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MARKSCHEME

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GEOGRAPHY

Higher and Standard Level

Paper 2

8 pages

Examiners should note that in the case of some sub-questions that are worth ***[10 marks]***, banding has been adopted. These bands are a guide intended to assist the marking process. Candidates' answers may not fit precisely the description given and mark allocation would then be at the examiner's discretion.

Question 1: The diagram shows the demographic transition pathways for four countries: England & Wales 1720–1998; India 1891–1998; Kenya 1950–1998 and Thailand 1950–1998.

(a) Compare and contrast the changes in population growth over time for *two* of the countries shown on the diagram. ***[6 marks]***

The contrasts are sufficiently distinct to allow any two countries' demographic transitions to be compared. In the case of each pair of countries, candidates must identify both similarities and differences in their demographic changes (although these might not be balanced). For ***[6 marks]*** they should comment upon three comparative features/changes; growth rates, birth rates and death rates and statistics should be accurately quoted.

(b) With reference to examples of your choice, describe the ways in which population growth rates have been reduced in some countries. ***[8 marks]***

Candidates should show an understanding of the inter-relationship between birth rates and death rates and their effect upon population dynamics. For full marks candidates should refer to more than one example in their answer and should show a good factual and statistical knowledge of the causes of the initially high growth rate and the means of reduction. Factors helping to reduce birth rates should range from direct ones such as the implementation of family planning programmes to indirect ones involving the reduction of poverty, education and the improvement in female status. Answers that refer to only one example, even if this is detailed, should receive a maximum of ***[5 marks].***

(c) Discuss the advantages and disadvantages of low rates of population growth experienced by some countries. ***[6 marks]***

Candidates should acknowledge that low growth rates are characteristic of EMDCs and should have some perception of "low" *i.e.* less than 1 % per annum. Candidates should provide both advantages and disadvantages, but these may not be balanced. The advantages should focus upon material well-being of society, whereas the disadvantages would concentrate on the problems of an ageing society; dependency, high costs of social provision and possibly immigration. For full marks, candidates should cover all the advantages and disadvantages mentioned either briefly or covering a few in more detail. Candidates who do not mention examples should receive a maximum of ***[3 marks]***.

Question 2: The information below concerns the classification of hazards by duration of the event and length of forewarning (advance warning).

(a) Select *two* hazards from the table above and explain the variation in (i) the duration of the event and (ii) the length of forewarning. ***[6 marks]***

Candidates should show an understanding of both duration of the event and length of forewarning. In so doing, they must show some basic knowledge of the physical conditions surrounding and leading to the occurrence of each hazard.

(b) Describe the factors that make societies vulnerable to loss of life and property in the event of a disaster. ***[6 marks]***

Vulnerability depends upon the degree of exposure of the society to the hazard, their wealth and technical ability, education and awareness of the hazard, the age of society and their health, and their living conditions. Candidates should mention at least four of these factors and refer to more than one example for ***[6 marks]***.

(c) Select *one* of the hazards listed above and, referring to named places, discuss the ways that people have responded to it. ***[8 marks]***

Candidates should discuss one of the hazards listed and a variety of responses with reference to examples. They should mention most of the following for ***[8 marks]*** (depending upon the hazard chosen):

- Modification of the event by hazard resistant design of buildings and structures.
- Modification of vulnerability by prediction and warning, community preparedness and land use planning.
- Modification of the losses through aid insurance.
- Acceptance of the loss as an act of God.

Question 3: The diagram shows the organisation of social areas within the city.

(a) For each of the diagrams A, B and C describe and explain the ways in which social areas within the city are used. ***[6 marks]***

Diagram A Candidates should recognise a pattern of ethnic segregation by clustering at points ***[1 mark]***. This develops in large towns and cities because of social and cultural differences. In the extreme it leads to the development of ghettos ***[1 mark]***.

Diagram B Candidates should describe the pattern as concentric ***[1 mark]***. The centre is often dominated by an elderly population and smaller single-person households. Towards the periphery, age usually declines and there is a tendency towards larger family households ***[1 mark]***. The pattern is by no means clear-cut and candidates may identify variations both at the centre and at the edge where in both cases populations may be heterogeneous.

Diagram C Candidates should identify a sectoral pattern ***[1 mark]***. Explanation should focus upon segregation by social class according to income and the separation of the two socio-economic extremes shown ***[1 mark]***.

(b) With reference to *one* city or large urban area that you have studied, describe the extent to which the pattern of social areas conforms to that shown on the diagram. ***[10 marks]***

A mark between ***[8 marks]*** and ***[10 marks]*** inclusive should be awarded for a thorough consideration of all social space patterns shown on the diagram and detailed knowledge of a specific city with a convincing labelled sketch map.

A mark between ***[4 marks]*** and ***[7 marks]*** inclusive should be awarded for reference to all three patterns, but spatial knowledge of a specific city is moderately weak. At the top of this mark band a sketch map may be provided but it will lack detail.

A mark between ***[0 marks]*** and ***[3 marks]*** inclusive should be awarded for an unconvincing answer, which describes the social geography of any city. There is little evidence of any real knowledge. A sketch map is either missing or weak.

(c) Describe and explain *two* social and *two* environmental problems that can be found in some inner city areas. ***[4 marks]***

There are a large number of social problems such as lack of services, unemployment, crime, urban decay and dereliction, lack of green space. Environmental problems might include air pollution, poor sanitation and drainage (which could be social), traffic congestion, lack of safe building space except for steep and poorly drained land. For full marks candidates need to expand on each problem.

Question 4: The cartoon shows excessive food production in the 'North' (Economically More Developed Countries) compared to the 'South' (Economically Less Developed Countries).

(a) Discuss the environmental conditions that contribute towards the under-production of food in the 'South'. ***[8 marks]***

The environmental conditions that can lead to under-production of food are:

- Drought where there is shortage of water and inadequate funds to irrigate.
- Vegetation where there is clearance, associated with over-grazing, and over-cultivation.
- Salinisation due to poor irrigation practices.
- Soil erosion, which is often associated with the above conditions and the unsuitable cultivation of marginal, often steep land.
- Desertification, which may be the culmination of some or all of the above causes.
- Natural hazards – tropical cyclones, flooding.

For a full ***[8 marks]*** candidates should develop a full discussion of at least three of the above conditions referring to at least two examples.

(b) With reference to examples, from both the 'North' and the 'South', discuss the social, economic and environmental consequences of increasing food production. ***[12 marks]***

A mark between ***[9 marks]*** and ***[12 marks]*** inclusive should be awarded for answers which cover a discussion of both ELDCs and EMDCs to illustrate the problems. The examples given are accurate and convincing and all three problems, social, economic and environmental, are discussed in detail.
Some of the problems within each of the three categories to which reference might be made are:

- Social consequences as a result of the amalgamation of holdings, unemployment and out-migration from rural areas.
- Economic consequences as a result of surplus food production, world gluts, depression of prices.
- Environmental consequences as a result of pollution, soil degradation.

A mark between ***[5 marks]*** and ***[8 marks]*** inclusive should be awarded where social, economic and environmental problems are all mentioned, but the discussion lacks detail. Examples are given, but these are thin.

A mark between ***[1 mark]*** and ***[4 marks]*** inclusive should be awarded where there is inadequate identification of social, economic and environmental factors. Examples are missing.

Question 5: The diagram shows the different environmental conditions in which people live.

(a) (i) Describe what is meant by optimum living conditions. ***[2 marks]***

Optimum living conditions exist where there are no environmental extremes and populations are not exposed to natural hazards to any great extent ***[1 mark]***. Expansion of this idea would gain a second ***[1 mark]***.

(ii) Explain why some people must live in marginal lands. ***[2 marks]***

Populations are increasingly living in sub-optimal or marginal areas not by choice, but as a result of pressures of population growth ***[1 mark]*** or for political or other reasons causing displacement of the population ***[1 mark]***.

(b) Select *two* types of marginal lands from those shown in the diagram and, with reference to named areas of the world, describe and explain the natural hazards experienced by the people living there. ***[8 marks]***

For each type of marginal land the candidate should give an accurate example ***[1 mark]***, a description of the hazard(s) and a full explanation of the threat posed to humans by the hazard(s) ***[3 marks]***. An accurate example would be a description of populations living in the delta area of the Ganges followed by an explanation of the nature of the flood hazard.

(c) Describe the ways that humans respond to the hazards that exist in the two types of marginal lands that you have chosen. ***[8 marks]***

Candidates should interpret the term response as adjustment to the hazard. They should focus upon long-term responses such as overcoming water shortage in dry areas, or dealing with predictable flooding in areas subject to inundations. Housing conditions, transport, food production systems and other sorts of economic activities may also be considered. The best candidates should recognise the connection between the habitation of marginal lands by poor people who may experience difficulty coping with the associated hazards. Candidates may only gain ***[8 marks]*** if there is full development of ideas and one or more examples.

Question 6: The graph shows the global trends in energy consumption between 1970 and 1990.

(a) Using the graph, describe and give reasons for the changes in total energy consumption between 1970 and 1990. ***[4 marks]***

For ***[4 marks]*** reasons given should include description and explanation but marks need not be equally divided between description and explanation
Description should include the overall increase in consumption with two periods of levelling off (supported by statistics).
Explanation should include the growing demand associated with increasing global populations and levels of industrialisation. Energy increase is however not continuous because of the two recessions in 1974-5 and 1981-2.

(b) Select *two* types of energy shown on the graph and explain how their exploitation can produce environmental damage. ***[10 marks]***

The most likely choices will be oil, nuclear energy or coal, but hydroelectric power and natural gas are also acceptable. The following points are relevant:

- Oil: drilling and the obstruction of the land(sea)scape; spills and pollution of land and sea; atmospheric pollution by global warming and acid rain.
- Nuclear: obstruction of the landscape by power stations; contamination of land and oceans by waste disposal.
- Coal: scarring of the landscape by mining; subsidence; dust; acidic runoff; global warming; and acid rain.

A mark between ***[8 marks]*** and ***[10 marks]*** inclusive should be awarded where the answer covers all the points above and possibly more with detailed knowledge of pollution events and particular areas of exploitation.

A mark between ***[4 marks]*** and ***[7 marks]*** inclusive should be awarded where the answer shows sound knowledge on some aspects, but examples are weak. The answer is likely to be unbalanced and discussion of one of the energy sources is thin.

A mark between ***[1 mark]*** and ***[3 marks]*** inclusive should be awarded where the answer is weak on knowledge and understanding. Examples are missing.

(c) Suggest *two* ways in which world energy resources might be managed in a more sustainable way in the future. ***[6 marks]***

For ***[2 marks]*** candidates should show an understanding of the term "sustainable" *i.e.* managing the resource to prolong its life and prevent environmental damage. The remaining ***[4 marks]*** should be allocated to two of the following conservation methods (the distribution of marks might be uneven):

- Conservation by recycling of materials to reduce primary processing.
- Improved energy efficiency in domestic, industrial and vehicle consumption.
- Substitution of non-renewable energy resources by renewables.