (b) Describe briefly any notable differences in the way Gambia and Suriname utilise their total domestic supply of food? [3 marks]

A total of [3 marks] may be awarded for responses to this part of the question. Most obvious is the amount of total domestic supply used in the Gambia for food, whereas in Suriname barely one-half of the total is used for food and one-fifth is used for livestock feed. [1 mark] each should be awarded to these characteristics of utilisation in Gambia and Suriname. Candidates might observe that the case of Gambia reflects the very high premium placed on food in countries that are experiencing population pressure. The point merits the award of a third mark [1 mark] but examiners should be flexible and award credit for other plausible responses.

3. This question requires candidates to demonstrate a basic understanding of weather systems, and specifically low pressure systems in the northern hemisphere, as sources of natural hazard.

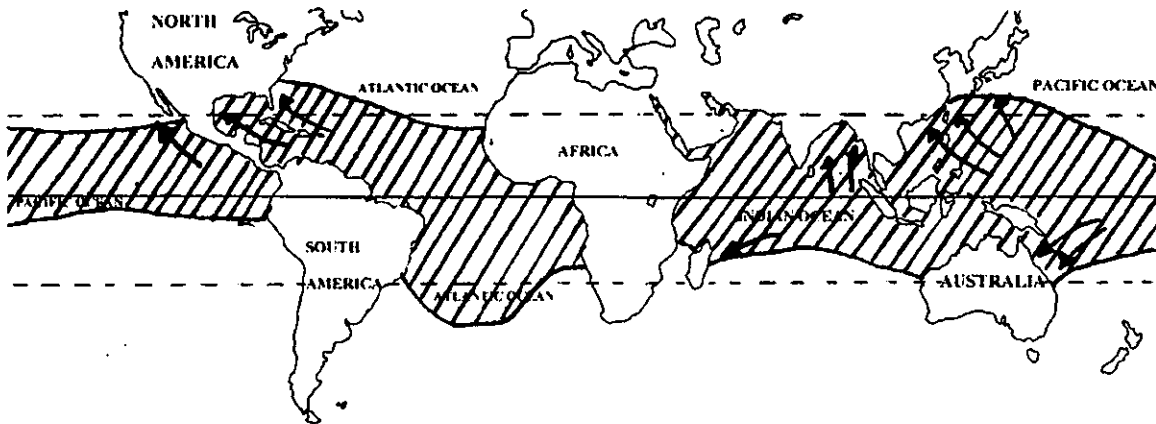
Candidates may receive *[1 mark]* for each correct answer to Questions 3 (a), (b), and (c), as shown on the photograph below. Note that the sign 'H' may be placed correctly at any point on the circumference of the weather system.



- (a) X *[1 mark]*
- (b) The arrow sign *[1 mark]*
- (c) H *[1 mark]*

- (d) Candidates are expected to show that tropical storms occur in **two** of the regions shown on the map below. More able students may add the tropics to the map to confirm their understanding of latitudinal range of the storms. Examiners should award [1 mark] each for the correct indication of two regions.

[2 marks]



- (e) Briefly describe *two* things a community might do to be better prepared for a tropical cyclone.

[1 mark]

Many candidates will mention prediction and early warning; but to get the mark they must **also** state a second measure, such as community preparedness or land use planning, or a specific arrangement within either of these measures. For example, community preparedness would include arrangements for disseminating news and information, preparing for evacuation (routes, shelters *etc.*), sealing and boarding up buildings. Within land use planning, arrangements might vary from prohibiting development to limiting development to uses compatible with flooding - such as beaches and parks - or to post-disaster redevelopment plans.

These suggestions do not exclude others but two must be given for the [1 mark] to be awarded.

4. The question requires candidates to demonstrate an understanding of the difference between the terms ‘standard of living’ and ‘quality of life,’ with reference to world development and to associate these with spatial arrangements.

- (a) **Explain the different factors that are used to determine ‘standard of living’ and ‘quality of life’ as measures of development.**

[3 marks]

Candidates may receive *[1 mark]* for answers stating that standard of living is measured in terms of GDP and GNP and reflects a material standard of living achieved through economic growth. A second mark *[1 mark]* may be awarded for answers stating that quality of life involves use of criteria such as cultural development, social well-being, and political rights. Examiners may award a third mark *[1 mark]* to candidates who elaborate by mentioning that standard of living has been associated with an industrialised society, notably a Western one, as a form of material well-being; or that quality of life involves factors such as longevity and literacy. Candidates should also receive the mark if they refer knowledgeably to the PQLI (Physical Quality of Life Index) or HDI (Human Development Index). Candidates may also mention that the concept of material standard of living has been adopted in a number of Asian countries.

- (b) **Which of these two measures has traditionally been used in countries on the ‘north’ side of the Brandt line?**

[1 mark]

Candidates should receive *[1 mark]* for answers stating that ‘standard of living’ is the term that has traditionally been associated with countries to the north of the Brandt line (Economically More Developed Countries) as a measure of material well-being.

- (c) **Name one ‘Least Developed’ country and one of the ‘Other Developing’ countries.**

[1 mark]

Examiners should use their discretion in awarding *[1 mark]* for two answers that correctly name representative countries. As the awarding of half-marks is not allowed, this discretion should enable examiners to avoid penalising candidates who have performed well on 4 (a) and (b) but have correctly named only one of two representative countries.

5. This question requires candidates to display the data given on logarithmic graph paper and to interpret data plotted.

- (a) On this graph, plot the data for the actual population of the 10 cities given in the table below.

[2 marks]

For [2 marks] candidates must plot the 10 cities accurately [1 mark] and identify (label) each correctly [1 mark].

- (b) What name would you give to a type of population distribution such as Thailand's?

[1 mark]

For [1 mark] the correct term for this type of distribution is *primary* or *primate*. No alternatives are acceptable, although examiners should accept reference to a primate city.

- (c) Identify *two* problems that might arise for a country with this type of population distribution.

[2 marks]

Candidates may refer to examples from either the more developed or less developed world. Allow flexibility here. However, for [2 marks] they need *broadly* to identify the two problems below:

- (i) The diseconomies of excessive overgrowth of the primate city itself, such as severe traffic congestion, escalating land prices and serious housing shortages. [1 mark]
 - (ii) The effect of excessive overgrowth on regional inequalities in the country as a whole and the development of an economically neglected periphery. [1 mark]
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