

## GEOGRAPHY

#### Overall grade boundaries **Higher level** Grade: 2 7 1 3 4 5 6 Mark range: 0 - 13 14 - 27 28 - 36 37 - 48 49 - 59 60 - 71 72 - 100 Standard level 2 3 7 Grade: 1 5 6 4 Mark range: 0 - 13 14 - 26 27 - 36 37 - 47 71 - 100 48 - 59 60 - 70

This session went smoothly and feedback from centres via G2 forms was very positive.

It was pleasing to see that many recommendations made in previous reports are now being followed by almost all centres. This familiarity with expectations suggests that candidates are being better prepared for the examinations, and becoming more careful in responding appropriately to particular command terms. In addition, more candidates are providing detailed case studies, maps and diagrams in their responses. Many examples quoted by candidates are intelligently used, and well developed with supporting details.

One important, overall recommendation is to advise candidates to respond to questions by starting with their strongest question, rather than always answering questions in the same order as the examination paper. This should help candidates to perform better because it was apparent from some scripts that some candidates had not performed as well as they might have done, partly because they had left insufficient time to complete a question that they seemed well prepared to answer.

Some candidates appear to have been advised to answer each question in reverse - i.e. by starting with part (iv), followed by part (iii) and so on. The early parts of most questions are deliberately designed to provide some clues and direction to candidates so that their responses to subsequent parts are more likely to be well focused and relevant. It is strongly recommended that the individual parts of each question are attempted in the same order as on the examination paper.

Despite these reservations, there were more good quality scripts this session than last year a very pleasing development!

The word limits for Internal Assessment continued to cause some concern for some centres. As noted below, it is not necessary for IA work to include a multitude of hypotheses. The mark

weightings for the different IA criteria are meant to be a guide to the likely length of the respective sections of IA reports.

### Higher level internal assessment

#### **Component grade boundaries**

Grade:	1	2	3	4	5	6	7
Mark range:	0 - 3	4 - 7	8 - 11	12 - 15	16 - 19	20 - 23	24 - 30

### The range and suitability of the work submitted

The range of topics, locations and investigative techniques made the moderation process very interesting. The overall improvement in the standard of fieldwork at HL is evident and high quality work is being done by centres in every continent. The majority of investigations followed regulations and were hypotheses based. Hypotheses are generally appropriate and well formulated so that they can be tested objectively using data collected in the field. Candidate should not be discouraged if the outcome of their research does not produce the expected results and their hypotheses were rejected. Provided they can suggest a viable explanation for the outcome, there is no reason to abandon the project.

The method of data collection is fundamental to the success of the investigation. Ideally, data should be of sufficient quality and quantity to allow for statistical analysis. Although secondary data derived from published sources can provide a useful backup, research should be based upon the collection of primary data in the field. The "field" need not necessarily be outside and when necessary, as in some cases the candidates can collect data from home. This is quite acceptable and introduces some individuality.

The word count regulation was rigorously applied and moderators stopped awarding marks where the 2,500 word limit was reached. Fortunately, there was only a small minority of candidates whose work exceeded the limit, usually by 500 to 1000 words, but in one case a candidate produced a report of 13,000 words. Occasionally, candidates understated the number of words on the front cover; this is dishonest and will be noticed by moderators. Where candidates did exceed the word limit the penalty involved criterion E and sometimes D. Teachers should also be aware that where such penalties are imposed on the work of one candidate, it can affect the marks of other candidates whose work is not included in the moderated sample.

Fortunately, the majority of schools observed this regulation and the resulting reports were concisely written and clearly focused. It should be emphasised that high marks can still be achieved where there are a reduced number of hypotheses and excessive background theory is eliminated. Fieldwork investigation and writing the report should enhance the learning process and not increase the workload.



## Candidate performance against each criterion

#### **Criterion A**

Ideally, candidates had one aim and one or two hypotheses. This approach resulted in greater depth of analysis. Where there were several main hypotheses or a number of sub-hypotheses, the purpose of the investigation became obscured and the amount of attention that could be given to each one was limited. Very often this resulted in superficial analysis as candidates attempted to keep within the word limit.

This section discriminated well with stronger candidates justifying their hypotheses in relation to theory and then explaining their chosen location. Weaker candidates stated the hypotheses, described the theory and survey location in some detail, but failed to link them. Sometimes these introductory sections were overloaded with irrelevant background, such as town histories, which added unnecessary text.

It is still common practice for candidates to produce three maps; one on the national scale with blue coastline and a dot for the survey site, one regional map and finally a close up of the specific area where the work was undertaken. In most cases, only the local map showing specific survey sites is required.

#### Criterion B

In some cases more time might have been spent increasing the sample size instead of using several types of data collection techniques. Most candidates used quantitative techniques to collect their data, but qualitative techniques were especially useful where subjective judgement was needed. Bi-polar analyses or quality indices proved to be effective in this respect.

It was pleasing to see the majority of candidates describing and justifying their sampling technique. Systematic sampling was clearly explained but few really understood the meaning or purpose of "random" sampling. Many thought this involved doing whatever they wanted or a haphazard approach to data collection. It appeared that only one school used random numbers tables to sample beach pebbles.

Some good opportunities for investigating change over time were missed. For example, monitoring daily or seasonal changes in urban spheres of influence and beach profiles might have been more challenging and more interesting for candidates.

Methodological weaknesses continue to plague some fieldwork reports. This ranged from questionnaires which include irrelevant questions (never analysed in the subsequent report) to misused statistical techniques on data sets that were too small to yield meaningful results. For example, results collected from only five sites along the course of a river are unlikely to be statistically conclusive.



#### Criterion C

Some candidates used a good range of illustrative techniques. One very good example was a series of acetate maps of CBD characteristics. These were then superimposed to determine its core and limits. Data presented as values on a map either by choropleth or proportional symbols, were easily interpreted and essentially geographic. Graphs grouped together on one page also made comparison easy. Unfortunately, successive pages of pie charts were common and ineffective as an illustrative tool.

Cartographic skills were generally weak. The best maps (whether hand-drawn or computergenerated) were truly outstanding, demonstrating an admirable grasp of cartographic principles and techniques. But, on the whole, drawing techniques were basic with pencil outlines and poor shading. Few candidates produced maps that contained information that was relevant only to the research. Unedited Internet maps were usually uninformative and should not be included unless they are personalized by using overlays or annotations. Imaginative techniques do not necessarily require high levels of IT skills and hand-drawn maps may be preferable.

Most candidates used statistical techniques and were able to comment briefly on the result, but few understood the reason for applying such tests. Spearman Rank correlation coefficient was commonly used to correlate data, although significance was mentioned by only a few. Mathematical errors were evident in the application of some of the statistical tests. There was, for example, inaccurate ranking of tied values in the calculation of Spearman Rank correlation coefficient, or inaccurate application of the formula for Simpson's Diversity Index.

It is not essential for data to be tested, but it should be processed in some way. For example, means, modes, range and indices of dispersion and concentration were used very effectively by some candidates.

#### **Criterion D**

This criterion proved to be the most discriminating, and some teachers awarded high marks where the data was described but not explained. High marks can only and were only achieved where the analysis reviewed each hypothesis using the data collected, made reference to the aims and theory and demonstrated depth of understanding. Few candidates achieved this. (In one case the analysis was labelled as the conclusion; an error which could result in a major loss of marks).

Teachers and candidates need to be more aware of the importance of this section and its relatively high mark weighting. Very often, too much attention and space (text) was devoted to other less weighty sections such as background theory and the description of data collection techniques.

#### Criterion E

The majority of candidates drew valid conclusions and reflected upon the suitability of their methods, but recommendations were sometimes missing or unrealistic. A few stronger candidates made specific recommendations regarding changes in timing, sample size and



technique. Where these ideas were carefully thought out and could be easily implemented, candidates deserved high marks, but this was rarely the case. On the whole, teachers overcredited this section of the report.

### Recommendations for the teaching of future candidates

Teachers should be encouraged to consider the following points.

- Select fieldwork investigations which are challenging and allow candidates to focus on depth rather than breadth in their discussion. This can be achieved by testing no more than two hypotheses.
- Include brief annotations on the report to indicate the marking rationale.
- Despatch each report in a folder; loose sheets are unacceptable.

Students should be encouraged to consider the following points.

- Organize the report under headings and, where appropriate, match these to their assessment criteria.
- Ensure that all maps are relevant and that one shows the survey sites.
- Use a range of presentation techniques that allow relationships to be shown.
- Match the amount of text for each criterion approximately to its mark weighting.
- Ensure that their report includes an accurate word count on the cover.

### Standard level internal assessment

#### Component grade boundaries

Grade:	1	2	3	4	5	6	7
Mark range:	0 - 3	4 - 6	7 - 11	12 - 15	16 - 19	20 - 23	24 - 30

## The range and suitability of the work submitted

There was a wide range of topics submitted for SL IA. Most centres followed the regulations and the overall quality of the investigations seems to be improving. It was encouraging to see some students showing great depth of understanding and presenting good, balanced discussions. As in previous sessions there were more fieldwork research reports than assignments and the former were the more successful in general terms than the latter. The most popular topics were the ones related to drainage basins, as well as population studies and settlements. Unfortunately there were also some unsuitable topics containing little geography and some were more based on subjects like social studies, history, economics



and anthropology. Examples of these were a research project based on a study of the red panda that was very weakly linked to the ecosystems component of the syllabus, a piece of work based on the influence of the ancient agricultural practices in the economy of Mesopotamia and the success of Ancient Egypt and a study on the impact of 9/11 in the discrimination of Muslims in the USA.

The word limit did not have a major impact in most schools, but there are still some candidates exceeding the limit and some of them lost all the marks for criterion E and even D.

There was also one case in which the school sent two pieces of work instead of one. This format is out of date and incorrect as it was revised for the May 05 session and onwards. Teachers must also keep up to date with the requirements for each session and as noted frequently, teachers should write comments on why and how they allocated marks. Some teachers are not adding these comments for each criterion.

## Candidate performance against each criterion

Referring to criterion A, centres have improved giving and explaining hypotheses but now they should focus on narrowing the hypotheses and reducing them in number as it is very difficult to achieve good work on more than one or two sound hypotheses. This also keeps the work within the word limit. When too many sub-hypotheses were presented the results tended to be superficial. There were also some cases in which students did not link the theory to the investigation successfully or devoted too much space to the theory which used up too much of the word count. In other cases the spatial component was a problem. Often there was no map, or just a poorly printed, downloaded one without referencing or interaction and which also often ignored the location of sample sites when it was crucial to the investigation.

As for criterion B, in fieldwork most methods were well described, but candidates still need to work on explaining why they used their particular sampling techniques and on justifying why they are doing something and linking it to the aim for criterion A. Some centres use good annotated photographs to explain the methods, nevertheless, it is necessary to note that tables used to hide important amounts of words are not acceptable. Dependence in the research assignment reports on secondary data led in some instances simply to downloading data from the Internet without any attempt to interpret the data or even to attribute the source or comment on its reliability.

For the presentation and processing of data, in criterion C, it is necessary to note that not enough maps are being used to represent spatial data. A few schools also tended to produce very limited and repetitive types of graphs (especially pie charts) with few statistics. Statistics were rarely included, and if they were then it was the most obvious, with Spearman Rank correlation coefficient and percentages being the most frequently used. Statistical test methods were also rarely applied and these should be used to enable detailed analysis and conclusions. It is also necessary to note that techniques of data presentation should include graphs and statistics as well as maps, to score highly on criterion C. Reading some projects was sometimes not easy when huge quantities of raw data were just added to the middle of the text as opposed to being placed in an appendix. In other cases, candidates put all their



data processing in the appendix and did not refer to any of it in their analysis. This is another common mistake that should be avoided.

With regard to criterion D, the higher achieving candidates were the ones who made clear reference to the data and the hypothesis in their analysis. Unfortunately there are still students who write very descriptive essays that do not follow the criteria. Some candidates failed to make use of the data collected, not even referring to the data within the analysis. In other cases, data that would have been subjected to a test method for a detailed analysis was left unutilized. Depth of analysis was determined to be generally poor; this was particularly the case if the investigations were too broad or if the rest of the report contained too many words. Very often, too much attention and space (text) was devoted to other less weighty sections such as background theory and the description of data collection techniques. It is necessary to stress that this section should contain the bulk of the text.

Conclusions on the whole were included in most reports, but in some cases tended to be simplistic. Evaluations were not always present especially the ones referring to the methods of data collection. Few candidates suggested possible improvements that could have been adopted and, when this was the case, they were mostly unrealistic.

## Recommendations for the teaching of future candidates

Teachers should be encouraged to:

- encourage students to focus on depth and limit the number of hypotheses
- include notes on the allocation of marks in the samples
- give further guidance to students to ensure clear, well labelled structure, with clear titles, a contents page, page numbering, chapter headings, and a good referencing strategy
- encourage students to place photographs, graphs, and maps appropriately within the text. All these should be numbered /labelled and referred to within the text.

Students should be encouraged to:

- organize the report under headings and, where appropriate, match these to their assessment criteria
- reduce the number of hypotheses being investigated
- improve mapping, whether hand-drawn or computer-generated and link location to theory and provide maps of sample sites
- use annotated maps and photographs in the sections relating to criterion A and B to help them reduce words in line with the word limit and the restrictions that apply to annotations



- place questionnaires within the appendix but the data presentation within the text
- use a range of presentation techniques that allow relationships to be shown
- where possible, apply statistical test methods so as to give room for a detailed analysis and conclusion
- match the amount of text for each criterion approximately to its mark weighting
- make every effort to utilise all data collected
- ensure that their report includes an **accurate** word count on the cover.

### Higher and standard level paper one

#### **Component grade boundaries**

Higher level							
Grade:	1	2	3	4	5	6	7
Mark range:	0 - 7	8 - 14	15 - 18	19 - 24	25 - 29	30 - 35	36 - 50
Standard level							
Grade:	1	2	3	4	5	6	7
Mark range:	0 - 7	8 - 14	15 - 18	19 - 24	25 - 29	30 - 35	36 - 50

### General comments

About 25% of centres had completed and returned the G2 feedback forms in time for the Grade Award meeting; that is, at HL 65 schools out of 241 and at SL 44 schools out of 235. The majority were satisfied with the papers.

Individual comments expressed pleasure at the fact that the paper "maintains rigorous standards, but still allows weaker students a chance of moderate success", and that "students could show what they know".

After reviewing scripts, the senior examining team felt that this paper was slightly more accessible to candidates than last May's paper. In light of this, grade boundaries were adjusted slightly upwards. Even after this adjustment, the average grade this session on Paper One was slightly higher than last year. It is apparent that the preparation of candidates continues to be generally sound, and that the examiner's reports from earlier sessions have been read and absorbed.



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## The areas of the programme and examination that appeared difficult for the candidates

No question proved to be universally difficult and, in terms of content, there appeared to be no serious areas of weakness. However, responses about whether richer countries reduce or increase hunger in poorer countries (Question 2(d)), about the reasons for contrasts in development between the core and periphery regions of a named country (question 3(c)) and the obstacles to sustainable developments in LEDCs (Question 3(d)) were often disappointing.

Time allocation and examination technique, despite some improvement, remain areas of concern. The failure to read the command terms carefully remains the most serious problem. For example, marks were missed by candidates who failed to compare (question 1(a)) or contrast (Question 3(a)), or described, rather than explained, the contrasts in development in core and periphery regions (Question 3(c)).

There were fewer overly long responses to preliminary parts of questions than in most previous sessions, but it is still a concern that many candidates do not use the mark allocation as effectively as they might as an approximate guide to the expected length of response.

Very few candidates appeared to have experienced undue time-pressure. Those who did had often written very convoluted and verbose responses to one or more parts of one of the questions they had attempted. It is important that candidates be encouraged to divide their time evenly between the two questions required for paper one.

## The areas of the programme and examination in which candidates appeared well prepared

As the overall performance in this paper indicates, candidates seem generally well prepared in all areas, even though the mean mark for question 3 was somewhat lower than the mean marks for questions 1 and 2. The conceptual knowledge required to make appropriate responses was often impressive, and demonstrated a clear understanding of the main issues.

Of particular (and pleasing) note was the increased willingness of candidates to present relevant diagrams and maps, the best of which were neatly drawn and effective. In weaker responses, some maps and diagrams served little purpose and contributed very little of value.

## The strengths and weaknesses of the candidates in the treatment of individual questions

#### **Question 1 - Population growth / structure / Malthus**

This was a popular question, attempted by about 75% of the candidates.

(a) Comparison of natural increase and increase from migration



This was generally well answered, though some candidates offered either no quantification in their comparison, or made errors reading the numbers from the graph. Almost all candidates recognized the main trends, and many made clear reference to the anomalies or fluctuations. Weaker responses tended to incorporate some explanation of the differences (not called for, given the command term "compare").

(b) Reasons for trend in natural increase

Responses were very mixed. A surprising number of candidates did not specifically refer to birth rates or fertility rates, and even fewer made any mention of death rates. However, most candidates recognized that the downward trend of natural increase could be explained by factors connected to the status of women, for example such aspects as their focus on careers, later age of marriage, and the expense of having children. Some candidates erroneously thought that the downward trend of natural increase meant that this MEDC was experiencing a natural decrease in population, where death rates exceed birth rates. Not all MEDCs have yet reached stage 5 of the demographic transition model! Several candidates also appeared convinced that the fertility rate had fallen in this MEDC since 1992 due to the improvement in medical conditions which meant that infant mortality had fallen and therefore there was no longer any need to have numerous children in order to ensure that some survived infancy. This line of argument is unrealistic and was not credited.

(c) Effects of migration on population structures

Many responses to this straightforward question were somewhat disappointing. Many responses examined migration in general with no clear focus on how it affected population structure. Population structure was not well understood by many candidates, whose interpretation tended to be very narrow and based solely on age and sex. Other candidates examined effects at the destination, but ignored effects at the point of origin. There was considerable discussion of different types of migration. Some types, such as forced migration, may affect total numbers, but generally have relatively little effect on population structure and were therefore not sound choices. The misuse of the term "working class" for "working age" was surprisingly common.

(d) Relevance of views of Malthus

There were some outstanding, well argued responses to this question, revealing an excellent grasp not only of Malthusian ideas, but also of alternative viewpoints. The best responses offered plenty of evidence, data and examples in support of the key statements and opinions presented and were a delight to read. Weaker responses tended to fall into three categories. In the very weakest, candidates appeared to have little idea at all of what Malthusian views are, and some completely misinterpreted the question. In the second category, responses contained lots of useful material but were very poorly structured and no clear argument emerged. These included cases where statements made late in the response appeared to contradict claims made previously in the same response. The third category included those who found a clear line of argument for their response, but focused on only one of the two main threads inherent in Malthusian ideas of population growth and food (resource) availability, failing to also consider the other one.



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#### Question 2 - food shortages / hunger

This was the most popular question, attempted by about 85% of candidates. The level of performance was similar to question one.

(a) Ranking of causes of food shortage

Almost every candidate managed this correctly. Where the candidate provided no indication that he/she recognized the tie for second and third places, only [1 mark] was awarded of the [2 marks] available.

(b) Two causes of hunger

While there were some very strong responses to this question, there were also many very vague and superficial attempts. Many candidates made incorrect claims about soil fertility being dependent on weather conditions and many incorporated the word "technology" into their response with no further clarification or exemplification. The term "technology" is so wide-ranging that its use in responses requires some clarification by the candidate as to what precisely is meant in the particular context of the question. A small number of candidates, having chosen weather problems, wrote about tsunamis and/or plagues, failing to establish any link between these and weather problems.

(c) Difference between chronic and periodic hunger

The essential (temporal) difference between these two categories of hunger was generally understood by most candidates, even if some found it difficult to express themselves clearly. A very wide range of examples was accepted, and most candidates were able to provide appropriate locations. Fewer responses than expected were fully developed.

(d) Actions of richer countries affecting hunger in poorer countries

Responses which focused on **either** reduction **or** increase or **both** reduction **and** increase were all accepted on equal terms. Weaker responses tended to include only a small number of distinct points, which were then repeated several times. Strong responses were often thoughtfully constructed and argued, displaying a considerable maturity of thought for this level. There were some relatively common misconceptions. A few candidates, apparently forgetting that the question was about effects in poorer countries, tried to incorporate inappropriate examples such as the aid to post-hurricane New Orleans into their responses. Many candidates included references to international organizations such as WHO, UN and UNICEF without ever establishing any grounds for them to be considered "richer countries". Some stronger responses included these or similar organizations, having first argued the case that the richer countries control their agendas and decisions. It was also common for candidates to cite the Green Revolution as an action of richer countries, without any explanation. Much of the landmark research behind the Green Revolution was actually carried out in poorer countries, not richer ones.



#### Question 3 – development variables / core-periphery / sustainable development

About 40% of candidates chose this question and the level of achievement was slightly lower than that of the other two questions.

(a) Contrasting the trends for two time periods

This was generally well answered, though many candidates failed to highlight the overall trends for the two different time periods sufficiently and relied instead on an item-by-item consideration of changes. Several candidates described the trends for each time period, but failed to make any direct comparison.

(b) Concept of development

Virtually all candidates scored well on this question, though some suggestions made for other characteristics of development were only thinly disguised variants of economic growth. The best responses referred to development indices such as the HDI and provided the criteria used in their compilation.

(c) Explanation of core-periphery differences within a country

Most responses to this question were mediocre in standard. Weak responses revealed no knowledge of the core-periphery model, or no specific knowledge (place names, regions) of any country where it might be applied. The majority of candidates provided a simplistic description of the core and periphery of their chosen country, sometimes with some clear attempt at describing the contrast between the two. Most of these descriptions focused on only one or two aspects of the differences, and did not have a good grasp of the entire range of possible valid points that could be made. Surprisingly few candidates attempted any genuine explanation of these contrasts, as demanded by the question. Many of the stronger responses not only explained, but also incorporated clear maps showing the spatial relationship between the core and periphery for their chosen country.

(d) Obstacles to sustainable development in LEDCs

Responses to this were disappointing. Very few candidates provided a clear definition of sustainable development. Some candidates appeared to equate sustainable development with "sustaining development", as in an economy continuing to grow, even if in an unsustainable fashion. Even when a good definition was offered, responses tended to focus on sustainable development policies, with examples of them, rather than on the obstacles to sustainable development, as required by the question. Responses that focused on the obstacles were usually limited to a very small number of different obstacles, and in most cases, an insufficient variety of obstacles was incorporated for the award of top marks.



## Recommendations and guidance for the teaching of future candidates

As already noted, the impression was gained that the candidates were well prepared for this examination. Knowledge of both facts and concepts was excellent in many centres and candidates frequently demonstrated an ability to apply this knowledge most effectively.

Some weaknesses still remain with examination technique. One particular concern (remarked upon in several previous reports) is the failure to pay sufficient attention to the command term/s and the mark allocation for each question.

Weaker candidates would benefit from further practice in using examples and case studies effectively, and in the skills involved in the interpretation of graphs, diagrams and maps.

Candidates should be encouraged to avoid bullet form in responses, especially those involving extended writing, since bullet points will not clearly demonstrate a sound structure to an argument or basis for an opinion, or enable clear comparisons and connections to be made between parts of a response.

Legibility of handwriting remains an issue. Several scripts this session were very, very difficult to read, and may have been slightly under-credited by examiners as a result.

## Higher and standard level paper two

Higher level							
Grade:	1	2	3	4	5	6	7
Mark range:	0 - 11	12 - 22	23 - 29	30 - 38	39 - 46	47 - 55	56 - 80
Standard level							
Grade:	1	2	3	4	5	6	7
Mark range:	0 - 5	6 - 11	12 - 14	15 - 18	19 - 23	24 - 27	28 - 40

#### Component grade boundaries

### General comments

The teachers' responses to this exam and examiners' reports on the candidates' performance were very favourable. They suggested that it was more accessible to a greater number of students, particularly those writing in English as a second language, than previous ones. Consequently, grade boundaries were raised slightly to reflect equivalent candidate achievement. Even with this upward shift, the percentage of high grades (6 and 7) was significantly greater than in previous sessions.



As in previous years, the essay questions proved to be far less popular than the structured questions (ratio 1: 5). In this exam, popularity and performance proved to be unrelated. The most popular questions were: 2(b), 4(b), 8(b) and 10(b), but the level of achievement was highest in questions 1(a), 2(a), 4(a) and 6(a). The least popular questions—7(a), 7(b), 5(a) and 9(a) had mixed results, including some excellent responses.

## The areas of the programme and examination that appeared difficult for the candidates

Interpretation of command terms continues to challenge candidates. Some fail to see the distinction between "describe" and "explain" and many find it difficult to present a balanced argument when confronted with the question "to what extent". Although knowledge of case studies has improved markedly, candidates still experienced difficulties in adapting their chosen case study to the requirements of the question. Other limitations included a reluctance to define terms or include well labelled diagrams, when not specifically required to do so by the question.

The majority of candidates were very well prepared for this exam, but a few were disadvantaged through lack of practice in exam techniques. Time management continues to be a problem. It is quite common for candidates to devote too much time to the first question to the detriment of their last question. In structured questions, poor marks very often resulted from a disregard for the mark weighting, with inadequate time and attention being given to the final extended-writing part. Candidates should be encouraged to write concisely at all times, and the assumption that more pages mean more marks is quite false. Poor handwriting is unacceptable and may result in candidates being under credited by examiners. Rubric errors were few, but it was surprising to find a number of candidates completing both the essay and structured question of the same option. When this did occur, only the better answer was credited.

## The levels of knowledge, understanding and skills demonstrated

Overall performance in this exam was very pleasing with some candidates achieving exceptionally high marks. Although performance normally improves during the course of the syllabus, the results this time exceeded expectations. Many responses showed a mature level of knowledge and understanding and also real insights into geographic issues. This is a testimony to the thorough preparation by teachers and the hard work of candidates.

There has been a steady improvement in the level of skills in this exam. These include competence in responding to stimulus material, analysing data and improved case study knowledge. The best candidates used good, detailed case study material very effectively and often from their own region/area. The weakest responses used none, or examples such as "in Africa", or "in America".



## The strengths and weaknesses of the candidates in the treatment of individual questions

(In most cases the performance of HL and SL candidates was similar; the comments below apply to both levels).

#### A1 Drainage Basins and their Management

#### (a)

The best responses cited a wide range of methods to control floods and assessed their effectiveness. Weaker responses failed to show any understanding of the physical circumstances leading to flooding and wasted time describing multipurpose schemes whose principal function was not that of flood control. The challenge in this essay was not the recall of factual knowledge, but the evaluation.

#### (b)

(i) The majority of candidates successfully calculated the width of the river but the depth proved more problematic and some could not cope with the negative values.

(ii) Most candidates recognized the positive relationships between depth and velocity and bedload size and velocity, but failed to develop their response.

(iii) About half the candidates were able to explain how the discharge of a river is calculated, although the units (cumecs) were sometimes missing.

(iv) The best responses were able to relate the variables of discharge, velocity and load in a methodical explanation from source to mouth. Candidates were able to describe some of the downstream changes, especially discharge, but too many centres appear to be still convinced that velocity slows with increasing distance from the source. Some were unable to discuss accurately other changes such as bed roughness, width/depth ratio, changes in bedload and suspended load and channel efficiency.

#### A2 Coasts and their Management

#### (a)

This unpopular question produced some remarkably good answers where candidates showed a sophisticated knowledge of changes in relative levels of land and sea. Diagrams were generally good and examples relevant and varied. Unfortunately, a few candidates failed to recognize the importance of long-term change and instead wrote all they knew about the short-term evolution of coastal features. SL candidates found this question even more challenging.

#### (b)

Most were able to describe the changes to the coast in part (i), but not all used figures to support their answer. In part (ii) the responses were often vague with little real grasp of why



International Baccalaureate® Baccalauréat International Bachillerato Internacional there was deposition in the bays and erosion of cliffs. Erosion on the headlands was normally explained in terms of their exposure to high energy waves and deposition on the beach to shelter and the convergence of low energy waves. Speculative answers citing rock type and management schemes (neither of which was visible on the map) were acceptable if fully justified.

(iii) Very few candidates had any understanding of the processes leading to swash aligned beaches and drift aligned beaches. Many answers were filled with descriptions of swash, backwash, construction, and destruction in the hope that one or more of these processes might qualify.

(iv) The coast of south-east England proved to be a popular choice. However it was rare to find an answer which set the case study in the context of the question and drew meaningful conclusions at the end.

#### A3 Arid Environments and their Management

#### (a)

This was an unpopular question, but those who attempted it wrote with confidence and produced relevant and detailed responses drawing on a range of varied and appropriate examples. The very best responses looked at both natural factors and human factors that affected stability both negatively and positively. Diagrams were surprisingly rare and often poorly drawn.

#### (b)

(i) A list of deserts was inadequate and a more specific description was expected. Only a few candidates attempted to categorize the locations in terms of continentality and latitude. Non-geographic expressions such as "to the left of" or "above" and "below" were frequently used, but unacceptable.

(ii) Only a minority of candidates competently handled this part of the question providing several explanations for the existence of their chosen desert. Knowledge of the effects of relief, continentality, high pressure cells and cold ocean currents was basic or missing in many cases.

(iii) Many candidates disregarded the restricted choice of either semi-arid or arid areas. Nevertheless, there were some impressive answers covering a wide range of water-related concerns in several key areas of the world. On the whole, these essays were interesting and well argued. Some candidates demonstrated a mature understanding of hydro-political issues such as water conflict in the Middle East. Those candidates who drew on their own fieldwork experiences in North Africa produced some convincing and interesting responses.



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#### A4 Lithospheric processes and Hazards

#### (a)

This unpopular question produced some excellent and comprehensive essays covering human, physical, positive and negative influences upon slope stability. There were relatively few weak responses. These were usually let down by poor case study knowledge and basic vocabulary. Trigger mechanisms such as earthquakes, heavy rainfall and traffic vibrations were seldom identified. Some out-dated and irrelevant examples were used.

#### (b)

Parts (i) and (ii) presented few problems, but part (iii) was regarded by some candidates as an opportunity to present a well rehearsed case study of a volcanic eruption with only passing reference to a number of volcanic hazards. The lahars of Pinatubo (1991) offered plenty of scope for discussion of the impacts upon the environment and people. The Vesuvius eruption of AD 79 was too ancient to be of much value.

(iv) Discussion depended heavily upon social and economic responses to the hazard. Scientific knowledge of monitoring techniques and hazard modification were generally deficient. Possible post-event responses were seldom mentioned.

#### A5 Ecosystems and Human Activity

#### (a)

Where candidates showed an understanding of the concepts of fragility and resilience, and were able to draw upon two or three examples of ecosystems/biomes the marks were impressive. However, the depth of the question was not appreciated by some candidates who produced limited and emotional arguments in favour of saving the rainforests.

#### (b)

(i) Defining a biome was straightforward for many candidates, although scale was seldom mentioned.

(ii) Reference to the diagram resulted in some basic descriptions of tree types with little appreciation of the interaction of moisture and warmth upon biomass development and structure. Some candidates reduced their marks by failing to refer to the diagram.

(iii) Knowledge of soils was very weak and focused on economic returns rather than the internal physical characteristics of structure, texture and nutrient status. Many candidates were unable to name the soils associated with their chosen biome.

(iv) Some candidates regarded this question as an opportunity to write all they knew about tropical rainforests. Knowledge of costs and benefits was disappointing in many cases except those who appeared to have rehearsed the topic.



#### A6 Climatic Hazards and Change

#### (a)

This was an unpopular question. Human activity affects existing microclimates and may also create them. Most responses focused on the creation of urban heat islands. The best responses covered a wide range of factors affecting urban temperatures. These included the thermal capacities of urban buildings and surfaces and the amount of anthropogenic heat input. The effect of friction upon average wind speeds was understood by many, but the localized canyon (venturi) effect was usually omitted. The effect of open spaces, rivers and lakes upon humidity and temperature were recognized in many of the best answers. Explanation for other human-induced microclimates, created by agriculture, forestry, road construction, reservoir building were mentioned by very few.

#### (b)

Part (i) presented few problems. In part (ii), candidates produced some imaginative reasons for the lack of coincidence between peak tornado frequency and peak mortality. Lack of preparedness was a common reason, but others included the occurrence of stronger tornadoes earlier in the season or their tendency to occur in late afternoon in spring time in poor daylight, which would hamper rescue teams.

Part (iii) was poorly done with little understanding of how tornadoes are formed. A few responses managed to explain some basic facts about contrasting air masses but few mentioned the role of differences in pressure and moisture content or super cells.

(iv) This was also poorly done. Many recognized that some of the human responses are similar but few could effectively identify contrasting human responses due to the different nature of the hazards. Hence, candidates dealt poorly with the "extent to which" command term.

#### **B7** Contemporary issues in geographical regions

(a)

Some responses were very strong using good examples from Mexico/New Mexico, and Texas as well as the boundaries imposed on Africa as a result of colonization, but there were many weak answers. These answers failed to accurately describe and locate any recognizable regions.

(b)

There were very few responses to this question.



#### **B8 Settlement**

#### (a)

Although few candidates attempted this question, some produced well structured explanations of central place theory supported by convincing examples demonstrating the concepts of size and spacing. There were one or two omissions, including a failure to acknowledge the importance of changing technology and transport both of which distorted the pattern of retailing. There was a wide disparity in marks for this essay relating to familiarity with the subject. At the top end, answers appeared to be well-rehearsed, but at the bottom end misinterpretation was common. Intra-urban land uses were often explained, though these were irrelevant.

#### (b)

(i) The majority of candidates gained full marks for describing the changes in two ethnic distributions over time.

(ii) Responses to this question were generally very poor with only a few candidates interpreting social segregation in its broadest sense. These answers covered ethnicity, wealth, gender and age and cited examples of each. Explanations for social segregation were often naïve, along the lines of the English idiom "birds of a feather flocking together".

(iii) For this part there was a wide disparity in marks; some inspired responses explained structural change using annotated population pyramids, while other candidates appeared to be baffled by the terms "social structure" and focused their discussion upon the growth of commuter villages in MEDCs. The breadth of the answer depended very much on the national area, but other types of rural settlement such as remote or retirement villages were seldom mentioned. Sweeping generalizations were often made about rural life in LEDCs. Typically, villages were considered as places of social abandonment and despair. The changes in age, gender and wealth resulting from rural out-migration were mentioned by some, but examples were often limited to "e.g. Africa".

#### **Productive Activities: Aspects of Change**

#### (a)

Only a few attempted this question, but the responses were relatively strong. The overlap between this question and that in Globalization (10 b) was successfully exploited by some candidates.

#### (b)

In part (i) most candidates were able to identify factors affecting a farmer's choice, but some did not understand what was meant by a behavioural factor and lost marks. Parts (ii) and (iii) were well done with some strong answers referring to government influence in the EU in (iii).



#### **B10 Globalization**

#### (a)

Although relatively unpopular, this essay produced some outstanding results. Many candidates showed a sound understanding of sustainability and drew upon relevant and recent case studies to support their answer. The best responses took an overview of the whole topic, reconciling the pressure of increasing tourist demand with the need for sustainability at the global and local scale. Achievability was not fully appreciated or was overlooked by some candidates.

#### (b)

(i) Most candidates identified that the number of McDonald's restaurants had grown dramatically since 1950. However, the use of logarithmic graph paper led to inconsistency in the interpretation from 1980. Answers referring to growth rate or the absolute increase in numbers and restaurants were deemed equally acceptable.

(ii) Many candidates simply described the pattern on the map without giving the geographic reasons for the distribution. Some credit was given for a distinction between MEDCs and LEDCs.

(iii) This question produced some strong responses identifying a wide variety of factors attracting TNCs in the less developed world. The most common reasons given were resource availability and cheap labour. Other incentives such as improved communications, liberalized trading and industrial deregulation were less commonly cited.

(iv) It appeared that many candidates had carefully learnt the advantages and disadvantages of transnational corporation influence in LEDCs, but high marks were only awarded to those candidates able to focus on the benefits, while addressing both sides of the argument.

#### C11 Topographic mapping

This was a popular question which clearly differentiated candidates: those who chose the question positively because they had been trained in map skills and those who chose it as a last resort.

(a)

Many candidates gave the correct grid reference.

(b)

Many lost marks here because either they mis-measured the distance of the tunnel, failed to give any unit of measurement, or the answer was quoted in metres. There were some astonishingly unrealistic answers, such as 885 km.



(C)

There were some poorly organized answers where candidates discussed both communications and settlements together. In some cases it appeared that they were unable to distinguish between the two. Although there was some good attempts to evaluate the photograph against the map, answers tended to be very vague with little reference to specific evidence from either the map or photo.

(d)

In this question most identified many different types of land use but tended to look at it piecemeal rather than describe broad patterns. Few responses used map references or place names to locate examples of particular land use types. The descriptions tended to be stronger than the explanations and this was a discriminating factor. The majority devoted insufficient time to this part of the question and disregarded its heavy weighting of 10 marks.

# Recommendations and guidance for the teaching of future candidates

- Learn and use terminology.
- Understand command terms such as describe, explain, evaluate and annotate.
- Revise recent case studies.
- Adapt case studies to the question.
- Practice answering questions that are clear and concise.
- Practice answering questions under timed conditions.
- Match the time allocation to the mark allocation of a question.

