N99/320/HS(2)M

INTERNATIONAL BACCALAUREATE
BACCALAURÉAT INTERNATIONAL
BACHILLERATO INTERNACIONAL

MARKSCHEME

November 1999

GEOGRAPHY

Higher and Standard Level

Paper 2

12 pages

Note to examiners

Some points in this markscheme have been identified by bullets for clarification of marking. However, it is expected that in most cases the candidates will avoid this approach in favour of an extended and reasoned response.

Notes On Individual Questions

1. Population densities

(a) The classification should refer only to the column for population per square km. *[3 marks]* for a three fold classification with headings on each (allow for Japan to be medium density). *[2 marks]* for a twofold classification with headings. Candidates who produce only accurate rank ordering of countries receive *[1 mark]*. More complex classifications should gain a maximum of *[3 marks]* if well thought out.

Low Density	Medium Density	High Density
Australia	Indonesia	Japan
Iceland	Nepal	Netherlands
Chad	Vietnam	Bangladesh
Brazil		

[3 marks]

(b) (i) *[2 marks]* should be allocated for an accurate definition of each term.
Overpopulation - The idea that the population cannot be supported by the resources and current technology available is fundamental, *e.g.* Bangladesh.

The symptoms would include: poverty, unemployment, poor quality of life, out-migration. ***[4 marks]***
Underpopulation - almost the reverse except that the quality of life will not be poor, *e.g.* Canada.

(ii) The concept of density is only useful when related to resources and carrying capacity of an area *[1 mark]*. Candidates should refer to GNP on the table as an indicator of wealth that can be related to density. From the table, they should identify countries that are likely to be overpopulated and underpopulated *[2 marks]*. ***[3 marks]***

(c) 8 - 10 marks: Detailed knowledge is required of 1 country with statistical support on population density, resource base, technology level, quality of life. Both socio-economic and environmental conditions will be considered (the latter might include people living in areas of flood, landslide and pollution hazard). There should be some recognition of spatial variation in population/resource ratio over the country and an indication of future prospects for full marks.

5 - 7 marks: Correct choice of country with good understanding of environmental and socio-economic conditions there, but statistical support may be thin at the lower end.

0 - 4 marks: Dubious choice of country with no real understanding of the terms socio-economic and environmental. ***[10 marks]***

2. Tourism

(a) For the two areas, candidates need to compare:
Changes over time for tourist arrivals *[2 marks]*
Changes over time for % share *[2 marks]* ***[4 marks]***

(b) There are a number of factors and three from the following list should be described for *[3 x 2 marks]*:

- increasing leisure time
- affluence
- increasing efficiency and reducing cost of transport
- greater accessibility of distant places
- improvement in economic status of some tourist destinations
- wider media coverage ***[6 marks]***

(c) For full marks, there should be a reasonably balanced and detailed assessment of at least five *[5 x 2 marks]* costs/benefits and there should be at least 1 ELDC (maximum *[6 marks]* if no example stated). Costs/benefits would include the following (there may be others).

Costs	**Benefits**
Leakage	Much needed foreign revenue
Cultural conflict	Cultural understanding
Environmental damage	Improvement in infrastructure
Crime	Employment

8 - 10 marks:	At least 5 costs/benefits discussed with reference to at least one country
5 - 7 marks:	At least 4 costs/benefits with reference to one country
0 - 4 marks:	Unbalanced assessment with limited knowledge of example(s)

Note: Candidates do not gain credit for discussing other types of development strategies here. ***[10 marks]***

3. Soil erosion

(a) The description should include two of the following for *[2 marks]* each:

- steep gradients,
- erosive rainfall,
- excessive amounts of surface runoff,
- erodable soil (such as loess),
- effect of wind. ***[4 marks]***

(b) *[2 marks]* are given for a full discussion of each cause *[8 marks total]* and *[2 marks]* for the one result shown on the diagram. Reference to examples (China, Nepal) would be expected for *[8 - 10 marks]*.

Causes:

1. Farming steep slopes - shortage of land means that a farmer must clear vegetation to plant crops.
2. Over-grazing - if vegetation is intensively grazed down to the roots, vegetation does not grow back and soil becomes unstable. Compaction can also assist erosion.
3. Over-cropping - land shortage leads to intensive cropping and the loss or shortening of fallow periods. Nutrients that cement soil particles are lost.
4. Ploughing up and down the slope.

Results:

5. Deposition of debris and flooding - soil and water run down the valley ruining fields and causing serious sedimentation and flooding downstream. ***[10 marks]***

(c) Three methods might include:

- The building of terraces to reduce the velocity of surface run-off
- The regeneration of vegetation cover by planting
- Investment and research into more sustainable practices
- Government investment into training programmes in forestry and fuel conservation for local people

References to examples would be necessary for *[6 marks]*. ***[6 marks]***

4. Natural hazards

(a) For each of the terms - magnitude, duration or frequency there should be clear reference to one natural hazard. *[1 mark]* per accurate definition. ***[3 marks]***

(b) Perception ranges from complete ignorance through growing awareness to complete intolerance. It is conditioned by factors such as:
The frequency and magnitude of the event, as well as socio-economic variables such as age, sex, occupation and education. ***[7 marks]***

(c) Candidates should interpret the term adjustment as response and may categorise the adjustments as follows (other terms may be used for full marks):

(i) Modification of event - *e.g.* cloud seeding in the case of drought, catchment and channel management in the case of flooding
(ii) Reduction of vulnerability - *e.g.* snow shields against avalanches and earthquake resistant buildings
(iii) Redistribution of losses - sharing the losses such as emergency relief and insurance

8 - 10 marks: candidates will draw examples from both ELDCs and EMDCs to illustrate a variety of responses according to the perception of risk and the availability of resources. Knowledge of more than one specific hazard event will be present. They will also produce a well-ordered answer that uses appropriate terms.
5 - 7 marks: Good knowledge of response from both ELDCs and EMDCs, but little or no mention of specific hazards. Variety of adjustments missing. Some terms.
0 - 4 marks: Limited range of ideas on adjustments and few terms. ***[10 marks]***

5. Agriculture

(a) This is the total value of all agricultural produce of one country divided by the agricultural workforce *[2 marks]*. The values are ranked according to the key and the central value is the median ($1120) *[2 marks]*. ***[4 marks]***

(b) The most likely choices would be from Western Europe, North America, Japan or Australia. The factors might include the following four and there should be detail for full marks *[4 x 2 marks]*. Allow some flexibility on a number of factors if detailed support is present.

(i) Suitable physical conditions - this might include some of the following:

- low relief
- accessibility
- advantageous climate
- fertile soils

(ii) The adoption of intensive techniques:

- fertilisers
- pesticides
- HYVs
- irrigation
- drainage
- increasing scale of operation
- mechanisation

(iii) Government encouragement through subsidies (CAP)

(iv) Increasing demand through growing population ***[8 marks]***

(c) These are mainly adverse and should include a full discussion of at least four of the following for *[8 marks]*:

- Excessive use of fertilisers - eutrophication of water bodies
- Excessive use of pesticides - disruption of food chains and local ecology
- Salinisation - typical in arid, sub-tropical areas where irrigation practices are poor
- Drainage - loss of valuable wetlands
- Increasing field size - loss of ecological diversity and wind erosion with loss of hedgerows

[8 marks]

6. Housing in Mexico City

(a) Broad patterns should be identified for each of the 4 housing types - only housing types should be discussed *[1 x 4 marks]*:

- Rich - west and south-west, close to middle classes and away from industrial zone
- Middle-class - widespread, but a distinct 'spine' exists along the main route southwards from the centre. Also some peripheral development to the north-west
- Poor - large developments on the periphery especially in the north and east
- Ciudades perdidas - dispersed over the central area

Locations need to be precise for full marks. ***[4 marks]***

(b) The main difference is the tendency for the rich and middle classes to be found closer to the centre in Mexico than in EMDC cities and for the poor to be peripheral *[2 marks]*. A similarity is the existence of poor housing close to the industrial/commercial zone *[1 mark]*.
Candidates may compare briefly with any of the urban models of Burgess, Hoyt, Mann and Ullman and Harris *[1 mark]* but this is not essential. Up to *[3 marks]* can be gained from a brief comparison with one or more examples. ***[6 marks]***

(c) The problems should be set in the overall context of a low level of national economic development. This prevents rapidly growing cities from adjusting to rapid growth *[2 marks]*. Specific problems should include most of the following for full marks and the discussion should be fully exemplified. Maximum *[6 marks]* for part (c) if no examples mentioned.

(i) Poor infrastructure - lack of roads, water supply, sewerage, power, and waste disposal
(ii) Inadequate social provision - housing, schools, hospitals, for young immigrants
(iii) Hazardous environments - zones of disamenity for squatter settlements, unsafe buildings, polluted atmosphere

It is expected that candidates will discuss growth of a city in an ELDC with similar problems to Mexico City. ***[10 marks]***