

MARKSCHEME

May 2005

GEOGRAPHY

Higher Level and Standard Level

Paper 1

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Core Theme: Population, Resources and Development

1. (a) **Describe how you would determine the population density of the shaded area in Area C.** [2 marks]

Responses would be expected to provide an explanation of the process of determining the density of the area in the diagram. No calculation would be necessary to obtain the [2 marks], but it would have to be stated that density is given as a number/km². Where candidates have clearly calculated the density as 8/km² (800/100km²) full marks should be awarded. If the response fails to refer to the diagram, or makes a simple arithmetic error, only [1 mark] should be awarded.

- (b) **Briefly describe and explain the distributions shown in the three areas, A, B and C.** [6 marks]

Several possible descriptions and explanations could be offered. Accurate terminology would not be expected, provided that the response notes the even distribution with a nodal point for Area A that could reflect a uniformly fertile plain with either a communications centre, urban area or resource point; the strong linear distribution in Area B, possibly as a result of a fertile river plain or a communications line; and a concentration of population along a clearly defined line with dispersion away from it in Area C – such as that found along a shoreline or where there is an abrupt change in relief. However, other acceptable explanations for the distributions could be given. The descriptions should be awarded [3 × 1 mark], followed by [3 × 1 mark] for the explanations.

- (c) **Using annotated maps, describe *one* example where population re-distribution has happened for income-related reasons and one example where it has happened for age-related reasons.** [7 marks]

Responses could give a large number of examples as the question is intentionally broad, providing the opportunity to offer examples drawn from a large variety of scales. The sketch maps are an important element in the response and at least [2 × 2 marks] should be allocated to large, neatly drawn and clearly labelled maps. The remaining [3 marks] should be allocated to a description of the processes responsible for income-related and age-related distributions, such as those resulting from rural-urban migrations and from retirement changes in residence respectively. It would be acceptable for the total mark allocation to be given to fully annotated maps only. One annotated map showing all features is equally acceptable.

- (d) Referring to specific examples, examine the positive impacts that voluntary migrations have at their destinations. [10 marks]**

Responses would be expected to concentrate only on the advantages that such migrations have in the destination areas. These would include the role played in providing labour in areas where there is a shortage (often at lower costs and by over-qualified migrants), in enriching the cultural and political mix, in establishing links with their countries of origin, in providing additional income through taxation and increasing the fertility rate in areas with aging populations. Some comment could also be made about the contribution resulting from the so-called “brain drain”, particularly in the more skilled professions, and the character of migrants, who often show great initiative that could be of benefit to the host countries or areas. Most, but not all these points need to be covered for full marks. Responses that fail to be well reasoned and developed may not move beyond band F.

The examples discussed need not be confined to international migrations. Any discussion of commuting would be self-penalizing.

Responses that fail to provide substantive or accurate examples may not move beyond band E.

The marks should be allocated according to the markbands.

2. (a) **Describe the changes in the percentage of the populations suffering from malnutrition shown in Diagram A.** **[4 marks]**

A general comment showing an awareness that the proportion of malnutrition had fallen in all regions over the period would be required for **[1 mark]**. **[1 mark]** should be awarded for some quantification and the final **[2 marks]** for some fuller description or analysis, such as the decline being slowest in Sub-Saharan Africa, or that South Asia showed an initial increase, unlike the other regions.

- (b) **State why there appears to be no agreement in the trends shown in Diagrams A and B.** **[3 marks]**

Responses should show an appreciation of the implications of presenting data as actual, as opposed to relative, values **[2 marks]**. The differences should be stated in terms of the increased population numbers in the selected regions as a result of more rapid population growth or any other valid reason **[1 mark]**.

- (c) **Briefly describe the main changes in global food production since 1970 and explain why they occurred.** **[8 marks]**

Responses should show an awareness that food production has increased. **[1 mark]** but that this increase has not kept pace with population growth in all the areas shown **[1 mark]**. The two main factors responsible for the change are the increase in the area under cultivation **[1 mark]** and the increased yields resulting from technological developments **[1 mark]**.

The remaining **[4 marks]** should be allocated to the development of these points, possibly by using examples or by expanding on each of the factors, or for any other valid points, such as the decline in Africa due to economic, political and environmental factors.

- (d) **Referring to examples, explain how trading patterns in food can result in a shortage of food.** **[10 marks]**

A number of different approaches could be expected but responses should focus on the following: agricultural subsidies in the richer countries, which result in over-production and the distortion of internal markets in LEDCs; trade barriers (tariffs) on products from the LEDCs; the demand for cash crops, which encourage a switch from staple food production in the exporting countries; and the impact on prices in a market controlled by the richer countries. Some reference could be made to the role of organizations such as the WTO, but this would not be essential to gain full marks.

Responses that fail to provide accurate and developed examples, or which concentrate either on countries or on specific products, may not move beyond band E.

The marks should be allocated according to the markbands.

3. (a) **Define *infant mortality rate* and then describe the correlation evident in the data in the table.** [2 marks]

The IMR should be defined as the rate of deaths of children under the age of one year [1 mark]. Ideally the definition should note that it concerns the child deaths / total number of live births. The correlation evident in the table is a negative correlation between birth interval and the IMR [1 mark].

- (b) **Briefly describe *three* other factors that can influence infant mortality.** [3 marks]

A large number of separate factors could be covered, for example: safe water supply and adequate sanitation, access to health care, adequate nutrition, and mother's education level. However, each factor should be described and not just listed for the [3 × 1 mark]. Where answers focus on the same factor e.g. medical conditions, up to [2 marks] can be allocated to the description. It would also be acceptable if a response stated that poverty was the main factor and then described the implications of this state.

- (c) **Referring to a country *or* region of your choice, give an account of a pronatalist programme designed to encourage population growth.** [8 marks]

Again, a wide choice of countries or regions could be offered. Responses would be expected to show a sound knowledge of the example chosen and be able to come to some conclusion about its success. In order to obtain the [8 marks] available, some quantitative or specific information should be included. Answers failing to refer a country or region should not gain more than [4 marks].

- (d) **Examine the geographical consequences for a country *or* region severely affected by a disease.** [12 marks]

Responses would be expected to comment primarily on the demographic, social and political effects of the disease of their choice. It is likely that they would be unable to cover all the following aspects, as some could not be applicable to the countries or diseases chosen. The responses should develop and examine the consequences of the following elements:

- demographic – such as increased mortality rates and reduced life expectancy, changes in the dependency ratio
- social – such as the breakdown in family support, the loss of breadwinners, and the lack of care of orphans
- economic – such as the loss of both skilled and unskilled labour (especially in the agricultural sector in LEDCs), an overall reduction in the work force, and the fall in GNP.

It would be possible that a candidate would not choose AIDS or malaria, which are extensive only in LEDCs, but opt for a disease such as SARS (where the impact has been obvious in some MEDCs) or even some water-related diseases, such as diarrhoea. This would be acceptable but, in such a case, the consequences would be of a different nature and scale.

Equal weighting need not be given to all three sets of factors but responses which fail to give suitable examples may not move beyond band E. Those that fail to be developed or well reasoned may not move beyond band F.

The marks should be allocated according to the markbands as follows:

Overall quality	Marks out of 12
A	0-1
B	
C	2-4
D	
E	5-8
F	
G	9-12
H	
