

Geography A

Advanced GCE A2 7832

Advanced Subsidiary GCE AS 3832

Report on the Units

June 2008

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This report on the Examination provides information on the performance of candidates which it is hoped will be useful to teachers in their preparation of candidates for future examinations. It is intended to be constructive and informative and to promote better understanding of the syllabus content, of the operation of the scheme of assessment and of the application of assessment criteria.

Reports should be read in conjunction with the published question papers and mark schemes for the Examination.

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Chief Examiner's Comments

General Comments

The performance of candidates has again been approximately equivalent to previous sessions. There was considerable variation between Centres and within Centres. This summer yet again the contrast between Centres was most marked in the responses to the A2 level papers. The top quartile of candidates produced work of an impressive quality showing a very encouraging level of knowledge, understanding and application with some excellent and detailed examples or case studies. Some candidates lacked the necessary case study material to make answers fully effective. It is clear that some Centres did heed the advice given at the INSET in the autumn term as, for example, there were far fewer errors made in the way coursework was arranged.

AS

Assessment is largely by short structured questions. Performance did vary across the components. Responses to 2680 (Physical Environment) were relatively weaker than 2681 (Human Environment). By far the weakest element was the written section of 2682 (Geographical Investigation) although this was lifted by the report component in which a high percentage achieved at the highest grade.

A2

Assessment is largely by extended writing which allows effective differentiation. Overall performance was similar to last summer, being stronger on the synoptic paper, 2684, and weakest on the Personal Investigative Study, 2685. Units 2685 and 2686 (Investigative Skills) performed very similarly although the latter did noticeably better at grade A.

As A2 is assessed via options it is possible for candidates to experience a limited range of geography. Few centres study applied climatology and service activities in 2683 and the geography of the EU and managing rural environments remain unpopular in 2684 although this summer saw a growth in the popularity of both of these topics. This selectivity does re-emphasise the importance of the synoptic paper which draws together the strands of the whole two year A level course.

Overall

There have been very few communications from Centres expressing concerns about aspects of the unit examinations this session and, where necessary, issues were easily addressed by incorporating changes to the mark schemes at standardisation. These schemes have to be very flexible as candidates have very inventive minds and read into questions some quite original, and often valid, interpretations.

There are some common themes throughout all the components:

- candidates must carefully read and answer the question set rather than produce prepared answers that lack relevancy. This was a particular problem in both 2681 and 2684;
- candidates need to understand and use effectively geographical definitions and technical terms. This is a particular weakness in 2680;
- in short section answers in 2680 and 2681, candidates would be well advised to develop a few points in depth rather than many superficial ones;
- often the level of candidate's response is held back by the poor quality of English. This is most obvious in short section questions at AS;
- more candidates should emphasise the spatial context of their work and lay stress on location. Some need to refer to far more examples or case studies.

Report on the Units taken in June 2008

Coursework at all levels still suffered some common limitations:

- inappropriate titles that were too challenging or too complex to research within the word limit or candidate's ability;
- too many candidates produce over-length work often with excessive appendices or lengthy annotations despite the clear guidance given and the detailed exemplification at the coursework INSET meetings;
- excessive use of repetitive diagrams representing the same data;
- including **all** the questionnaires used within the appendices;
- candidates didn't always understand why they were using particular statistical tests or the implications of the results they achieved. Some still do it for the sake of doing a statistical test, which may add little to the investigation;
- Centres should ensure that candidates actually experience fieldwork conditions and do their own research in the field so they can comment from their own unique experience in answers;
- Centres should ensure candidates do not use plastic wallets and greater care still needs to be taken in filling in the cover sheets.

It is not always evident that candidates show progress from AS to A2 in their coursework and geographical skills. Indeed some of the shorter versions in 2682 are more effective than those in 2685 which can lack tightness of focus.

2680 The Physical Environment

General Comments

Candidate performance on this Unit was much in line with that of recent Summer cohorts, although the mean mark was a little higher. All four questions provided opportunities for candidates to demonstrate their knowledge and understanding of the specification topics. As ever, there was a wide range in the quality of the answers seen by the examining team.

Candidates could usefully be reminded that:

- they should ensure that they write clearly and legibly
- they should draw any diagrams boldly
- if a supplementary answer sheet is used it should be securely tied to the script. Also candidates would be well advised to indicate that supplementary sheets have been used via a note at the end of their initial answer.

Virtually all candidates were able to attempt all parts of each question and it was rare to see parts not attempted. Legibility was usually good and most work was able to be read easily by the team.

As usual, Question 1 tended to produce the best mark for the majority of the candidates. Question 4 also scored well.

Some common weaknesses continue to occur and candidates should be encouraged to:

- learn definitions of key terms;
- read the question carefully, recognising the specific demands of the command words used;
- use good quality English and accurate, appropriate geographical terminology;
- exemplify the explanatory statements they make to ensure that cause-effect links are fully developed;
- support their answer with evidence/data from located examples if required.

Comments on Individual Questions

Question 1

- (a) (i) Most candidates were able to offer at least a partial definition of this very familiar term. Some were confused, however, and suggested that the term referred to water leaving the channel during flooding. Others focussed on the water in the channel itself. The mark scheme offers a clear, succinct definition.
- (ii) Much good description was seen here with many using appropriate terminology such as 'positive relationship' and 'anomaly'. Rather fewer mentioned the strength of the relationship. Quite a large proportion of candidates did not attempt an explanation, perhaps reflecting poor technique in reading the question. Those that did provide some reasoning tended to get no further than suggesting that bigger basins have more water. The best responses not only considered the inputs but also the transfer of water arriving in the basin to the channel.
- (iii) A wide range of possible reasons was offered, often relating to human activity. Some insecurity was seen in answers dealing with rock or soil type with much confusion between the terms infiltration and percolation. Many answers based on vegetation did not fully develop their response and little reference was made to where water

goes once it has been intercepted. A similar issue arose with some answers relating to urban areas in the basin.

- (b) A lot of good answers were seen to this part of the question and a very wide range of examples was used. The best responses provided full development of the role of human activity by linking this explicitly to the amount of water reaching the channel, the speed at which it flows or the time taken for it to get there. This contrasts with those middle level answers that tended to make very generalised links to the effects of human activity. Evidence in the form of named locations in the basin, discharge data and dates of activity were all very useful.

The extract below is from a L3 answer that provided clear explanation and good links to the discharge:

"The urbanisation that has occurred in the basin since the 1970s has led to an increased coverage of the surface with impermeable concrete and tarmac surfaces. When it rains, water is not able to infiltrate and so surface run-off carries it quickly into the river causing a rapid rise in discharge levels, especially after storms such as the one in July 2007."

Question 2

- (a) (i) Whilst most candidates were able to describe a change in vegetation with distance, few were able to identify general trends or patterns of change. Data was frequently used as evidence. The number of species was usually the focus, although references to the dominance of species were also seen. Credit was given to inferences about the vegetation made from the stimulus resource, such as vegetation height, even though no data was provided for this.
- (i) Having been asked to describe change with distance in the previous part of the question, some mistakenly did the same for pH rather than just focusing on the two sites specified. There was some confusion as to whether high pH values indicated acidity or alkalinity. Many mentioned salt spray, but few commented on the calcium input from shells. Inland acidity was often well explained in terms of vegetation decay and the release of organic acids, although many missed the significance of the pine trees in this process at Site 8.
- (iii) This question was well answered. Many candidates made appropriate references to the dominance of trees out-competing other species for light, nutrients, space and water. Others made valid comments about the acidity restricting the range of species able to flourish here.
- (b) (i) This term was not well defined. Many tried to apply it to single species rather than the plant community as a whole. Others were let down by weak language. Many suggested that the plant community was in equilibrium with the environment as a whole, rather than the climate specifically.
- (ii) This question produced a huge number of moderate quality responses as candidates failed to address the key points in the question of nutrient flows and stores. One of the main causes of this seemed to be the rote learning of textbook examples, such as Highgate Wood, that were not directly applied to the specific question demands. The extract below, from a Level 2 answer, was very typical of this problem:
"Coppicing and pollarding of Hornbeam took place until the 19th century and was used as fuel. Oak was also cut and used for timber and tanning. The coppiced areas were fenced off to stop cattle from grazing on the shoots. In 1885 the woodland was taken over by the Corporation of London. They cleared undergrowth and so this reduced biomass. Leaves were burnt which meant reduced amounts of litter."

Question 3

- (a) (i) Many candidates described the general trend correctly, although some reversed the pattern. Not all, however, used data as evidence or noted the uneven rate of change.

- (ii) A very large % of candidates wrote at some length about reflection by snow and ice surfaces. This explains why incoming radiation is not absorbed, but it does not explain why there is less arriving near the poles. The key is the angle of incidence, which many did mention, not the total distance travelled by the sun's rays. Some good development was seen in answers commenting on the scattering and absorption that takes place in the atmosphere.
 - (iii) Many candidates were able to offer ocean currents as a way and this was usually developed with reference to examples such as the Gulf Stream. Those who tried to use the general circulation had mixed success with many getting stuck at the point where warm air rises.
- (b) Many correct answers were seen although some did not specify long-wave or terrestrial radiation, which was a specific requirement needed to meet the question wording.
- (c) This question was quite poorly answered with many candidates not having the required focus on the exact wording of the instruction. The key was to address the transfer from the surface to the atmosphere. Many dealt almost exclusively with the trapping of heat by pollution and cloud layers in the atmosphere, some way away from the surface transfer. The best answers had a better appreciation of the scale involved and considered glass or plastic cloches, for example. References to the albedo of urban surfaces had the potential to be relevant, but many did not develop their answer beyond the fact that more heat is absorbed by dark surfaces such as tarmac and brick. They really needed to go further and talk about the release of this heat as terrestrial radiation, especially at night. In the extract below, from a Level 1 answer, the candidate has completely the wrong scale, lacks accuracy and does not provide process understanding:
"Global warming is due to increased amounts of greenhouses gases being put into the air by pollution and car fumes. This stops heat from the ground escaping into space as it gets trapped by the greenhouse gasses like ozone. This makes temperatures go up and so it gets hotter as heat can't leave the ground. This is melting glaciers."

Question 4

- (a) (i) The majority of candidates were able to identify at least one appropriate piece of evidence. Some offered ideas that were not able to be confirmed by the photograph.
- (ii) Most answers showed at least some appreciation of the factors influencing mass movement. The role of the river was the most commonly mentioned, although the lack of vegetation was also commonly used. Disappointingly few answers applied conceptual ideas relating to slope instability such as shear strength and shear stress.
- (ii) This proved to be very accessible to candidates as many were able to address the factors they had identified in part (a)(i). This resulted in lots of references to tree planting, although the benefit of this in terms of roots binding surface material were not always explicitly explained. Some showed good understanding of the part that drainage systems can play. Again, few showed conceptual awareness such as the equilibrium being restored.
- (b) (i) The quality of responses here was surprisingly variable with a significant proportion suggesting that the plates were diverging. Explanation was sometimes lacking or weak. Few explained how the convection currents actually move the plates, although they were able to access full marks without this.
- (ii) Many scored full marks on this part of the question, although fold mountains were frequently suggested for feature Y.
- (iii) This part discriminated well. Many were unable to develop their answer beyond some generic references to rising magma from the mantle. The best answers gave significant detail about the processes in the subduction zone, as well as why the magma rises and how it escapes onto the surface, as in the answer below which gained full marks:

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"The Pacific Plate is subducting beneath the Fiji Plate because it is composed of higher density crustal material and so sits lower in the asthenosphere. The heat and pressure in the subduction zone melts the leading edge of the plate producing additional magma. This is compressed by the convergence of the plates and is forced upwards, reaching the sea bed through fractures and faults in the oceanic crust. This happens at various places along the plate margin and over time the erupting lava builds up from submarine volcanoes to a line of volcanic islands."

2681 The Human Environment

General Comments

By and large, candidates made good use of the resources in the data-response part of this examination. These included: a dot map of the Australian population distribution; a bar graph showing demographic changes in Cantal, France; and an OS 1:25 000 extract of part of Birmingham's inner city. However, where factual recall and application of knowledge and understanding was required, especially in the two extended questions, overall performance was less convincing.

As on many previous occasions, this paper produced a very wide mark range and, as reported before, there were some outstanding scripts at the upper end of this range. It is clear that some candidates have been very well prepared, as might be expected now after eight years and 16 sessions of examining this unit.

The comments below are designed to reinforce the many instances of good practice and to identify areas of weakness which may be of value to those candidates sitting 2681 for the last time either in January or June 2009.

Comments on Individual Questions

Question 1. Population

This assessed understanding of factors which account for distribution of population and explanation of population change through time in terms of national population policies. The data source was a dot map showing the distribution of population in Australia, 2005.

- (a) This part examined candidates' ability to describe population distribution at the national scale with reference to the dot map. Many candidates used this map well, most responses achieving a mark in Level 2. The requirements of the Mark Scheme were: a summative comment such as the peripheral distribution; clear reference to areas of both high and low densities; and recognition of at least one specific named locality using map evidence. A number of candidates surpassed this with very detailed reference to the map plus recognition of anomalous features.
- (b) Candidates were asked for explanation of the physical and economic factors which account for population distribution.
 - (i) Many candidates achieved Level 2 by discussing the required two factors and often their answers were strengthened by appropriate exemplification. The most common factors cited were water supply, relief and temperature. The better responses included accounts of the influence of these factors on farming types, farming practices, communications and construction of the built environment plus the relative ability of an area to support higher or lower densities of population. Responses placed in Level 1 tended to offer little more than the naming of one or two factors; higher marks would have been achieved if explanations demonstrated explicitly a clear link between the influence of the chosen factor and population distribution. The question did not require reference to Australia; some candidates treated it as such, producing simplistic answers relating to coast and desert.
 - (ii) Answers were much less secure; many candidates were unable to identify clearly what is meant by an economic factor and few were able to explain the influence

of a correctly chosen factor on population distribution. Again, some candidates produced limited responses in attempting to relate their answer to Australia. The best responses clearly stated two generic factors, demonstrating their influence on population distribution and providing reference to diverse case material as appropriate. Employment opportunities, the effects of government investment, accessibility and transport costs were the most frequently discussed factors.

- (c) This examined national population policies. Candidates were required to write a more extended response based on knowledge and understanding of two contrasting policies. The overwhelming choice was the anti-natal policy of China. The pro-natal policies of Sweden, France and Italy also featured in many answers. There were a number of creditworthy responses based on Singapore and Mauritius. The best answers were well informed, providing detailed knowledge of policy implementation plus concise discussion of the need for these measures. There were, however, many responses which fell short of Level 3 either because factual knowledge was limited or imprecise; the need for the policies was ignored or barely understood; or the second policy was not included.

Question 2. Rural Settlement

This examined the causes of population change in rural areas in MEDCs and the impact of this change on service provision.

- (a) This was based on the demographic changes in the Cantal *department* of southern France between 1962 and 2004. The map of France which located Cantal and the bar graph showing changes in net migration and natural increase / decrease were used well by many candidates. There was much reference to the Massif Central, distance from major urban centres and the shift from natural increase to natural decrease in the late 70s / early 80s. The concept of net migration was less well understood.
- (i) Most candidates treated natural increase / decrease and net migration as two separate trends. Clear description of each enabled them to achieve full marks. Many responses concentrated on the declining rate of natural increase before 1975 followed by a period of natural decrease; there was much sensible use of appropriate dates and figures in this part of the response. Fewer candidates were able to recognise the trends in net migration; a common error was in stating that net migration was increasing. The best answers recognised that, overall, it was net migration loss that was decreasing between 1962 and 1990; the 1990s was an exception to this trend; and, since 1999, there was a period of net migration gain.
- (ii) This part examined understanding of possible conditions pertaining in remote rural regions which cause population loss as a result of migration. Most candidates were able to identify two 'push factors' and many made good use of the information available on the map to reinforce their answer. Map data specific to Cantal was not an essential prerequisite for full marks; there were many adequate responses which discussed generic factors and many which referred to exemplar material from a range of other remote rural regions. Limited employment opportunities in an upland region, poor accessibility, lack of access to services and mechanisation in agriculture were the most frequently stated reasons. The best responses were very detailed and fully explicit in their understanding of the link between the chosen factor and why it led to out-migration. A number of candidates, however, did not develop their answers and in many instances offered little more than bald statement of two factors. Some account of the reasons for limited opportunities to find work or why transport links and other services are difficult to provide in remote rural regions would, in many instances, have lifted a response into Level 2.

- (iii) Candidates were required to show understanding of the decline in natural increase and / or its change to natural decrease in Cantal between 1962 and 2004. There were various attempts relating to contraception, government policy, later age of starting a family and emancipation of women. It was, nevertheless, the net migration data in Figure 3 which prompted many candidates to state the correct answer: i.e. loss of the younger reproductive age groups as a result of age-selective rural depopulation, leading to reduction in the birth rate and the increase in the death rate as a result of ageing population. Some candidates also referred correctly to possible growth in retirement migration and its consequent demographic effects within Cantal.
- (b) This was the second extended question on the paper. It required understanding of the impact of population change on service provision in rural settlements both close to and remote from a large urban area. The chosen settlements did not need to be within the same rural hinterland but some of the most effective responses did in fact consider the differing circumstances of villages within the same rural area, notably in the Gower peninsula, in south Oxfordshire, west Suffolk and north Norfolk. For example, detailed responses awarded in Level 3 included, amongst others, the contrasts between Bishopston and Rhossilli in the hinterland of Swansea, Chalgrove and Stoke Row relative to Oxford and Thurston and Norton Little Green with differing accessibility to larger centres along the A14 in Suffolk.

Invariably the settlement nearer to the urban centre had gained in population but lost services and the settlement at greater distance had lost both population and services. The stronger responses discussed not only changes in total population and total number of services but also the changes in population structure and changes in types of services. Often the more convincing responses made frequent use of appropriate terms such as threshold population, higher / lower order services and changes in centrality within the rural settlement hierarchy.

Some responses were limited since there was reference to settlements which are clearly not rural. A surprising number of candidates, even though they demonstrated sound knowledge of two rural settlements, did not identify them as being 'close to' or 'remote from' the urban area. Furthermore, it was the application of knowledge and understanding to the precise requirements of this question which was the limiting factor for many candidates rather than knowledge of rural settlements per se. There was a number of candidates who simply reiterated a rehearsed answer to another question, unable to adapt it to this specific question.

Question 3. Urban Settlement

This examined: characteristics of the inner city, including land use; minority ethnic populations; contrasts in urban land use patterns between MEDCs and LEDCs; and the relationship between stage in family life cycle and residential patterns in MEDC urban areas. The OS 1:25 000 map extract of Birmingham's inner city was of value to candidates in answering all parts of Q3.

- (a) (i) This part required a description of the contrasts in land use between two different areas of the inner city of Birmingham, identified as area A and area B on the map extract. The emphasis on 'contrast' was a clear requirement of the question yet many candidates simply described or even listed land uses in the two areas separately. The best answers, clearly placed in Level 2, selected categories of land use for explicit contrast; the most obvious of these being communications, residential and industrial as identified in the Mark Scheme. For full marks the response needed the support of specific map evidence; many candidates were

proficient in their use of grid references and place names or other named features of the two areas.

- (ii) Explanation of the lack of open space in the inner city was required. The characteristics of this area were exemplified by the OS map extract and candidates had already been directed to the main features in the previous question. Some candidates found this a difficulty and could offer little more than further description of the map, whereas others demonstrated very clear understanding. In fact the better answers were of high quality including concise accounts of the demand for this land (either past or present) and the concept of bid-rent. A number of candidates placed their explanation in the context of the past, including knowledge and understanding of industrial development, previously limited urban transport systems, the building of industrial terraces in close proximity to 19th century factories and the inadequacy of planning for open space. Some candidates linked their answers to the development of this as a zone or sector as recognised in the various urban models.
 - (iii) This part required candidates to demonstrate understanding of the concentrations of ethnic minority populations in the inner city. The two most frequently offered reasons were affordable housing and proximity to a range of lower skilled job opportunities in the inner city or CBD. Some responses did not refer to ethnic minorities clearly enough; the comments made could have applied to other sectors of the population. Often there was no clear reference to the lower economic status of many minority ethnic populations. Moreover, points relating to culture, religion and discrimination were valid but in many instances were not specifically related to concentration in inner city areas such as Nechells ward. The best responses not only made these points very clearly and linked them to ethnic minorities and inner city areas but they also applied relevant supporting evidence from the OS map extract which further demonstrated convincing understanding of the reasons.
- (b) This required the statement of one difference in the pattern of urban land use between MEDCs and LEDCs. The overwhelming correct response given was in the location of poorer quality housing i.e. the tendency for this to be peripheral in LEDCs and a predominantly inner city feature in MEDCs.
 - (c) Candidates' understanding of the link between stage in the family life cycle and residential location within urban areas in MEDCs was examined here. Most candidates demonstrated knowledge of two stages in the Burtenshaw model, although they found it more demanding to associate the chosen stages with a specific intra-urban locality. A number of attempted explanations of this link between stage and location tended to be imprecise except, not surprisingly, for the better candidates. The most frequently cited stage was that of the pre-child, young couple or single person. The tendency for this group to locate in the inner city was identified but not always fully explained in terms of type of housing requirement related to family size, income and proximity to work. The second stage most often referred to was that of child rearing / child launching but again vague references to location in 'the suburbs' were insubstantially explained.

In summary, there were some very high quality scripts in which all three sections (population, rural settlements and urban settlements) were answered well; these candidates were adept in their examination technique / style of writing for both the shorter and the more extended types of response. The candidates who fell short of this high standard would have benefited from more specific application of their knowledge and understanding in answering the 10 mark sections; and they would have gained marks more consistently throughout the paper if explanations in the 6 mark sections were more detailed. Most of the best answers were concise, responses being confined to the space provided, without use of extra paper.

2682/01 Geographical Investigation (Written Paper)

General Comments

The questions had a similar accessibility overall to June 2007: candidates accessed the full range of marks but, in this session, credit was more concentrated in the middle of the mark range with fewer achieving Level 3 and fewer staying in Level 1. Overall, candidates found the level of difficulty for this paper harder than January 2008 and easier than June 2007. Many candidates showed a good understanding of the outcomes of their own investigations. As in the previous sessions Geographical theory and skills were well understood by many candidates, demonstrating the benefits of studying techniques beyond those used directly in the personal investigation.

Candidates should be reminded to **read the question carefully** as credit was lost easily: in Question 1 for not referring to their own study; in Questions 2 (a) and 3 for not referring to the resources; in Question 2 (a) for not saying how to take account of the risk; in Question 3 (a) for referring to house age as well as degradation; and in Question 3 (b) for describing how to carry out the technique rather than justify the choice.

Throughout the paper the use of good geographical terminology was a key discriminator. Candidates are also reminded that the written text should be easy to read, not as bullet points and that the correct spelling should be used for key geographical terms.

Nearly all candidates had time to attempt all parts of the paper but there were a few rubric errors: in Question 1 (a) some referred to more than two types of data [multiple examples of primary and secondary data were not penalised] whilst very few suggested more than two sampling methods in Question 2 (b).

Comments on Individual Questions

Nearly all candidates clearly understood the requirements of Questions 1 (b), 2 and 3 (a). Question 1 (a) proved more challenging than in previous sessions. All questions discriminated between candidates well.

Candidates were particularly able to apply their experiences of the Personal Investigation in answering Question 1. Although not required to do so, some also referred to their Personal Investigation in order to answer Question 2 (b). Candidates were more able to deal with Question 3 than in previous sessions which was not based on the Personal Investigation, but required application of their knowledge of analytical techniques. As is typical of this type of examination, candidates performed well at particular questions, thereby leading to fewer very good and very poor marks – although unevenness throughout the paper was less prevalent than in previous sessions due to improved performance in Questions 3 (b), in which few chose an inappropriate technique for analysing the given data.

Question 1

- (a) Responses were good overall. The full range of marks was covered, with most achieving at least the middle of Level 2 and quite a few entering Level 3; few remained in Level 1. There was good reference to the candidate's own investigation. Higher quality answers considered the extent of usefulness and reasons for limitations in the data.

Many made good use of their own investigation throughout the answer. The term “types of data” was typically interpreted in one of two ways: firstly, individual variables such as water depth, housing type; secondly, by referring to primary and secondary data together with relevant examples of each – this often included photographs and maps. The most able candidates devoted approximately equal parts of the answer to the two types of data; usefulness was discussed in terms of why the data collection method made the data useful, e.g. repeat sampling; how the data could be used for analysis; and addressing the hypotheses. The best answers usually discussed the reasons for limitations of their data. These candidates were more likely to consider the element of “to what extent” that is implied in “usefulness.” Middle ability candidates produced more unbalanced answers and they were more likely to write bland statements and to suggest at least two types of data. They also deviated into a discussion of how the data was collected or how to make the data more useful. Weaker candidates gave even less detailed answers or did not understand the word “data,” e.g. they referred to graphical and statistical techniques.

- (b)** Responses were good overall. The full range of marks was covered, with most achieving at least the middle of Level 2 and many entering Level 3; few remained in Level 1. The best responses considered the reasons for the findings relating or not relating to an appropriate theory, whilst less competent responses confused prediction/hypotheses with theory and gave simple “findings fitted the theory” responses.

Many made good use of their own investigation throughout the answer. The most able candidates approached the question by describing (briefly) the theory and then moving on to suggest the extent to which the findings related to the theory, with some discussion of the reasons for these outcomes, e.g. by identifying anomalies such as human interference in succession; poor or good sampling and data collection techniques. Thus, even if the theory was met, such Candidates were able to gain credit by giving the reasons for this success. Middle ability candidates were less likely to give reasons for the outcomes and the answer was less coherent, often confusing the terms “hypothesis and predicted outcomes” with “geographical theory” – the former sometimes being used to imply theory (not necessarily correctly). Such candidates were also unable to give the name of the appropriate theory, such as core-frame, Burgess, Butler, psammosere succession. The weakest candidates tended to say that the findings fitted theory without any further discussion.

Question 2

- (a)** Responses were very good overall. The full range of marks was covered, with most achieving at least the middle of Level 2 and many entering Level 3; very few remained in Level 1. The best responses clearly stated a range of risks and specific measures to overcome the hazards they posed. Weaker responses were less balanced in terms of the risks and measures; others offered very generic “must be careful” responses to poorly stated risks “traffic.”

Most interpreted “risk” as being physical risks associated with the chosen resource. However, some candidates interpreted “risk” as factors that may have impeded the successful collection of the data as a result of the sampling and data collection methodology. The most commonly referred to city risks were being run over by the traffic and the scaffolding, whereas the depth and speed of the river and the slippery banks were most commonly cited in the river resource. Higher ability candidates presented a logical answer in which each risk (or group of associated risks) was followed by specific ways of taking account of the risk(s). These candidates made the nature of the risk (“being run over by the traffic,” “drowning in fast, deep water”) very clear rather than implied (“traffic,” “deep water”). Middle and lower ability candidates made less direct

reference to the resource. Some did not specify the risk, whilst others did not say how to overcome the risk. Such candidates gave generic responses such as needing to be careful. Some did not understand the implications of the chosen method of avoiding the risk, e.g. by collecting traffic data during the off-peak periods, data would not be representative of traffic conditions; similarly collecting river data when water levels are low does not make the data any more or less representative – it simply records different flow conditions. Many confused accuracy with representativeness. Some methods of overcoming the risk were unrealistic, e.g. wearing a hard hat at all times in the city centre. Others devoted a disproportionate amount of the answer to describing risk assessment procedures without linking them to ways of addressing specific risks. Weaker candidates gave generic answers that were not resource specific, whilst others referred to both figures. Others suggested risks that were unrealistic in the context of the resource, e.g. flooding in the city, tidal surges at the river. Methods of overcoming the risk were sometimes impossible, e.g. collecting river data from the bridge or lowering someone in from the bridge.

- (b)** Responses were very good overall. The full range of marks was covered, with most achieving at least the middle of Level 2 and some entering Level 3; few remained in Level 1. Overall knowledge of sampling techniques was better than in previous sessions – however confusion remains between pragmatic and random sampling, and between systematic and stratified sampling. Some did not understand the term “sampling method.” Weaker advantages/disadvantages were typically applicable for at least two methods. There was little distinction between methodological and operator bias. Many confused accuracy with representativeness.

Most candidates understood the term “sampling method” – referring to two of stratified, systematic, random and pragmatic. Few specified point, line/transect or area sampling. Higher ability candidates suggested advantages and disadvantages in terms of how the method is applied, e.g. stratified sampling along a sand dune transect enables the collection of data for substantial changes in physical characteristics. Middle ability candidates did not specify whether bias was in terms of methodological or operator bias – indeed this was seldom noted higher ability candidates. Weaker candidates only discussed one type of sampling or gave highly generic responses that would be applicable to at least two sampling methods, e.g. “it is easy to carry out,” “it takes a long time to carry out,” “it is not representative,” “it covers a large area.” Many of these statements would have been justifiable provided an explanation was given for the suggestion, e.g. random takes a long time to plan and carry out as random numbers need to be generated and the locations found in the field. Many described in detail how to collect the data rather than its advantages and disadvantages. However, many forgot that representativeness may simply be a function of sample size rather than the sampling method used. Such candidates often confused pragmatic and random sampling; whilst others confused systematic and stratified sampling. Many confused accuracy with representativeness. The weakest candidates did not understand the term “sampling method,” e.g. suggesting selective sampling, questionnaires or soil samples. A few candidates did not attempt this question, but this was not a Centre-wide characteristic.

Question 3

- (a)** Responses were moderately good overall. The full range of marks was covered, with most entering Level 2, but very few entering Level 3; quite a few remained in Level 1. A surprisingly large number of candidates did not address the question as they introduced the mean building age into the answer, whilst many others did not understand the need to group the data in order to create pie charts. Most answers included bland statements regarding advantages of pie charts.

Higher ability candidates understood that the data would need to be grouped in order to prepare pie charts – a few noted the difficulty of choosing suitable group sizes. More noted that the grouping of data gave a good summary. These candidates referred specifically to the resource. Many middle and lower ability candidates based their answer on an inappropriate method of manipulating the data, by suggesting that each piece of data would form a segment on a pie chart – some even suggested that all thirty items would be placed individually on one chart. Answers were somewhat generic. A surprisingly large proportion of middle ability candidates did not address the question as they introduced the mean building age into the answer, e.g. stating that pie charts were not suitable as they did not show mean age – the question asked about the suitability of pie charts to compare degradation in two cities. Furthermore, many of these candidates also suggested that a scattergraph or Spearman's would be more suitable – whereas the appropriate suggestions were Mann-Witney, dispersion diagram or possibly bar charts. Many responses were simplistic and lacked development, e.g. "a visual method," "easy to carry out." The weakest candidates only gave these simple responses and some were contradictory saying pie charts are both easy and difficult to execute. Many simply repeated the question, saying that it would be easy to compare the differences between the cities.

- (b)** Responses were moderately good overall. The full range of marks was just covered, with most entering Level 2, but very few entering Level 3; quite a few remained in Level 1. It was pleasing to see that very few chose an inappropriate statistical technique compared with similar questions in previous years. However, many went on to misinterpret the question as they described how to conduct the chosen technique rather than to justify its use.

Few did not understand the question: it was pleasing to see that very few chose an inappropriate analytical technique compared with similar questions in previous years. Many linked the use of a scattergraph to Spearman's Rank Correlation Coefficient. Very few of those who chose Spearman's did not describe how to calculate it. Better quality answers justified the selection of Spearman's in terms of having a minimum sample size (each being the same for the two variables) of ordinal data and the ability to determine the strength and direction of the relationship (if any) at a specific confidence level, so that a null hypothesis can be accepted or rejected. Of the few who chose just a scattergraph, very few noted its use for predicting values based on the line of best fit. Middle ability candidates tended to concentrate on either the direction or the strength of the relationship found by using Spearman's. They seldom referred directly to these characteristics in terms of being an advantage – this was usually implied. In particular, the justification for being able to accept or reject the null hypothesis was usually not in the context of the question. Most of those who justified the use of a scattergraph noted the ability to detect anomalies. Many weak candidates simply repeated the question, saying that the chosen technique would show a relationship – whereas more capable candidates qualified this statement by using the words "strength" and "correlation." Weaker candidates also tried to compare the two cities, which did not address the question. A few candidates did not attempt this question or only gained a single mark for identifying an appropriate technique, but this was not a Centre-wide characteristic.

2682/02 Geographical Investigation (Report)

General Comments

As in previous years the majority of candidates entered Level 3. Few Reports did not represent all five stages – although in some cases the headings varied from the normal format or there were none at all. Candidates demonstrated substantial development compared to GCSE, particularly in the analysis and evaluation of outcomes. Most candidates from most Centres presented clear and logically structured Reports. The quality of written English was generally high. Many had taken some care and pride in the submission of their conclusions.

As is expected for AS Level, nearly all Reports were guided by the Centre or a field studies centre with group collection of data. There were considerable differences in the approach adopted by Centres, some of which were more successful than others. Whilst there is evidence of good practice in many Centres in terms of organising data collection and teaching methods, the teacher directed approach should not preclude independent initiatives by students. An important role of this AS Report is to provide the basis for independent research at A2.

With regard to content, there was a balance between physical and human investigation topics, encompassing a wide array of subjects and considerable field work activity. Due to the teacher led approach, differentiation was achieved by assessing the candidate's skill in manipulating the data collected.

Appropriate fieldwork tasks were often accompanied by challenging hypotheses and significant personalised input into the discussion of planning, methodology and statistical techniques. The essence of a good report was relevance and quality not quantity. It was organised and presented well. It examined no more than two hypotheses, which could be discussed in depth, rather than superficial description of numerous variables. Overall, the stated hypotheses were relevant and reasonably feasible for AS candidates to achieve. The data collected and analysis related to the question that has been identified at the beginning of the Report. This included reference to any models and theories that had been presented. Statistical analysis, when used, included tests for significance. Geographical terminology is assessed and care must be taken that the correct terms are known, understood and used, e.g. discharge is not the same as velocity.

Less successful studies were characterised by an inability to apply statistical analyses correctly and interpretations and conclusions were vague or not expressed with understanding, e.g. "most pedestrians will be found near the shops." Centres need to provide sufficient support to ensure that their candidates choose titles they understand and can do. Many candidates did not understand the need to justify the selection of the method or sampling strategy. The content should be relevant, e.g. one candidate included a risk of Tsunamis when doing a beach exercise. Important supporting evidence for the work should be included, e.g. the template and summary results for questionnaires and field measurements. Above all the report should remain focussed on the aims and hypotheses, e.g. the detailed history of an urban area is unnecessary when looking at land use models. In some cases, there was evidence that insufficient time was spent on data collection, e.g. three sites on a river study or 20 questionnaires assessing sphere of influence will not give very useful results. It needs to be borne in mind that those who collected data for only a limited number of variables generally benefited. The application of statistical tests must be appropriate, e.g. three sites are insufficient for Spearman's Rank Correlation. Centres should ensure that basic geographical terminology and theories are understood, e.g. velocity increases downstream; low pH is acid. The role of each stage of the report should be understood, together with a need for an appropriate balance between the length of each stage.

As with the textual content, a few appropriate figures gained as much credit as many pages of repetitive poorly conceived and irrelevant figures. Like for like variables should appear on the same page – with the same scales on axes for graphs, e.g. for a river study the cross sections should all be on the same page; for a study of change in urban characteristics, pie charts or bar charts are best located on a map to demonstrate spatial variation. There was rarely justification for presenting the same data in several different ways.

Comments on Administration and Presentation

1. Candidates need to be concise. Candidates who exceeded the word limit could not enter Level 4, as stated in the Specification. A substantial number of candidates – particularly at certain Centres – vastly underestimated the word count. An *accurate* word count is required.
2. Centres need to ensure that reports are submitted on time.
3. Reports should be submitted in the correct format: Identifying a Question; Development of a Strategy; Collection of Data; Analysis, Interpretation and Evaluation; and Presentation of a Summary. Other approaches can be harder to interpret and deal with.
4. Correct documentation should accompany the reports – Authentication forms (CCS160) and Coursework Cover Sheets (CCS202) are required.
5. The preferred method of presenting the Report is for it to be **held together with a treasury tag**. There is no need for folders, wallets, clip files, paper clips, staples or plastic envelopes which all cause administrative problems and make the Report less easy to read. It is also hard to manage loose sheets and A3 sheets folded back and captured by the treasury tag. The inclusion of numerous field data collection sheets is detrimental to the Report – a summary of the outcomes should be neatly reproduced in the Report itself together with a template for data collection. Similarly, lengthy Annexes, often containing data downloaded from the internet, or handed out by Field Studies Centres as background information, are not required: if they contain material to be read by the examiner, it should be given in the five stages and be counted within the word limit.

Well presented reports:

- have been proof read;
- use continuous text;
- are correctly ordered;
- have page numbers;
- have cross referenced figures, maps, graphs, tables etc. which are relevant, appropriate (eg scale, correct annotations) and of high quality;
- refer to any statistical tests in the text and provide for the level of significance to be determined;

Comments on the Five Stages of the Report

The subject matter of the Reports was nearly always appropriate, since candidates were advised by their Centre. Physical topics such as psammomeres and river studies tended to be both popular and executed successfully. Candidates are reminded that in a 1000 word Report there is no room for irrelevance or repetition. A reasonable balance between the sections is

necessary – a lengthy description of how to calculate a statistical test leaves little room for evaluation and candidates are unlikely to achieve high marks with a weak stage 4. Reports must clearly relate to and refer to a specific study location.

Identifying a Question

This section was generally well presented, although it varied considerably in length. Almost everyone provided a hypothesis or clear question that they intended to test. Some better candidates led into their question from theory, whilst others spent far too long on the theoretical aspects at the expense of later sections.

A substantial number of Level 3 Candidates used too many variables leading to substantially over-length Reports or rather meaningless generalised Reports within the word limit. Theory is often reproduced from a book without noting its relevance to the study being undertaken. Weaker candidates tended to include lengthy historical detail or an explanation of why the topic was chosen. Hypotheses were not clearly related to the question *or* their purpose was not understood well *or* they had no geographical substance; stated hypotheses did not correspond with the relationships considered in analysis – or even with the data collected. Alternatively numerous (e.g. 6 was not uncommon) hypotheses were proposed which could not be analysed in depth and often led to an imbalanced Report with a lengthy Collection of Data section and limited Analysis, Interpretation and Evaluation. Some theory, for instance on urban models or settlement hierarchies, appeared but was only vaguely referred in the analysis section. The stage was highly imbalanced with little (or no) contextual information *or* a lengthy description of the context. The map, if any, tended to be inappropriate and poorly labelled.

Development of a Strategy

Many candidates made sensible reference to risk assessment. However, overall this stage was often weak compared to the rest of the Report. Many candidates commented only vaguely, or not at all, on their sampling strategies, or how their strategy for data collection was tailored to the available resources (e.g. manpower, time) or sampling strategy was not understood. Weaker candidates tended to overlap this section with the next stage and give excessive description of problems arising from risk assessment, without remedies. There was often no reference to geographical theories or how the data collection was organised. Sampling procedures were often not justified.

Collection of Data

Questionnaires were often undertaken with very few people being interviewed. This section tends to be long at the expense of the Analysis, Interpretation and Evaluation. Where Centres had sampled numerous variables, irrelevant data was often described and presented in tables, but then not used. Conversely, most candidates had no problem collecting numerical data, but not all stated it. Field sketches where included, were generally poor. More appropriate annotation of graphs and photographs was evident, e.g. to identify anomalies. Photos included were mostly relevant. Environmental quality testing was often present but not described: a copy of the actual survey form is useful; conversely, inclusion of all the completed survey forms is not required. Weaker candidates either wrote in great detail about how data was collected (up to half of the Report) *or* provided almost no description at all *or* gave a confused description; they tended to discuss more variables than was relevant for the stated aim/hypotheses. Candidates were often not aware of appropriate techniques, e.g. line graphs rather than scattergraphs; inappropriate use of pie charts.

Analysis, Interpretation and Evaluation

The quality of this section was highly variable. This section often set the better candidates apart from the weaker ones as the latter did not attempt to explain results (including patterns,

relationships and anomalies); however, since many better candidates (offering high quality discussion of their results) were over-length, the differences between good and weaker candidates was not always reflected in the final mark. Many candidates made good use of annotated photographs. The discussion of anomalies has improved, although weaker candidates tended to blame “anomalous data” for low Spearman’s rank correlation coefficients, without considering other reasons. Analysis sections often had very little explanatory text to accompany data from graphs which meant that a cursory comment was made for each graph or the outcome of statistical testing but the points were not drawn together until the Summary stage (if at all). If data has been collected, it must be referred to in this stage, e.g. a questionnaire may be supplementary to the investigation, but if carried out, it should form part of the analysis. Conversely, irrelevant data should not be collected, e.g. pH and soil moisture are not relevant to wind speed across dunes.

Statistical testing

Whilst most Candidates used some method of statistical testing, many regarded it as a hurdle to be jumped rather than as a way of enhancing their understanding of the outcomes. Many candidates still used Spearman’s with a very low sample size. Too often, candidates used a computer to do the calculations and did not understand the result – or did not even attempt to analyse the results. Often significance testing was not used and the significance tables were also not necessarily clearly understood. Many candidates incorrectly refer to rejection of data rather than the null hypothesis – the data is not necessarily incorrect, but it may not satisfy the predicted outcome.

Weaker candidates often gave a lengthy description of the outcomes, whilst failing to note relationships and anomalies. Interpretation tended to be generalised, without reference to geographical theory – particularly models noted earlier in the Report. The meaning of some variables was not understood, e.g. confusing altitude and gradient. Statistical tests were incomplete. Mann-Whitney (difference between data sets) was confused with Spearman (association between data sets). Computational errors were common and candidates often stated that the study went well and outcomes were as predicted when this was clearly not the case. Land use models were dealt with in a summary manner if at all. Those who used measures of central tendency were seldom able to demonstrate their relevance to the chosen hypotheses.

Presentation of a Summary

This is often the weakest part of the Report. Candidates added analysis and evaluation that had not been discussed in earlier stages. Evaluative statements often lacked depth, especially with regard to the way data was collected. Alternatively, the Summary consisted of only two or three lines with little substance – often due to the constraints of the word count, the preceding sections being too long. Another weak approach was to restate what was expected rather than the actual findings. In general, any evaluation was rather vague, e.g. “*More samples could have been taken and at different times of the year or on different days*” and was often focused solely on how the study could be extended.

2683 Options in Physical and Human Geography

General Comments

In this session examiners were pleased to read a good number of scripts showing evidence of a sustained and deep engagement with geography. Centres and their candidates have clearly spent time effectively exploring the processes and patterns and some of the responses indicated a degree of authoritative understanding accompanied by a substantial body of knowledge.

Such scripts stand out from a too significant a number that simply did not address the actual question set. Although these candidates have acquired some sound knowledge and understanding, they are not able to apply this under examination conditions. The issue of examination technique, in particular when the focus is on the writing of extended prose needs to given additional significance when preparing for the new A levels. At AS and A2 level there is a heightened expectation with regard to the quantity and quality of candidate's prose.

One feature examiners have noted in previous sessions is that of candidates choosing a question on the basis of one of its sub-parts rather than the two elements together. This was perhaps even more evident this session with large numbers of candidates writing with authority in one sub-part but producing a very disappointing effort in the partner sub-part. Centres need to advise candidates that they must prepare thoroughly for all the content of an option.

Coastal Environments

Question 1

Candidates seemed to be attracted to this question more by sub-part (a) than (b). As a consequence, many failed to deliver a high quality of answer overall. This is all the more disappointing given that without substantial knowledge and authoritative understanding of sub-aerial processes, knowledge and understanding of management will be superficial.

Descriptions of contrasting methods of coastal management were rarely less than sound and in a good many scripts impressive. The basics were well known and often a response was enhanced by the use of labelled or annotated sketch diagrams. Examples of 'hard' and 'soft' engineering techniques gave many responses their 'contrasting methods' with appropriate located examples adding conviction to the descriptions. Managed retreat was less successfully handled, and ignored altogether by a significant minority.

Sub-part (b) was less well handled by the majority of candidates. There were too many who wrote all they could remember about cliff erosion, including detailed accounts about wave-cut notches and the development of shore platforms. Those who could write about weathering processes moved their response into 'sound' territory. The best answers were able to offer some helpful material concerning the latitudinal differences in processes such as freeze-thaw. It was with mass movement that the majority of candidates had difficulty. The weakest scripts offered no explanation of the relationship between cliff development and mass movement while too many failed to distinguish amongst the different types of mass movement. Overall, candidates did not link with sufficient clarity, sub-aerial processes with cliff development, preferring simply to write extensively about the processes.

Question 2

As with Question 1, too many candidates seemed to choose this question on the basis of its sub-part (a) rather than the whole question. Comments about marine erosion were authoritative

although too many were confused as to the difference between abrasion and attrition. A significant minority of scripts started to unravel when they turned to transport. Most of these candidates managed something about long shore drift although most of these indicated they had not moved on in their knowledge of this process from GCSE. The more effective answers included comments about traction, saltation and suspension. In response to sub-part (b) the global scale pattern was ignored by all but a few. Most candidates were aware of the role and significance of fetch although those without even a basic knowledge of global atmospheric circulation made some interesting claims regarding distances over which waves are generated, Cape Horn to Cornwall for example!

The two most disappointing areas were the role of wave refraction / diffraction and tides. Regarding the former, diagrams were often included but without the wave rays drawn on and it was virtually impossible for the candidate to indicate with any degree of authority the variation in wave energy along the coasts.

Fluvial Environments

Question 3

Although the less popular of the two questions in this Option, many responses were excellent. The most convincing were those who spoke with enthusiasm and authority about their fieldwork and made direct application to this question. Those responses who adopted a solely theoretical approach, were less convincing although they still managed to convey a good deal of knowledge and understanding of variations in velocity and discharge. The two most disappointing aspects examiners noted were the confusion between discharge and velocity and the lack of appreciation of the significance of bankful discharge. Explanations of the contrasts in energy required to pick up, transport and deposit sediment were generally effective. Candidates drew accurate graphs and highlighted the important differences in energy levels required to entrain sediments of different calibres.

Question 4

To this, the more popular of the two questions in the Option, there were some very secure answers. Coverage of the causes of flooding was, for most candidates, a factor-led approach which lent itself to a comprehensive coverage of the topic. However, too many candidates failed to deal securely with rainfall, either its intensity or duration.

Candidates wrote effectively about measures capable of reducing and preventing river flooding, dealing authoritatively with both structural and non-structural techniques. The more convincing responses gave detailed exemplification of schemes. Examiners are always pleased to read these, in particular when candidates consider local small scale schemes as well as the well known large scale ones.

Glacial and Periglacial Environments

Question 5

This drew a wide variety of responses, from those who had substantial and authoritative knowledge and understanding of glacial chronology, to those who simply had little idea! The very best included sketch maps which were most helpful in conveying knowledge. For too many candidates, it seemed as if this question was chosen simply on the basis of sub-part (b). In answer to this there were some good explanations of lowland landscapes that have undergone glaciations. The key discriminator here was how effective, if at all, the idea of multiple ice advance and retreat was picked up. Erosional effects were less well covered than depositional.

Question 6

The more popular of the two questions in this Option was answered well in sub-part (a), and less successfully in (b) by most candidates. They were clearly at home writing about types and rates of movement of cold and warm-based glaciers. The role of water is now well established in this context although the perennial weakness of the functioning of the pressure melting point remains. It was good to read in many scripts about glacial surges but more attention needs to be given to bed deformation.

Sub-part (b) shifted the focus to the effects of ice on drainage patterns, the latter always given a wide interpretation by examiners across the scales. Candidates tended to concentrate on river diversion, Thames and Severn were prominent, and be less secure regarding more subtle changes such as river capture following glaciation. The imposition of lakes in a landscape as a result of ice action, ribbon and corrie lakes for example, was not often included.

Hot arid and Semi-arid Environments

Question 7

There was quite a range to the quality of descriptions of the landforms identified in this question. The best were impressive in their detail of the landforms, offering both accurate outlines of the shape and style of the landforms as well as appropriate dimensions. However, there was a significant minority who seemed to have gained little from their study of arid landforms. It was from amongst this group that few dealt with bahadas or inselbergs and their knowledge of wadis was sketchy and too frequently confused with canyons.

When answering sub-part (b), most candidates were aware of previous pluvial periods affecting today's arid regions but were less convincing in their links with landforms. This was particularly disappointing in the context of the development of inselbergs. It was also surprising how rarely dunes were mentioned in the context of present day processes.

Question 8

There was some impressive knowledge and understanding on display amongst descriptions of the characteristics of arid soils. Both basics and details were often securely described with good use made of sketch profiles.

The accompanying sub-part was also nearly always well-handled. Accurate and comprehensive explanations of plant biology and physiology made many of these responses a pleasure to read. It was encouraging that so many scripts made full use of botanical terms to add real conviction to their discussion.

Applied Climatology

Question 9

The few candidates answering this question on human comfort did so mostly competently. The area where they tended not to give sufficient attention was to areas of the world experiencing either low temperatures or heavy precipitation. Sub-part (b) extended the discussion to building design providing human comfort. This was less successfully explored although the majority dealt with the topic in a sound way.

Question 10

Responses were better when describing the relationship between buildings and micro-climatic modifications than when exploring urban morphology and urban climate. The latter sub-part

tended to drift into a general discussion of urban heat islands where factors such as wind funnelling deserved greater attention.

Agriculture and Food

Question 11

This question focussed on food supplies. In sub-part (a), descriptions of the pattern of food shortages and famines in LEDCs were disappointing. Too many restricted their answer to a MEDC / LEDC contrast. 'Pattern' was not picked up by many; for example, Africa is too often considered as an amorphous mass. A significant number of candidates gave the impression that they considered food shortage and famine to be synonymous. It is this sort of detail that a study of this Option at A2 level should provide.

In sub-part (b) explanations of the pattern in terms of physical and non-physical factors was the focus. Answers included points such as natural disasters, wars, disease and politics. In terms of exemplification, the current situation in Zimbabwe figured prominently but the anticipated inclusion of Burma / Myanmar was not forthcoming from many.

Question 12

The topic of diffusion was the theme of this question and sub-part (a) required a description of this process applied to agricultural innovation. Many candidates knew well the classic S shaped curve and gave sound outlines of how this operated. Where they tended to fall down was in not understanding that innovation starts from a point of origin and then how it might spread from there.

Explanations of variations in the pattern of diffusion in sub-part (b) varied greatly. The better responses highlighted both spatial and non-spatial factors. There was also an opportunity, all too rarely taken up, to consider variations in scale: the fundamental MEDC / LEDC contrast was not often included.

Manufacturing Industry: Location, Change and Environmental Impact

Question 13

The word 'labour' seems to have attracted many candidates to this question, as sub-part (a) tended to be answered competently or rather well. This was not often the case in (b). There were many effective descriptions of the role of labour on manufacturing locations. At the more basic level, responses consisted of simple statements about labour cost but without offering convincing exemplification. However, it is increasingly common for candidates to be aware of the cost differentials existing amongst and between LEDCs and NICs. Examiners rewarded candidates who were aware of the advances made in wages in countries such as South Korea, Malaysia and Taiwan. The better answers included material about the onward migration of some types of manufacturing to countries such as Vietnam and Indonesia. It was also encouraging to read about the importance of unit labour costs in locational decision making, especially when this appropriately exemplified.

Sub-part (b) too often was the weaker of the pair. For some, their focus on the causes did not address the question in ways that moved their answer forward and they tended not to pick up 'place to place' from the question. There were, however, many effective responses to this sub-part when candidates offered authoritative case study material, Consett and South Wales for example. These answers tended to identify the narrow range of industry and the difficulties in transferring skills.

Question 14

It was surprising that so many of those choosing this question, did so when they had little or no secure knowledge and understanding of the term 'industrial inertia'. It was also disappointing how out-dated some of the material deployed was when electronic research would have revealed more recent trends. That said, there were those who knew this topic inside out and gave very convincing accounts.

Sub-part (b) was an example where more careful reading of the question would have paid dividends for many candidates. The key command word here is 'how' but too many responses concentrated entirely on 'why', which is not the same. Thus examiners were faced with numerous answers consisting of lengthy accounts of the attractions of LEDC / NIC locations in terms of low cost labour, cheap land and limited controls. The inclusion of comments about import substitution, export-led industrialisation, rising domestic demand and eventual investment overseas were rarely secure and detailed. When they were present, they tended to make strong arguments based on the experience of some of the South-East Asian economies such as Taiwan and South Korea. It was particularly encouraging to read in a small minority of scripts of the significance of political factors, especially during the Cold War years.

Service Activities: Location, Change and Environmental Impact

Question 15

Descriptions of the theories and models of retailing and office location within the CBD were, by and large, encouraging. In most cases, the application of the bid-rent model was successful although the weaker candidates did not focus on 'within' the CBD and gave descriptions of the whole urban area. Some were most convincing here through their detailed application to a case study, which often seemed to be the result of some very effective fieldwork. A good number of the responses contained secure knowledge and understanding of the core-frame model, again in the context of a local case study.

There were also some encouraging responses to (b) which employed detailed local material. The best of these maintained a sharp focus on retailing, as the question requested.

Question 16

Descriptions of the characteristics of regional shopping centres, retail parks and hypermarkets were not always convincing. Some of the very best responses suggested some common characteristics, such as extensive car parking and edge-of-town location, and then went on to describe characteristics particular to each of the three types of retail centre. Answers were made more convincing when they included appropriate exemplification.

When answering sub-part (b), too many candidates failed to apply themselves to the question's focus on the effect of these new retail forms on 'traditional urban retailing hierarchies'. Thus, although there were comments about the negative effect on CBDs, little was made of their impact of retail locations lower down the hierarchy such as corner shops and suburban or neighbourhood centres. Positive effects were only registered by the more discerning candidates.

Tourism and Recreation and their Environmental Impacts

As ever this was the single most popular Option, but also, as ever, it witnessed far too much indifferent generalisation on the part of the candidates.

Question 17

The three types of tourism which were the focus of sub-part (a), mass, eco- and urban tourism, were well known and understood by the majority of the candidature. Some of the descriptions were splendid in their detail and historical sweep, for example, the acknowledgement of some 19th seaside resorts as examples of mass tourism alongside the oft quoted Costas. Both urban and eco-tourism were soundly described by the majority.

To sub-part (b) examiners reported significant numbers of convincing responses, with the more successful examples coming from those candidates who picked up 'contrasting' from the question. Thus, these answers interwove their comments about both mass and eco-tourism, with good material based on Kenya prominent. There is a tendency for eco- to become muddled with conservation projects and whilst there is undoubtedly a blurring in some cases, certainly the more astute candidates take on board some of the distinction. Effective use was made of material on Ecuador, Costa Rica and Belize. It would be appropriate if more candidates were encouraged away from the simplistic view that mass equals bad and eco- good.

Question 18

This was perhaps an example of a question to which many candidates were attracted by just one of the sub-parts, in this case (b). The first sub-part drew a wide range of responses, with the key discriminator being the degree of application to development strategies. Very few acknowledged the association between infrastructure developments and tourism although there were some apposite references to developments that are part of the 2012 Olympic Games. Too many wrote vaguely about how tourism has led to development. The issue of Zimbabwe arose, in particular concerning the Campfire scheme. Examiners decided to accept references to this as it features strongly in several texts used widely in Centres. However, it is a concern that this example was used so indiscriminately amongst a group of candidates who have studied for two years a subject that is rooted in the real world. Zimbabwe's circumstances have been given prominence in our media for quite some time now and it is not an unreasonable expectation that A2 students of geography should be more aware of the situation there.

Unfortunately, in response to sub-part (b), far too many candidates took this as their opportunity to write about tourism developments in general. As has been highlighted in reports on previous sessions, many candidates have a weak historical perspective. Their understanding of what constitutes the 18th, 19th and 20th centuries is vague and their allocation of certain key changes to the wrong time period is unerring. Thus examiners reported regular and frequent ascription of air travel technology to the 19th century and cars were, apparently, widespread in Victorian times. The question was clear in its demand for transport technology to be applied to patterns of international tourism. Too many ignored this element and many spent much of their answer discussing domestic tourism of the late 18th and 19th century. That said, there were, of course, those candidates who gave a sharply focussed and detailed account of the role of boats and trains to allow the wealthy to travel further for their holidays. The growth of the French Riviera and the Alps as tourist destinations from around Europe in the later 19th century was picked up by some. In the earlier 20th century the role of ferries in cross-channel traffic, in association with premier rail services such as 'The Golden Arrow', is an area ripe for exploitation here. It was most encouraging to read responses not simply mentioning cars, but applying their increasing reliability to the growth of intra-European tourism in the second half of the 20th century. As ever, candidates should be reminded to answer the question set, not the one they want.

2684 Synoptic Geography: People and Environment Options

General Comments

Candidates produced a wide range of performance. This examination proved quite challenging for candidates, who frequently failed to read the question carefully enough. The group that achieved the top grade did so by directly answering the question, using detailed examples and case studies and making obvious synoptic links. Those more marginal candidates had two or more of these essential elements missing. This reflected poor preparation by the individual candidates or most typically a failure to keep tightly relevant to the question being answered. All too often, candidates tried to produce pre-learnt answers e.g. Q.6 was seen as the pollution problems created by traffic congestion and how these could be overcome. The failure to read all the elements in the question was pronounced yet again in this examination and explains the disappointing results that some candidates must have achieved.

The questions on this unit are open-ended and **evaluative**, requiring careful thought and planning. It is the ability to evaluate effectively that distinguishes the good A2 candidate. Plans also help examiners trace the logic of the candidates thinking. It was encouraging to see that most candidates do present brief plans and it was those answers that tended to have a tighter, better focused structure.

The responses are marked by the following components and candidates' responses varied greatly between them:

- 1) Knowledge of content – more successful candidates demonstrated detailed knowledge of case studies, relevant concepts and geographical terms. Some weaker candidates made no reference to any location apart from 'e.g. Africa' type exemplification. Candidates should appreciate that this is a geography examination so some concept of location or/and place is essential. Without this clear grounding in the real world, candidates can not expect to do well.
- 2) Critical understanding of content – this was the more effective component for the majority of candidates, who demonstrated a clear appreciation of cause-effect and an understanding of the connections between different aspects of the subject (including synoptic connections). Clearly the basic concepts are well taught and understood by candidates.
- 3) Application and evaluation – this is the crucial component as it requires the higher level analytical and discursive skills to apply the understanding and knowledge to answer the question set. It is the evaluation aspect that usually distinguishes the better candidate and this examination was no exception. The higher achieving candidates evaluated arguments, concepts and statements in detail with some encouraging insights based on synoptic understanding, usually drawn from AS. Weaker candidates tended to agree with any quote regardless of the scale, location or time period. Many candidates could still improve their responses by using a less descriptive approach in their answers.
- 4) Communication – this varied tremendously as in most years. This is an essay paper and so requires extended discursive writing. Weaker candidates found even the most basic forms of communication difficult. Spelling was of particular concern as many could not spell place names or geographical terms and the misspelling of basic words like there (confused with their) and where (were) continues to be common. Weaker candidates also struggled with the concept of the paragraph and the need to have well focused introductions and conclusions. Maps and diagrams were often included which had little relevance to the discussion, such as plate margin diagrams in Q. 11. Another problem is the increasing use of colloquial and vague forms of expression eg 'A few years ago

*London was absolutely swarming with cars.’; ‘In 2002 24,000 people died from asthma.’
(where?)*

At the other end of the scale, candidates wrote with commendable fluency and organisation.

Candidates should be reminded that a total of 16 marks is available on this unit specifically to reward effective communication so it is important to present their work in a readable form with a clear introduction and conclusion and in a structured format.

Answers should:

- **Relate directly to the question set.** Some offered pre-learnt answers e.g. on the development of shanty towns for Q 4 which had only passing relevance to the actual question.
- **Give examples.** Stronger candidates quoted detailed knowledge of locations and some drew relevant maps. Weaker ones gave vague references; e.g. for Q 6 examples of pollution from traffic congestion were exemplified by ‘e.g. London’
- **Be clearly synoptic.** Most of the questions had clear possibilities for synoptic links e.g. Q11 could have linked into material from 2680. The link should be seamless so the discussion flows.

Selection of questions

This is of continued concern as so few candidates and Centres elect to study the EU. In this examination, more seemed to answer the rural management options but often they showed inaccurate knowledge of current rural situations. Nearly all candidates study the hazards option and nearly 95% of candidates attempted questions from here, chiefly Q10. The urban management section was equally popular, especially Qs 4 & 6.

Comments on Individual Questions

Option 1: Geographical Aspects of the European Union

This remains unpopular but candidates from Centres that do this section seem to perform well.

Question 1

The few candidates that did attempt this question focused on the benefits of the EU – labour flexibility, common currency, pollution laws that attracted or repelled multi-national companies. Often this was seen as largely negative:

‘MNCs find the strict anti-pollution laws now enforced across the EU a disincentive to investment in the EU so locate in areas where laws are weaker such as India.’

Few candidates unpicked the question to distinguish the impact of economic union from that of monetary union. The other limitation was the lack of exemplification of multi-national companies and most candidates treated the EU as a homogeneous block or stated generalizations without locating them:

‘The new additions (10) to the EU at the turn of the century brought in areas of cheap labour that were attractive to multi-nationals.’ But where are these?

Question 2

This was by far the most popular question in this unpopular option. The subtle stress on 'regional development' was largely ignored but candidates did discuss why regions varied in their levels of development. Many pointed out that isolation and physical geography are often one and the same:

'Norrland is isolated from the core of Europe by its physical geography (harsh climate, mountains and rivers) that makes transport expensive or unreliable.'

Most went onto contrast this notion with regions that lacked development despite favourable location and physical geography although sometimes this lacked accuracy:

'Southern Italy's greatest barrier is the Mafia. People refuse to invest in the area for fear of the Mafia or the worry over corruption.'

Then other areas that were isolated and had challenging physical geography were seen as being developed due to tourism e.g. the Alps or minerals e.g. Norrland – Kiruna or due to EU regional policy and aid e.g. SW Ireland.

Question 3

This was a very straightforward question but not popular in an unpopular section and most candidates who attempted this question found it difficult to go beyond description of the main features of the policy to evaluate its effectiveness.

One of the major problems of questions like this is the need to exemplify with some locational or place detail. This should have steered candidates to think about how this effectiveness may have varied from place to place. Those that did attempt to locate fishing industries often lacked accuracy or realism:

'The major fishing ports on the south coast were hard hit such as Hastings and Rye.'

Option 2: Managing Urban Environments

Question 4

This was a popular question and most saw this as the 'shanty town question' so spent excessive time describing the growth of these areas and what they were like rather than directly answering the question set.

'self-help' was not in capitals so candidates were quite at liberty to look at any form of self help such as the construction of shanty settlements themselves. Most candidates did look at ASH schemes and contrasted these with other attempts at providing or improving housing such as bulldozing the whole area and erecting tower blocks. All too often there was insufficient depth of detail in the exemplification:

Compare:

'In Rio the council gave people building materials and the people supplied the labour to construct better housing.'

With:

'In Rio the government has initiated a number of self help schemes.'

The key to a successful answer was the evaluation of the extent to which schemes are/were the **most successful** response. Most decided such schemes were the best response but then failed to say why. Some did offer some justification:

'Self help schemes give the people a feeling of self worth, an ability to adjust their building design to suit their needs and also it creates employment for the unemployed.'

Higher achieving candidates did look at housing needs and structured these into quantity and quality aspects.

Question 5

This question was not very popular and tended to demonstrate that candidates are not really clear on the difference between 'strategy' (or approaches) and 'schemes' so often repeated material as their schemes were the same type of strategy.

Few candidates looked at the 'big picture' – i.e. the role of taxation, social security policies etc in modifying the underlying causes or symptoms of multiple deprivation. Most focused on 'top down' versus 'bottom up' schemes with the latter seen as more successful.

Again strategies were rarely known in depth:

'Whole areas were redeveloped by clearing the area of old decaying terraced housing and erecting tower blocks.'

It was those answers that knew the details of an example of a particular strategy that scored more highly. The example below was another candidate's equivalent answer to the one above:

'Older Victorian terraced housing in the inner zone of urban decay were compulsory purchased in 1970, bulldozed and three 17 storey blocks erected next to the newly built inner ring road.'

Again the main weakness was a failure to evaluate. The notion of cost-benefit seems largely unknown. It is rare for any strategy to be totally successful. Few appreciated that the relative success of the strategies might vary with your viewpoint (e.g. wealthy versus poor or young versus old) or with where you are located (regionally or where within the urban area) or over time.

Question 6

This was a popular question but too many candidates saw this as an invitation to explain how traffic congestion is being tackled or why pollution occurs. Most candidates recognised that 'pollution' includes a wide range of types (air, water, solid, noise) with some including visual and light pollution!

There was no requirement to focus on LEDCs or MEDCs and some of the better answers contrasted the two to evaluate strategies. Again the inability to think in terms of cost-benefit produced rather simplistic evaluations:

'The London congestion charge has been successful as it has reduced traffic entering central London by 30% so leading to a reduction in air pollution.'

Others took the 'big picture approach' and looked at attempts to reduce global warming so missing the need to focus on urban pollution.

At times, candidates demonstrated limited knowledge of LEDCs:

'LEDCs suddenly realised that sewage disposal was crucial if they were to reduce diseases such as cholera. They introduced proper drainage and sewage disposal.'

The more successful answers evaluated the relative success in terms of cost, impact on the economy/population, ease of implementation, scale etc. – the strategy might be successful from one aspect but not another:

'The congestion charge has reduced air pollution in central London but has in turn increased problems just outside this zone due to the increased demand for parking spaces and increased traffic.'

Option 3: Managing Rural Environments

Question 7

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Rural landscapes covers a wide variety – farmland, moorland, woodland, and includes both the environment and its community. Most candidates related the question to the need to protect the landscape from excessive tourism (rather like Q. 8) whilst saw it as protecting it from rampant agri-businesses or urban sprawl. This is of less importance than the range of strategies as these seek to protect the landscapes from a large variety of threats whatever their source.

Most saw this as the 'National Parks question' but did not really understand the strategies used by these authorities to protect rural landscapes:

'National Parks stop excessive building and make sure farming does not damage the landscape'.

Few focused on the planning controls that National Park Authorities use as protection strategies. Some contrasted English National Parks with those in the USA where the land is owned by the state so control is easier:

'In the USA it was easier to protect the landscape as parks were set up before many of these areas were under any threat – they were wilderness areas. The sheer size of the USA and the population spread made protection so much easier than in the UK.'

More effective answers covered a range of approaches such as ANOB, SSSI, National Trust etc. – both governmental and private e.g. individual landowners. A few looked at some of the EU initiatives. Yet again the key differential between answers was the level of evaluation and the explanation of why success could vary. Some of the best answers linked this to differences in the rural landscape:

'The bulk of these strategies are used in upland areas often to protect the economically weak hill farming communities. They are less needed in lowland areas as threats such as tourism are fewer or agri-businesses play such an important role that is difficult to over-rule them.'

Question 8

Higher achieving candidates did distinguish between recreation and tourism or active versus passive tourism but few suggested that farming might likewise differ – arable v pastoral, upland v lowland etc.

Report on the Units taken in June 2008

Most candidates took the approach that it was a mix of conflict and co-operation. Strangely it was the latter that got the most attention with lengthy accounts of the way individual farms benefited from recreation and tourism:

'Follyfoot farm in Devon has become a major tourist attraction. With a petting zoo, quad biking track, farm nature trail as well as the usual gift shop and café it is more a visitor attraction than a farm.'

So is it benefiting farming or replacing it? Most candidates saw providing bed and breakfast for tourists as supplementing marginal farm incomes so keeping the farm in business. Others saw various controls as encouraging the coexistence of tourism and farming – National Parks again!

The obvious threats to and conflicts with farming were often dismissed as so obvious that they didn't need development:

'Tourists trample crops, damage walls and drop litter all of which makes the farmer's job more difficult' but in what ways?

This example illustrates the other common weakness with no real attempt at exemplification or a sense of location/place. Yet again it was those candidates that qualified their evaluations that achieved at a higher level:

'Tourism tends to cause more conflicts in upland areas where tourists have the right to roam in stunning scenery whilst lowland areas often see the benefits from renting out rooms and running recreations such as clay pigeon shooting to local urban residents as more important.'

This may not be 100% accurate but at least the candidate tried to look at 'extent' and linked it to a geographical contrast.

Question 9

Many candidates spent too long explaining why farming was de-intensifying rather than directly addressing its level of impact on rural environments **and** communities. Few spotted the need to consider the validity of the statement – it could be argued that other factors of change in the rural landscape are having a much more significant impact. Again not all rural environments are experiencing de-intensification. Some are still intensifying!

Most candidates saw de-intensification as having a very positive impact on a range of aspects of the rural environment:

'The use of set aside has increased areas free of agri-chemicals so wildlife has increased which in turn feeds into the food chain so there are more foxes, birds of prey than there were 20 years ago.'

Candidates saw an increase in hedgerows, woodland, wetlands etc. as stemming from de-intensification, with a return to a rural landscape of the past. This may well be an over-romantic view and it did need supporting with some effective exemplification, which tended to be rather too generalised. When it came to the communities aspect, candidates were often on more dubious ground:

'As less intensive farming needs less machinery then it needs more labour. By creating more jobs in farming rural communities are kept thriving.'

The really effective answers considered the validity in the context of different types of rural areas such as upland versus lowland, remote versus near to a large urban area or arable versus pastoral.

Option 4: Hazardous Environments

Question 10

This proved to be a very popular but challenging question for many candidates probably due to careless reading of the question. Too many saw this as a question about the ability to predict disasters or their impacts. Certainly prediction is part of being prepared, a precursor:

'To prepare for a hazard event first you need to research the area, predict the likelihood and the nature of the event, issue warnings and then prepare to reduce the impacts should they happen.'

It was the more perceptive candidates who suggested that preparation before, during and after hazard events (usually seen as disasters) varied in importance and effectiveness. Most considered that it was possible to prepare but often this was inappropriate or simply overwhelmed in the face of the sheer scale of events.

Evaluation was reasonable in this question and many candidates saw that the level of preparation varied with the level of technology or development:

'LEDCs like Burma have little capital to invest in early warning equipment or strengthening buildings and if they did have spare capital they would use it to develop their economy.'

Others recognised that natural hazards vary in scale, areal extent, violence, predictability and duration – so making preparation difficult if not impossible. These were supported by examples such as the Kobe earthquake, Hurricane Katrina and the Boxing Day Tsunamis in the Indian Ocean. The date given for the last example varied from 2000 to 2007 whilst in other cases, candidates gave no date at all:

'The earthquake in California in Palmo Almeira was well prepared for so deaths were low.'

The date can be significant, so candidates should at least tie it to the correct decade.

Question 11

This was essentially a comparative question where candidates were expected to examine which presented the greater risk and why. Many spent considerable time and space in giving an account of plate margin activity. Useful though this might be, it was rarely linked to the question. Most candidates agreed that earthquakes posed the greater risk usually because of their scale, invisibility and unpredictability:

'Often people live on top of a fault line and are unaware of the possibility of an earthquake whilst few people would live near to the cone of a smoking volcano as it is so obvious.'

Again some candidates used it as an excuse to say that the difference in risk was more due to human factors such as population density, technology, preparedness etc:

'It is less about the difference in the hazards and more about the level of development. An earthquake of the same magnitude may do more damage in a LEDC than an MEDC.'

Report on the Units taken in June 2008

This approach at least tried to evaluate the statement but there needed to be a focus on the differences between the two tectonic events for the answer to be fully effective. Some candidates recognised the time aspect of the events. Volcanoes tend to give warning signs and then persist, unlike the almost immediate earthquake shock. Some candidates disagreed with the statement and supported their argument effectively:

'Volcanoes unlike earthquakes can change the entire global system. A massive eruption such as Krakatoa in Indonesia in 1884 spewed so much ash into the atmosphere that it blocked the sun and the earth experienced a mini-ice age.'

Others looked at the contrast in primary and secondary impacts. Most saw earthquakes as having more secondary effects including the Boxing Day Tsunamis, so making them of greater risk.

Question 12

This was the least popular question in this most popular of sections. In some ways, this was a more straightforward question than Q11 but did involve an evaluation of the various strategies used. This was often very effectively answered, with a range of strategies well supported with detailed exemplification and diagrams. Some of the exemplification was very local and this was often more effective than better known examples:

'The road along the Tallylywn valley into Barmouth has had numerous strategies applied including retaining walls along the sides of the road with drainage systems to remove water.'

Some candidates used examples drawn from 2680 such as the cliff protection at Barton on Sea, so demonstrating some good synopticity.

Some of the most effective answers did distinguish between those strategies used at the foot, on the face and at the top of the slope and evaluated their relative effectiveness. Others distinguished soft engineering solutions such as afforestation with hard engineering such as gabions or sheet piles.

Yet again it is the ability to evaluate that proved crucial. So many candidates described strategies very effectively and exemplified well at a variety of scales but few really explained the pros and cons or the relative effectiveness of the strategies they described. Much was simplistic:

Compare:

'Planting trees on slopes is a good strategy as their roots bind the soil so making it less likely to slip.'

With:

'Tree planting on slopes is cheap, relatively easy and is environmentally sound but it does take time for root systems to bind the soil so it is not a quick fix.'

2685 Personal Investigative Study

General Comments

Examiners felt that the standard of work presented was at least on a par with previous years. There were, as usual, some outstanding studies that linked well-understood geographical theory or concepts to a clear location through researchable questions or hypotheses. Such studies also showed a clear understanding of the process of investigation by completing the circle of inquiry in a logical fashion, so that methods clearly matched aims, and the data was then presented and analysed to provide answers to the original question or hypothesis.

However, Centres are asked to take particular note of the following points which will aid both themselves and their candidates:

Administration

A significant number of Centres failed to include the Centre Authentication sheet, without which grades cannot be awarded, and several did not include the attendance register. A small number of Centres still submit their studies in an inappropriate form. Studies should be bound or tied together in a simple fashion, which makes it easy to read. They should not be presented in hard folders and should not be placed in plastic file pockets. Presentation should not exceed A3 and material of this size should be folded neatly and easily accessible to the examiner.

Presentation

Candidates should be advised that material presented in graphs, photos or maps is an integral part of a study, accounting for approaching 20% of the mark under the revised mark scheme. Essential presentational material should not be placed in appendices, since it may be overlooked and not gain the credit it deserves. Similarly, a minority of candidates, and indeed some Centres, continue to include in the study, either in appendices or occasionally in the body of the study, the whole set of questionnaires or data recording sheets used. This is not necessary; one example would suffice.

The vast majority of studies are now based around the five assessment criteria. Although presentation and analysis are identified as two separate components in the mark criteria, candidates should be encouraged to regard them as closely linked. Analysis should be referring to the material presented to answer the questions/hypotheses posed. This is much more effectively done if the presentation and relevant analysis are integrated, rather than separated by many pages. The best studies almost invariably include presentational and analytical material side-by-side. It is particularly effective to see word-processed studies in which graphs and even maps are slotted into text on the same page so that, when reference is made to such presentation, it is easy to recognise the validity of any analysis made.

A significant number of candidates still do not appreciate the importance of organisation and layout in the final product. They should number the pages of their studies and to give reference numbers to their presentation (eg Figure 1, Map 3). This helps examiners to see more clearly how presentation and analysis relate to each other and, therefore, give the candidate the appropriate mark. Studies should also have a contents page that indicates the page numbers of significant sections of the study. It would also be good practice for candidates to adopt an acknowledged referencing system for books, articles, websites and other secondary sources used. This could take the form of footnotes or could involve sources quoted in brackets (name of author and date/website), which are then detailed in a bibliography at the end of the study.

Other issues

Two issues of concern to examiners surfaced again this year. The first is the use of shared data by candidates, whether this was collected as part of a Field Centre visit or as part of Centre-based fieldwork. The second concern is the length of some studies.

While there may be good risk assessment and practical reasons for organising data collection through groups, Centres need to make their candidates aware that this is an individual study and that, in formulation and methodology, the individual input needs to be clearly apparent to the examiner. In many cases, Centres enable candidates to identify their individual contribution through different data and/or different hypotheses or questions. However, situations where a whole Centre of significant size collects and shares data are not acceptable in an assessment component that is entitled a *Personal Investigative Study*. It is very difficult in these circumstances for examiners to award appropriate credit to candidates. Where Centres have continued down the road of shared data but tried to tackle this problem by ensuring candidates are looking at different questions or hypotheses, this leads to some contrived questions or hypotheses. In addition, candidates often include irrelevant data collection and presentation in their studies, because it has been part of questions that other candidates are examining. This does not help the candidates concerned because it indicates a lack of planning. Group work should not involve more than three candidates in collecting similar data. Where more than this number is involved, mediocre studies tend to be produced. This approach also 'stifles initiative' and it is often the more able candidate that suffers.

Once again, it is pleasing to report that most Centres had guided their candidates to produce studies to meet the word length requirement, but there remains a significant number of studies that were over-length, a transgression sometimes compounded by the candidate declaring a clearly false word count on the cover sheet. In a minority of Centres, this occurs on a regular basis and such Centres need to be aware that the current mark scheme significantly limits the credit that can be given to over-length studies.

There continues to be an increasing trend for candidates to attempt to overcome the problem of word count by including substantive material in tables. This was particularly common in descriptions and explanations of data collection, but more often than not these consisted of full sentences, simply surrounded by boxes. While this is a valid means of presenting this information, the words used in tables are part of the word count. In addition, the use of such tables does not always explain the methodology as clearly as it might do, because of the sometimes artificial nature of the headings used.

In some cases, the problem of over-length is self-imposed. There were many instances of candidates wasting words:

- sections in both the introduction and the methods that were virtually identical and involved considerable repetition;
- the expression of aims in three separate ways: aims, followed by hypotheses, followed by null hypotheses – only one of these is necessary.

Overall, however, the quality of much of the work produced by candidates is of a high standard and demonstrates an impressive amount of effort in collecting and processing the data. It is a pleasure to read many studies that show a thorough understanding of a geographical idea and apply it effectively to a specific place, so that the examiner feels they have learned something new.

Comments on Individual Questions

Whilst there are no individual questions to be considered, the assessment criteria provide appropriate headings under which to discuss candidates' performance. As in previous years,

examiners felt that Formulation and Data Collection were the strongest sections, but noted that there had been a general improvement in quality under Data Representation. The weakest section in general, was that involving Summary and Evaluation, with many candidates not affording it the weight it warrants in the assessment criteria. It needs to be stressed again that the Summary and Evaluation section is of equal weight to all the others and should, therefore, have a similar prominence within the study.

Formulating a question or hypothesis capable of being researched and understanding the limitations imposed on geographical enquiry by the resources, including data available. Designing realistic strategies including risk assessment.

This is the most crucial stage in developing a successful investigation. A suitably framed formulation opens up the scope for high marks in the subsequent sections, whereas one that is not tends to narrow the opportunities, for example in representation and methods of analysis.

The most successful studies are characterised by topics that:

- have a clearly focussed question or aim, usually defined through a limited number of subsidiary questions or hypotheses that are inter-related;
- have a conceptual or theoretical background that has clear links to the overall question or aim and is used to develop or justify the subsidiary questions or hypotheses;
- are clearly located.

The main way in which candidates continue to limit their own studies is through the identification of a question or hypothesis which is too narrowly focussed. The question or hypothesis reads more like an AS or even GCSE title than one suited to A2. For example, studies that examine how just one variable varies spatially provide limited scope for graphic representation and for detailed analysis at A2 level. Questions such as *'Does the percentage of marram grass cover decrease with distance inland?'* and *'how do pedestrian flows vary in the CBD?'* are examples of such titles. Candidates would give themselves much more scope by examining factors that might influence such variations, such as abiotic factors in the first instance and land use patterns in the second. The following title of one of this year's successful studies illustrates the broadening scope when other factors are introduced: *'An investigation to find how changes in physical conditions across a sand dune affect the species diversity'*.

With a few honourable exceptions, studies that attempt to assess the impact of one thing on another continue to be relatively unsuccessful. Successful examples invariably identified measurable criteria as the basis of assessing impact, and several considered the spatial variation in impact successfully.

Many studies use hypotheses or sub-questions successfully to focus a general geographical question or idea. Such studies phrase the hypotheses in a form that is clearly researchable, such as:

"Temperatures in a deciduous woodland are lower than those in an open grassland."

"Socio-economic deprivation decreases with distance from the centre of a town."

However, weaker studies often also use hypotheses in an inappropriate way. In particular, candidates should be advised to avoid:

- too many hypotheses: the identification of 5 or more hypotheses is too many and will inevitably lead to a lack of depth in the analytical and concluding sections. A maximum of three to four hypotheses (or questions) is recommended;
- hypotheses that contain a "due to" or "effect of" clause are not testable, because it is impossible at this level to establish a causal relationship;
- vague hypotheses such as *"the biotic population will rise again"*.

The Assessment Criteria Descriptors indicate clearly the importance of geographical theory and concepts to a successful study. Studies at Level 1 have “limited reference to relevant geographical theory and concepts”, while at Level 3, “clear, explicit links to relevant geographical theory and concepts” are expected. Good studies are characterised by concise but detailed reference to relevant theories or concepts, which are used directly either to justify the questions or hypotheses being examined or to establish them. As one examiner noted: “the best summaries of theory contained effective references to several sources with information carefully summarised in the candidate’s own words so as to be directly applicable to the topic concerned.”

It is the absence or limited nature of relevant theoretical or conceptual material that remains the most significant weakness in many of the studies that do not score highly. There are two main aspects that contribute to such weakness:

The first is the relevance of the theory or concepts to the question or aim of the study. Weaker studies are often characterised by the inclusion of extensive theoretical material copied from textbooks that does not relate to the actual question. This is particularly noticeable in some CBD studies, where Burgess, Hoyt and Harris and Ullman are included, but are not relevant to studies examining patterns within the CBD or delimiting the CBD. Similarly, an extensive discourse on urban heat islands is not relevant to a microclimate study based around a garden or farm. It should be stressed to candidates that, to gain credit, theoretical and conceptual material needs to be used either to establish reasoned hypotheses or questions, or to justify hypotheses/expectations put forward.

The second is the scarcity of theoretical or conceptual material in some studies. One example would be a study examining the sphere of influence of a particular centre. This is a clearly researchable geographical topic at a suitable scale, but needs some conceptual basis to develop it in a wider context. Concepts related to hierarchy, range and threshold, distance decay and competition would be relevant here.

The inclusion of such conceptual material also has benefits for other elements of the studies. Reference back to theory and concepts helps studies be more analytical and evaluative, gaining credit under the last two criteria. Some studies show no awareness of wider geographical ideas at all. The most successful studies also show some sense of place, conveying clearly that the geographical ideas and concepts being examined are related to the real world. Examples would include urban deprivation studies that identify areas that are more or less deprived than might be expected and provide descriptions and explanations that give a flavour for the defining characteristics of those areas. So too would sand dune studies that identify anomalies in changes inland and relate those to specific features of the physical and human landscape.

A final point is worth stressing in relation to theoretical material. Referencing, even amongst some of the higher scoring studies is not well done. Candidates should clearly reference the sources of such theoretical material in the body of the text and should include details in a bibliography at the end of the study. This material can then be recognised as relevant secondary material to the study under the ‘Programmes of Data Collection...’ heading.

The criteria for this section also contain reference to “realistic strategies”, and it is apparent that many candidates waste words here by duplicating material in both the introduction and the methodology. The strategy element can be dealt with very briefly with an outline of the data to be collected. For example, in a study of how deprivation varies within an urban area, a candidate need only identify the different measures of deprivation to be used, the sources of the data for those measures and the locations of the places to be sampled. Detail about the justification and implementation of these methods can then be placed in the methodological section. The addition of a relevant risk assessment would then complete the strategic planning. The key word in relation to risk assessment is relevant. Many studies adopt a rather formulaic approach. The most effective assessments are those that are concise and consider a limited number of specific

and realistic risks, including steps taken to minimise them. A few studies did not include any risk assessment; candidates need to be aware that they are an integral part of strategic planning.

Carrying out programmes of data observation, collection and recording using selected sampling strategies.

There are four important aspects of data collection: the balance of primary and secondary data, the volume of data collected, consideration of reliability and accuracy, including sampling issues, and the description and explanation of the methodologies employed.

In terms of the primary/secondary balance, the key element is that the balance is appropriate. Clearly, in some studies, especially those investigating the physical environment, the primary/secondary balance is appropriately dominated by primary data. Here the best studies make clear the significance of the supportive nature of the secondary data: maps establishing sampling sites; background theoretical material; even statistical formulae. In some human geography studies, a few candidates do not take the opportunity to use secondary material that would enhance their work. This applies particularly to studies of change in environmental quality within a city, where reference to census material would provide useful socio-economic data to compare to primary environmental data.

In all but the best studies, the explanation of secondary data remains relatively weak. Many simply state that they got information from the Internet. For example, when referring to Census data, the source will often be dismissed in a part sentence referring to the Library. Candidates should be encouraged to state exactly what data were collected, to establish their relevance and to quote sources accurately. This year, it was encouraging to see a number of studies quoting specific websites from which appropriate data were collected, but this is the exception rather than the rule. The same applies to all other secondary sources, especially maps downloaded from the Internet, which are rarely referenced. Candidates would benefit from being given clear advice on how to reference secondary sources.

The volume of data collected is perhaps the most crucial aspect of data collection. It is clearly linked closely to issues of reliability and accuracy. However, it also has an impact on later sections. All good studies have a wide database, with a good sample size and a range of different sorts of data collected. This allows the candidates to produce a range of informative and relevant presentation and the scope for detailed analysis. The weakest studies are characterised by very limited data, in quantity and quality. This is apparent in several ways, such as too few questionnaires, insufficient sample points, and insufficient readings at different times. For example, ten questionnaires to identify a catchment area of a centre is not enough to provide any reliability to the results; four sites down a river are insufficient to show change and certainly not enough to justify any statistical testing, such as Spearman; a microclimate study based upon one afternoon's readings is insufficient to produce any meaningful results. The completion of all primary data collection in a couple of hours, as a number of candidates indicated in their studies, is not enough material to support a piece of coursework at A2 level. The majority of candidates, however, do collect sufficient data.

At the other end of the scale are the minority of candidates who collect too much data. This does not involve too large a sample size, but too wide a range of data, so that the candidate ends up swamped with facts and figures. Such studies end up being highly descriptive, with no words or time to develop the higher analytical levels necessary. In many ways this relates back to the planning stage – some candidates need to be much more selective in the data they collect or, having collected them, take the decision to discard them and exclude them from the study altogether. This is most prevalent in questionnaires, with the inclusion of irrelevant questions, or ones which are not subsequently utilised in the analysis.

Candidates have continued to follow the trend noticed last year of paying more explicit attention to reliability and accuracy. This is apparent in several ways: the repetition of readings to produce

averages; a large sample size; more than one transect in a spatial study. For example, a study examining the urban heat island effect that is based upon one day's readings at twenty sites along a transect, has very limited reliability. Successful studies replicate the data collection on different days and at different times. It is difficult to give hard and fast rules about the amount of time that should be spent on the fieldwork element of investigation, but it is unlikely that meaningful results can be collected in less than two days.

Sampling is specifically mentioned in the assessment criteria and almost all studies are now referring to sampling in some contexts. A significant number of studies discuss sampling in a highly generalised way. It is not necessary to describe the different approaches to sampling in detail. The best studies identify clearly the method chosen, and then justify it in the context of the specific study. These studies also include maps or diagrams demonstrating the spatial elements of the sampling framework. There was also a number of candidates this year who did not understand the idea of stratified sampling, often confusing it with systematic.

The final aspect relates to the level of description and explanation. Studies that score highly in this section are characterised by succinct but detailed descriptions of the practicalities of their data collection, together with an explanatory justification of the choices made. Several examiners commented this year upon the weakness of the description and explanation of data collection, particularly the sampling framework adopted and the use of equipment. Examples of the latter include such phrases as *"I used a soil auger to collect soil samples"* and *"I measured temperature and humidity using a whirling hygrometer"*. To judge how accurate and reliable these methods were, an examiner needs to know how such equipment was practically applied, such as height above the ground and length of time readings were taken for. The better studies include annotated photographs demonstrating the application of such techniques.

These comments notwithstanding, this element remains probably the strongest of the five assessment headings. Successful studies describe the detail of the methods employed concisely and without repetition but, importantly, justify the choice of methods and their implementation. With less successful studies, explanation is lacking and it is sometimes unclear how the data collected relate specifically to the aims of the study. A final comment relates to the way in which candidates express this component. The best invariably use the past tense, which is correct, as this section should be reporting how the data collection was implemented.

Representing data using the most appropriate methods

Presentation remains a strong element in most studies and the vast majority of studies do communicate their findings effectively. Several examiners noted that they felt that this element had improved on previous years.

Examiners identified several aspects of presentation which, if addressed, would further improve performance on this element. The increase in the use of maps downloaded from the Internet has continued. These can have a place in helping to locate studies and even as base maps on which other information can be presented. However, a significant number of candidates include such material without apparently thinking about its value. Many such maps lacked scales and appropriate titles, or reference in the text, or contained information of no or little relevance to the study. Candidates should also be encouraged not to include large-scale photocopied maps covering the equivalent of more than 4 A4 pages onto which data is presented. Presentational material should be no larger than A3 – if A3 needs to be used, it should be folded neatly and should be capable of being viewed without taking the whole study apart.

Although the general quality of material presented is improving, a significant number of studies include material that is not presented to a high standard or does not show the information effectively. Even in some otherwise good quality studies, there were instances of missing titles, missing labels and scales omitted from maps. These omissions were more marked on weaker scripts. Inconsistency in presenting material intended for comparative purposes persists.

Candidates need to be using the same scales and should place comparative material side-by-side on the same page. The use of large pie charts, one to a page, is not conducive to effective comparison. Pie charts with too many subdivisions still tend to be used. There was a feeling amongst examiners that the use of spatial presentation was more effective this year, but there are still studies with a clear spatial element that lack a single map – this applied particularly to studies of urban land use patterns. If a study is examining the applicability of urban land use models to a particular town, or patterns of land use in a CBD, a land use map of the town or CBD is a minimum requirement in terms of applicability.

The effective use of annotated photographs highlighted in previous years continues to be a positive feature of this element. However, many candidates still include photos whose relevance is never made clear, either by annotation or reference in the text. Photographs are useful and informative, but in moderation; they need to have a purpose.

Finally, once again, those candidates that integrated presentation with analysis through specific reference to the presentation scored significantly better than those that referred to presentation in a more general sense. Extensive blocks of presentational material separated from the analysis make it difficult for examiners to establish relevance. In the same context, there are still a significant number of candidates who place relevant presentational material in appendices. As previously stated, **presentational material should be placed in the body of the study, not in appendices.**

Analysing the data using appropriate techniques

It seems that a significant number of candidates and, indeed, Centres believe that analysis equals statistical analysis and testing. This is not the case. Some of the most effective analysis can involve no statistical testing at all. Where statistical testing is appropriate it should **not** be the first stage in analysis, as far too many, even of the more successful candidates seem to think. Statistical analysis should follow a common sense examination of the data, which should identify trends, differences, relationships and patterns. This is the first stage of analysis that many, even the most capable, seem to ignore. This helps to explain why some studies do not score as highly as might be expected, because a basic stage in analysis has been omitted. Once trends, differences, relationships and patterns have been established, statistical analysis becomes valid – **it is a tool, not an end in itself; it will only gain credit when used appropriately.**

Many candidates used statistical testing effectively, judging when it is necessary and when it is not. Where statistical tests are used, the best studies explain why they were used, show evidence of the calculations made (this is something that could and should be legitimately placed in an appendix) and use the results to inform the analysis. This year, there was less evidence of candidates including statistical tests but making no reference to them at all in the textual analysis: this makes it very difficult to give much credit, because no interpretation of the results is involved. It is in the context of statistical testing that null hypotheses should be established, and it was encouraging to see this practice more widely adopted.

One reason for repeatedly expressing caution over the use of statistical tests is the fact that a significant number of candidates do not appear to understand the conditions and circumstances in which they are appropriate. In relation to Spearman's Rank, many candidates use the test when there are too many tied ranks – this makes the test invalid. Others apply the test when there are too few samples – using it with 3 or 4 pairs is really pointless. Others use it when either there is clearly no relationship, or such a strong one that testing is superfluous. Chi-square is another misused test. This test is inapplicable if too many expected values are 0 or less than 1. As a general rule, candidates should be advised not to use a test if they don't fully understand it.

The most successful analyses are explicitly organised around the sub-questions or hypotheses. The least successful mechanically describe what each piece of presentation shows regardless of its relevance to the aims of the study. Alternatively, weak analyses derive from the initial formulation of too narrow a question. Good analyses clearly identify trends, patterns, relationships, pick out anomalies and comment on these in the context of the location and general theoretical or conceptual ideas. This should be a section that allows candidates to show their understanding, but in some Centres there appears to be a 'tick box' approach – describe, do a statistical test (regardless of whether the data are suitable or the test is necessary), make a summary statement. Such an approach can stultify originality, especially amongst the more able.

Drawing conclusions and the critical evaluation of their significance and reliability

This section continues to be the one that scores least well and the one in which least words were written. This section has equal weight to all the others and should, therefore, involve a similar number of words to the other three written sections. This is not apparent amongst a significant number of studies. There are three key elements to this section:

- a summary of the findings of the study that relates back to the original aims and quotes material from representation and analytical sections, without simply repeating paragraphs or sentences from the analysis. It should be possible for an examiner to read the concluding section and understand exactly what the focus of the inquiry was and what was discovered about it;
- some evaluation of the study in the context of the original conceptual/theoretical ideas presented in the introduction: candidates should examine the extent to which their findings support these broader ideas, and suggest reasons for any anomalies;
- some evaluation of the methodology employed, which might identify limitations and/or improvements that could be made: this should go beyond the simplistic "more is better".

To an examiner, one of the key elements here is 'closing the circle'. Has the candidate, on the basis of the evidence presented, answered the original question posed? Have the results been explained, in relation to either background geographical theory or concepts or local factors, or both?

The best studies have a realistic evaluation of the limitations of the study and how these might have affected the results. Too often such evaluations are over simplistic, with phrases such as "*if I had more time I would have taken more samples*".

It was in this section that credit had to be limited by over-length. While the vast majority of Centres encouraged their candidates to maintain the word limit, there were a few Centres that clearly abused this. These Centres should be aware credit is withheld for lack of conciseness under Criterion A.

Concluding comment

Examiners feel that the vast majority of candidates produce good work, based upon considerable effort both in the field and in the subsequent write-up. There remains, however, many ways in which candidates can improve their studies and these have been identified under the different components of the assessment criteria. It also needs to be stressed that this should be a **personal** study and that the large-scale use of group data is not an acceptable approach. Candidates can share in the data collection process, but they must be able to identify their individual contribution, not only to data collection, but also in the identification of a question and in the subsequent analysis.

2686 Investigative Skills

General Comments

It was pleasing to see well-prepared candidates who produced discursive answers and had a clear understanding of geographical theory and the practical aspects of investigations. They had obviously undertaken a range of field work experiences and been allowed to develop their own ideas and techniques. Unfortunately, this was counter-balanced by other candidates who encountered problems because the nature of the paper asks them to think, analyse and develop strategies to investigate common themes. Some candidates had not developed the depth of understanding that comes with prolonged study and practice of investigative techniques. It also seemed that many candidates had not been involved in the full investigation process, particularly at the planning stage, and so could not manage the link between theory and sampling methodology. Candidates need to be given the opportunity to make mistakes and learn from them. Too much teacher-led field work is counter-productive in the long term.

Many candidates were well prepared for the paper and had a good grasp of what was required. There were a few examples of candidates who clearly did not understand statistical techniques but these were pleasingly rare. Once again, some candidates did not respond fully to the command words in the questions. This is a perennial problem. It was apparent that some candidates had been prepared for specific aspects of field work that could be transferred to any OS map but this was not always the case. Some investigations were too vague and wide-ranging to be useful when applied to the map. This seems to be a result of the lack of experience previously mentioned and the need to adopt a more pragmatic approach to the techniques paper.

Comments on Individual Questions

Question 1

- (a) (i) A surprising number of poor and inappropriate titles were offered. Many candidates had little concept of scale and appeared not to have attempted to formulate an hypothesis before. Unfortunately, this could have a knock-on effect for subsequent parts of the question. Other candidates offered a pre-prepared enquiry, designed to fit any map. This was either very successful or missed the point.
- (ii) Many candidates found it hard to identify the theory behind their question to underpin an investigation at this level.
- (iii) Candidates tended to stray away from how they would sample and select sites onto how they would collect data, often giving detailed methodologies.
- (b) There were many good answers to this question, showing a good grasp of questionnaire structure. The top of Level 3 needed a well-balanced answer indicating strengths, weaknesses and potential improvements. All examiners reported their continuing concerns over standards of English expression, with extended pieces of writing, such as this, presenting real challenges for some candidates. That said, there were many responses which displayed convincing knowledge and understanding and it is a real joy to read some scripts, reflecting a fusion of talented candidates and inspiring teachers who have engaged fully in the INSET and read previous examination reports.

Question 2

- (a) (i) Most candidates realised that photographs need annotations such as north arrow, scale and key but a wide range of responses was given, many of which were not relevant or did not use the stimulus material.
- (ii) Candidates often wrote about the 'the use of photographs' rather than 'photographs as a source of data' and so reached no more than mid Level 2. This is an area that could be included in all parts of teaching, where photographs can become an integral part of the study of the topic and their uses highlighted and explained.
- (iii) There were many good responses to this question as the study of sand dunes is an integral part of the AS specification. As such, no candidate should have been disadvantaged. However, there were a surprising number of wayward responses where a range of inappropriate techniques were displayed. Mastery of techniques in terms of *which*, *why* and *how* was often superficial. Knowledge of kite diagrams was limited and many candidates missed the point of enabling comparison of all the data given.
- (b) Many candidates did not understand the term 'spatial sampling'. This is a basic geographical concept. Candidates need to understand and be able to use correct terminology, especially in technical papers such as this. Having said all of this, the top candidates produced well-crafted answers that were a pleasure to read.

Question 3

- (a) (i) Chloropleth maps seemed not to be understood by some candidates. Many wrote superficially about what they saw in the stimulus material. There was usually an imbalance between the advantages and disadvantages and many of the more subtle nuances were missed completely, such as the map hides small area variations within each of the regions.
- (ii) Most candidates coped with some alternative methodologies
- (iii) This was one of the strongest parts of the paper. Most candidates correctly identified the test and wrote a 'recipe' about how to conduct the process. The explanation aspect was more problematical and was a very good level 3 indicator. Understanding of critical values and significance testing was good. This is a significant improvement upon previous years and was a most welcome surprise!
- (b) The best answers highlighted both sides of the question; when it was vital and when it was inappropriate. The best candidates integrated examples of their field work into the answer which gave it depth and this was a key discriminator. The weaker candidates struggled because many were unable to address the issue of whether a statistical test was or was not appropriate. They did not make a distinction between types of test. Stronger candidates talked about inferential statistics and distinguished between types of statistical testing, naming tests and stating when they could be used. This discursive approach separated the candidates and was a good discriminator. However, all candidates had something to say on the subject and so this question proved to be one of the most popular.

Grade Thresholds

Advanced GCE (Subject) (Aggregation Code(s))
June 2008 Examination Series

Unit Threshold Marks

Unit		Maximum Mark	a	b	c	d	e	u
2680	Raw	100	71	64	57	50	43	0
	UMS	120	96	84	72	60	48	0
2681	Raw	75	50	45	40	35	31	0
	UMS	90	72	63	54	45	36	0
2682 01	Raw	60	39	36	33	30	27	0
2682 02	Raw	15	12	10	8	7	6	0
2682 Opt A	Raw	75	51	46	41	37	33	0
	UMS	90	72	63	54	45	36	0
2683	Raw	90	69	61	54	47	40	0
	UMS	90	72	63	54	45	36	0
2684	Raw	120	86	78	70	63	56	0
	UMS	120	96	84	72	60	48	0
2685	Raw	90	76	68	60	52	44	0
	UMS	90	72	63	54	45	36	0
2686	Raw	90	59	51	43	35	28	0
	UMS	90	72	63	54	45	36	0

Specification Aggregation Results

Overall threshold marks in UMS (ie after conversion of raw marks to uniform marks)

	Maximum Mark	A	B	C	D	E	U
3832	300	240	210	180	150	120	0
7832	600	480	420	360	300	240	0

The cumulative percentage of candidates awarded each grade was as follows:

	A	B	C	D	E	U	Total Number of Candidates
3832	25.5	45.6	64.8	79.2	90.3	100.0	4,601
7832	30.9	62.5	85.0	96.5	99.4	100.0	3,874

8,475 candidates aggregated this series

For a description of how UMS marks are calculated see:

http://www.ocr.org.uk/learners/ums_results.html

Statistics are correct at the time of publication.

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