

# **MARKSCHEME**

**May 2001**

**GEOGRAPHY**

**Higher and Standard Level**

**Paper 2**

**Notes on individual questions**

**1. The diagram shows the population structures for Europe and Africa in 2000.**

**The figures under the pyramids indicate the population sizes in millions of people.**

- (a) Describe the differences in the population structures of Europe and Africa.**

**[6 marks]**

It is expected that candidates will note the wide base shape of the population pyramid in Africa compared with the more parallel-sides shape of the European population pyramid **[1 mark]**, and the higher proportion of females than males among the elderly in Europe compared with the more even gender balance in Africa **[1 mark]**. Up to **[2 marks]** should then be awarded for any two of the following three points: the higher proportion of children in Africa than Europe, the higher proportion of working age population (15-64) in Europe than Africa, and the higher proportion of elderly people in Europe than Africa. The remaining **[2 marks]** should be awarded for quoting relevant statistics to support these points.

- (b) Referring to specific countries in the two continents, suggest reasons for the different population structures in Europe and Africa.**

**[6 marks]**

Although it is not required, candidates may profitably relate the population structures in the diagram to the demographic transition model to provide a framework in which to answer this question. If this is done, then Africa would display the characteristics of stage 2, while Europe would exemplify stage 4. However, even if the demographic transition model is used in the explanation, it should be clear that the model describes the process behind the different population structures; the demographic transition model *is not a reason* for the different population structures, which is the focus of the question. The reasons for the contrasting population structures should include the social, cultural and religious attitudes which lead to contrasting birth rates, the demographic and economic factors that cause different death rates among both infants and the elderly, the economic and social factors which influence the numbers of children in each family. Although it is unlikely that any national population policies will markedly influence the population structure of either Africa or Europe as a whole, suggestions should be treated on their merits, and indeed they may be appropriate in the context of the question which requires specific examples to be discussed. Responses which make no mention of specific countries should not be awarded more than **[4 marks]**, and then only for outstanding analyses of the general reasons behind the two contrasting population structures.

*continued...*

*Question 1 continued*

- (c) Explain the consequences of each population structure for planners in Europe and Africa.**

***[8 marks]***

The consequences of the population structures will be felt in two main spheres, consequences for infrastructure (such as services and facilities, schools, hospitals and transport) and consequences for demography and population planning. Each of these two areas should be discussed to be awarded full marks. In Europe, the population structure places increased demand on services for the elderly, while in Africa there is increased demand for services for the young. In Europe, the pressure in the policy area is to arrest the declining population in some countries, while in Africa the pressure is to limit population growth. The candidate's response should be reasonably balanced between Europe and Africa to be awarded full marks.

2. The diagram shows the trends in per capita food production in some major regions or continents of the world from 1961 to 1996. The graphs are drawn using index figures, based on a value of 100 for the year 1961.

- (a) Describe the trends in per capita food production in different regions/continents during the period 1961 to 1996.

[6 marks]

Students should note that over the period 1961 to 1996, food production per capita has increased most in Asia (by 66%), followed by Europe and Latin America (by about 30% each). On the other hand, food production per capita has declined in Africa (by 12%) and most markedly in the former Soviet Union (by 20%, with the most severe decline occurring after 1990). [1 mark] should be awarded for correctly identifying these trends in each of the continents/regions provided that accurate relevant statistics are quoted. The sixth mark should be awarded for similarly identifying the trend in world food production per capita (increased by approximately 20% between 1961 and 1996). Where no statistics are given, only half the marks that would otherwise have been given should be awarded (rounded *down* to the nearest whole number of marks if necessary).

- (b) Outline the reasons for the different performance of *two* of the regions/continents shown in the diagram (do *not* use the world total as one of the regions/continents).

[8 marks]

Candidates' responses will vary according to the continents/regions selected. However, responses should include a variety of economic, political, demographic, technological and social factors to explain the changes during the period 1961 to 1996. It should be noted that explanations of changes outside the period 1961 to 1996 are not relevant unless clearly intended to illuminate the changes during the period shown in the diagram. It may be appropriate to mention physical factors which have caused these changes, but these are unlikely to be as significant as human factors when considering changes on a continental scale over the 34 year period in question. Although there should be adequate information on each of the two regions/continents selected, there may be some flexibility in that the two areas need not carry equal weighting.

- (c) Suggest realistic measures which could reduce malnutrition in the world.

[6 marks]

It is expected that candidates will identify current causes of malnutrition in the world and suggest measures which are not politically, socially or economically impossible to address these causes. Candidates should recognise that while insufficient food production (or diversion of farmland into non-food agricultural products) is perhaps a problem in Africa and the former Soviet Union, the overall problem is appropriate distribution of abundant food resources rather than shortage of production. Weaker responses will focus simply on treating the symptoms of malnutrition rather than the causes.

**3. Describe a natural hazard event which has occurred during the past two years (i.e. since May 1999). Your answer should include the following parts:**

- (a) (i) identify the hazard event that occurred ;**
- (ii) state the date (or period of time) when it occurred ;**
- (iii) name the country and city (or area) within the country where it occurred;**
- (iv) briefly outline the impact of this hazard event. *[5 marks]***

The aim of this question is to examine candidates' use of contemporary events occurring during the two-year period of their Diploma study, relating this to the specific topic area of hazards. Responses to part (a) should adequately 'set the stage' for the responses which follow by identifying the hazard and hazard event which will be discussed (it must be a *natural* hazard event that *actually occurred* to gain *[1 mark]*), accurately stating the date or period of time when it occurred *[1 mark]*, identifying the location of the hazard event *[1 mark]* and briefly outlining the impact of the hazard event *[2 marks]*. Candidates who use an example of a hazard which is prior to their IB Diploma studies (*i.e.* before May 1999) have this part and all other parts of the question marked normally, and then the total mark is halved (and rounded downwards).

- (b) Draw a half page sketch map at a scale which appropriately shows the location and extent of the hazard event. The sketch map should include :**
- (i) a linear scale;**
- (ii) a key (or legend);**
- (iii) orientation arrow showing north ; *[5 marks]***
- (iv) indicators of location such as latitude/longitude or grid references.**

A sketch map which shows with reasonable accuracy the location and extent of the hazard event, given the constraints of limitations of time in examinations, and which includes all the components listed in the question, should be awarded full marks. As a general rule, *[1 mark]* should be awarded for accurately showing each of the three components (linear scale, key and location), with *[2 marks]* for presentation and clarity of mapwork. However, these allocations should be treated flexibly, and examiners should feel free to award maps which are generally outstanding, but which fall short on a minor technicality, full marks.

*Question 3 continued*

- (c) Describe the natural causes of this hazard event.**

***[5 marks]***

There is considerable scope for candidates to demonstrate their understanding of physical geography processes in this open-ended question. Responses will vary according to the natural hazard selected, but to be awarded full marks, candidates must show an accurate understanding of the physical forces which caused the natural hazard event. A broadly accurate but superficial or generalised response will be awarded ***[3 marks]***, while a response which is absurdly brief, or contains numerous significant factual errors, will probably only be awarded ***[1 mark]***.

- (d) Discuss the short-term and longer-term responses that occurred following this hazard event.**

***[5 marks]***

As with part (c), responses to this open-ended question will vary considerably according to the hazard event selected. In general, ***[2 marks]*** should be awarded for a solid explanation of short-term (or immediate) responses to the hazard event, ***[2 marks]*** for a solid explanation of the longer-term responses, plus ***[1 mark]*** for candidates who include specific illustrative examples, or factual data, or perceptive insights into the responses to the hazard event.

**4. The map shows the average annual percentage growth in GDP per capita over the period 1990 to 1997.**

- (a) Describe the broad world pattern of economic growth shown in the map. [5 marks]**

Candidates are expected to recognise that the most rapid economic growth between 1990 and 1997 occurred in the newly industrialising nations of East Asia, south-east Asia, South Asia, western South America and south-eastern South America [2 marks]. There were some other isolated examples of rapid economic growth such as Sudan, Ireland and Poland [1 mark]. The areas where economic growth was slowest (in fact negative) were the countries of the former Soviet Union, much of Africa and the Arabian peninsula [2 marks]. Students who make alternative important, relevant and accurate remarks may be rewarded appropriately.

- (b) Identify the factors leading to different rates of economic growth in various parts of the world during the period 1990 to 1997. [7 marks]**

Although a range of emphases in candidates' responses is acceptable, it is expected that candidates will focus on explaining the reasons for negative economic growth in the "less than 0%" category and the rapid growth in the "3.0% or more" category. Negative growth can be explained in part by political changes in the former Soviet Union, by demographic changes in Africa and by changing balances in world trade for the Arabian peninsula. The strong growth in parts of Asia and South America can be largely explained by the consequences of rapid industrialisation, often fuelled by government policies promoting rapid transformation from subsistence-dominant to commercial-dominant economies. Candidates are free to emphasise other causes of varying rates of economic growth, and candidates' arguments should be treated on their merits on the bases of accuracy and relevance.

- (c) Name one country where the economy is either rapidly speeding up or slowing down, and discuss the factors which are specific to that country that are responsible for this change in the economy. [8 marks]**

Responses will vary according to the country selected by the candidate. However, forces slowing down economic development may include difficult physical environments, political instability, debt, environmental degradation, historical geography, low investment, and dependence on primary product exports, while forces speeding up economic development may include factors such as growth of tertiary sector, growth of manufacturing, strong agricultural growth, economic reforms, export growth, and migration. Government policies could well be a factor working in either direction, or in some cases, in both directions simultaneously. To be awarded full marks, it is expected that candidates will refer to some relevant statistics and/or illustrative examples from within the country selected.

**5. The diagram shows the trends in urbanisation in selected countries, and the world average, from 1950 to 1995, with projections to 2025. The inset shows the trend in world urbanisation since 1800.**

- (a) Suggest likely reasons for the different trends in urbanisation in any three countries shown in the diagram.**

***[9 marks]***

It is not necessary for candidates to have detailed knowledge of the three countries selected from the graph, as the question focuses on “likely reasons” and thus allows reasonable speculation based upon knowledge of the general nature of countries at different stages of urbanisation. As a general rule, ***[3 marks]*** should be awarded for the description of the reasons in each of the three countries. Responses which fail to include any relevant statistics or which make no explicit valid comparisons of urbanisation in the three countries selected may not be awarded full marks. Discussions of countries not shown in the diagram should be ignored and not be awarded any marks.

- (b) With the aid of specific examples, discuss the problems caused by rapid urbanisation in economically less developed countries (ELDCs).**

***[11 marks]***

It is expected that candidates will discuss problems which are the direct result of rapid urbanisation and not problems of economic development in general. Thus, problems to be discussed could include for example: shortage (and quality) of housing, high population density in some urban areas, urban unemployment, pressures on urban transport and other infrastructure, depopulated rural areas, gender imbalances in rural areas (and to a lesser extent also in urban areas), and urban sprawl. To be awarded full marks, it is necessary that illustrative examples be cited.



**6. The table shows data relating to agriculture, settlement, population and development in a selection of countries from around the world.**

- (a) Describe the relationship between the percent increase in the number of tractors 1984 to 1994 and the population living in urban areas.**

*[4 marks]*

To answer this question adequately, candidates must have some capacity to integrate their knowledge of four of the five themes of the common core of the course. In part (a), candidates are required to describe the relationship between an agricultural measure (percentage increase in the number of tractors) and a settlement measure (percentage of the population living in urban areas). Candidates should note that there is generally an inverse (or negative) relationship between these measures, with countries having a high percentage increase in the number of tractors being those countries which tend to have a low proportion of the population living in urban areas *[2 marks]*. The remaining *[2 marks]* should be awarded for quoting relevant examples and statistics to support this point.

- (b) Describe the relationship between the average annual population change 1995-2000 and the GDP per capita in 1997.**

*[4 marks]*

In this part of the question, candidates are required to describe the relationship between a population measure (average annual population change 1995-2000) and a measure of economic development (GDP per capita). Candidates should note that there is once again generally an inverse (or negative) relationship between these measures, with countries having a high GDP per capita being those countries which tend to have a low average annual population change 1995-2000 *[2 marks]*. The remaining *[2 marks]* should be awarded for quoting relevant examples and statistics to support this point, especially the statistics for Bulgaria which are contrary to the general trend.

*Question 6 continued*

- (c) **State the names of two countries shown in the table which have quite different patterns of statistics. Suggest reasons for the differences shown.** [12 marks]

Candidates' responses will vary according to the countries selected in this open ended question. However, it is expected that all four measures will be discussed for each of the two countries, with conclusions drawn about reasons for the differences. Candidates are free to select the organising framework for their response (*e.g.* factor by factor, country by country), but in general it is expected that the reasons for the differences will probably be linked to the consequences of different levels of economic development. If candidates select two countries with similar patterns of statistics, this will be self-penalising and there is no need to impose any additional penalty; treat the response on its own merits. It is not a requirement that the two countries be analysed in equal depth. With this context, marks should be awarded on the following basis:

*A mark between 11 and 12 inclusive* should be awarded for an excellent response which shows clear reasoning and which gives explicit factual information, where the arguments are developed in a logical manner, with evidence provided from a variety of sources and using illustrative examples to support the arguments.

*A mark between 8 and 10 inclusive* should be awarded for an above average response which is consistent, factually correct, explanatory and which attempts to justify its generalisations.

*A mark between 5 and 7 inclusive* should be awarded for a mediocre to satisfactory response which is somewhat descriptive but relevant to the question, where there is some use of factual data and which shows limited reasoning. The conclusions should be consistent with the reasoning presented.

*A mark between 3 and 4 inclusive* should be awarded for a weak response which is somewhat vague and which uses little factual data to support generalisations. The conclusions are inconsistent with the data or no conclusions are drawn.

*A mark between 0 and 2 inclusive* should be awarded for a very weak response which misses the point of the question, has an absence of factual data, contains much irrelevant material, and is incoherent or incomprehensible.

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