

# GEOGRAPHY

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Paper 9768/01  
Global Environments

## Key messages

### **Data Response Questions**

The key message is: the necessity of responding directly to the data provided.

These data response questions are new to this paper this session. They appear in each of the options in Sections A and B and are split into two parts: the first answer carries 4 marks and demands a direct response to and interpretation of the data. The second part, which carries 6 marks, demands an extension to the data interpretation but should, at the same time, contain direct reference to the resource provided. Identification of features is usually demanded in the first part. It is largely straightforward and needs one-word answers or a simple description of a feature or features. The second part needs direct reference to the data. For instance, in Question 3 the demand was for an explanation of the formation of the spit shown in the photograph. Generic answers were not sufficient so the directions and orientation of the spit, using photographic evidence was required. In question 6 some engagement with the blog in Figure 5 quoting figures from it; mention of the use of renewable energy to reduce and, therefore, mitigate global warming would have added to an answer.

### **Essays**

These provide a choice of question. They carry 15 marks and are assessed with the use of levels marking.

The key message is: engage and interpret the key words in the question. The command words and the subject that should be expanded upon, described and explained, before starting the argument. For instance, a traditional arid environment lifestyle; the climatic parameters of an arid environment which should be precipitation and temperature; ENSO events; biodiversity, sustainable tourism, and hard engineering in the context of coastal erosion processes.

Having established the context of the question, then the substance both sides of the argument and an evaluation should follow.

## Comments on specific questions

### **Question 1**

- (a) (i) Most responses were correct although some candidates confused two of the dunes.
- (ii) The principal omission here was application of process to form. Few candidates could explain how the supply of sand and wind direction produced the particular form of the dune. Most candidates scored 3 out of 6 for this reason.
- (b) (i) This question was quite well done because candidates know their case studies and can discuss the way in which the management relates to aridity and water supply. Elaboration of the lack of water to soil was limited to in terms of 'degradation' although that process was not developed. Hence the physical environment was seen in narrow terms. These answers were largely simplistic and the evaluation did not embrace both hot arid and semi-arid physical environments in detail. Often the distinction made at the beginning was not addressed further into the argument. Application of strategies needed to acknowledge water supply, temperatures, PE rates and the consequences for the physical, economic, social and even political aspects of the environment.

- (ii) It was important to establish how people have traditionally lived in these environments and then to address how they have had to adapt to changing circumstances. Few addressed the word 'compromise' specifically although there was some efforts at evaluation using case studies. Conclusions, which considered future threats, might have raised the performance but few candidates in any of the responses covered this. Such future change is often a way of extending the argument and expressing something new as a final commentary and can be illuminating and occasionally original.

### Question 3

It is noteworthy that the greatest stumbling block to full marks in part (a) was the lack of addressing this spit. The descriptions identifications and explanations needed to be more than generic taking into consideration the directions shown and the orientation of the spit in this photograph. Many understand and can explain the recurvature, its form and main features but cannot relate it to the specific conditions operating. Of those who tried one or two did an admirable job and seemed to appreciate the formation of this particular spit.

- (a) (i) Haloseres were covered by few candidates. Whilst mangroves were understood and their threats covered salt marshes were less well-known or documented. Both really are needed for a complete answer. Threats, conservation and in the case of salt marshes, re-creation in the UK were relevant to this response also.
- (b) (ii) Coastal environments need management because of the current and increasing threats of erosion. This erosion targets both the cliff foot and cliff face where hard engineering projects can be usefully applied. Most candidates are familiar with cliff-foot schemes like gabions, groynes and sea walls, which were all covered in some detail, but the relation between the strategy and erosion was not explained. For instance, redesigned sea walls prevent beach scour and are therefore effective barriers to destructive wave action. Consequently the key link was not made which would have demonstrated full understanding the reason why they are the preferred option. Cliff-face methods were dealt with by only a few of the better candidates. Managed retreat was needed as well as beach nourishment to demonstrate not only the current thinking about preferred options of soft engineering but also because they are cost-effective they are also an excellent option. Salt marshes are an excellent option as they offer a buffer to potentially destructive waves (the result of increasing storm events) and act as sponges by absorbing encroaching sea water. They absorb additional water thus protecting both the physical and human environments behind the marshland. So many candidates merely discussed the wetland habitat provided by such schemes, which arguably marginalizes their true value and purpose.

### Question 4

- (a) (i) This answer was well done most candidates because they know the details of shifting cultivation.
- (ii) The relationship between population density and traditional farming escaped most. As population numbers rise and densities increase so the fallow period of regrowth between phases of clearance is reduced because of pressure on the land, consequently, the yields may not support the population even at a subsistence level as they have in the past. That message was the key to the best answers. Encroachment by outside influences does have an impact but the ways in which the traditional lifestyles have adapted were not well-related to the larger-scale commercial farming practices mentioned.
- (b) (i) There were some good answers to this question. There was detail about the reasons for canopy layer biodiversity, appreciation of the process of photosynthesis and evidence of an understanding of this functioning ecosystem. The best candidates could give examples of species how they function and inter-relate and they were able to evaluate the fact that the forest floor may compete in terms of biodiversity with the canopy although the nature of the flora and fauna may be different.
- (ii) The focus of these answers were case studies and description of how tourism is organised in each case study. There was little application to the functioning ecosystem and little explanation and evaluation of how in terms physical geography apart from the scheme is or is not a success. Little critical analysis in relation to the physical environment appeared. This was disappointing. After all it is an evaluation in terms of a functioning ecosystem that is required. Application of the human to the physical environments is important to demonstrate understanding and meaningful evaluation.

## Question 6

- (a) Only two or three responses exhibited an understanding that global warming is the increasing temperature of the atmosphere. The simple principle underpinning the definition is that the sun heats the earth and the earth heats the atmosphere and if there is more absorption of heat by the gases of the atmosphere then the temperature of the atmosphere will rise. The acknowledged build-up of greenhouse gases in the atmosphere suggests that there is a reason for this theory of global warming.

All candidates knew what renewable energy was and gave examples. They also needed to develop the definition to demonstrate knowledge of the role of the IPCC accurately.

- (ii) Mitigation and adaptation were incorrectly applied by many candidates and so few could really engage with both sides of the argument. Adaptation was often better explained and illustrated than mitigation.

What was missing from both these extended pieces of writing was an appreciation of meteorological processes and links between processes and the weather.

- (b) (i) Short-term variations as a concept was explained by few responses. The idea of timing was also not seen in responses with only a few reference to seasonal variation was mentioned. The weather systems of an area like the UK are well known descriptively so these answers were detailed and knowledgeable. It was in the higher order skills of elements of explanation and evaluation that were not explored. Short-term variation is perhaps defined as hourly, daily, weekly or even monthly. The passage of a warm front can take 24 hours, the contrast between warm front rainfall and cold front rainfall could have been explored, as could the length of time an anticyclone might sit over the UK especially if it is a 'blocking anticyclone'. Few mentioned these. The role of the upper atmosphere and the links with surface conditions was rarely mentioned to provide some explanation of the weather systems and this type of engagement would raise answers to the top level.

- (ii) ENSO events needed to be defined, described and located and developed before embarking on discussion of global impacts. These impacts are often extreme weather events and, it is thought, have increased in intensity and frequency over the last years. Reference to such observations providing a structure to the essay would have been ideal but most candidates just tended to provide a catalogue of events in a somewhat random fashion. The recent forest fires in Canada and the monsoon season was identified and discussed in detail by many. However it would have been valuable had candidates mentioned delays failures or exacerbated rains in the case of the Indian monsoon. A lack of structure and clear argument was one of fundamental aspects of these answers that were omitted.

There were few plans submitted as part of the thinking processes on any of the scripts which perhaps indicates some squeezing of time give the new types of questions this session.

# GEOGRAPHY

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**Paper 9768/02**  
**Global Themes**

## **Key messages**

- Knowing the content of the Generic Mark Scheme (GMS) and understanding its application is fundamental to success. All pieces of extended writing for Paper 2 are assessed using this framework.
- The skills of deconstructing the question set and planning to address all its elements are highly valuable.
- As extended writing, Paper 2 essays need to be of appropriate length in order to develop in both depth and detail. Short pieces of work (in most candidates' handwriting, two sides of an Answer Booklet or less) are unlikely to achieve high Level awards. The vast majority of essays this year were of an appropriate length, including some long pieces.

## **General comments**

This seventh examination of Cambridge Pre-U Geography (the first of the revised syllabus) saw a slight decrease in candidates from 2015, and the cohort remained relatively small. Coverage of the syllabus is uneven in terms of choices, with no essays on two Themes: People, place and conflicts and Energy & Mineral Resources.

Knowing and understanding the GMS is foundational to achievement on Paper 2. Teachers are encouraged to use the GMS with candidates throughout the teaching programme, both as a measure of achievement for a piece of work and as a means of demonstrating areas for improvement.

One way to enhance performance is to develop the skills of deconstructing the chosen title into its constituent elements, e.g. command word to follow, subject area, key idea(s). Then a candidate can plan to answer the actual question set, and to cover all aspects of the question. This will ensure the response addresses the bulleted descriptor in the GMS concerning focus and also keeps the response away from irrelevance or the tendency to go off into straight recall of learned material.

Rewards to individual essays were made using all 5 Levels of the GMS, with Levels 3, as expected, being used the most intensively. At this Level, there was some very impressive quoting of relevant texts, recent articles and often a clear account of the relevant theories. A small number of essays were awarded marks in Level 1 usually for failing to follow the advice in the previous paragraph.

In assessing responses, the GMS is used along with indicative content for each question. This indicative content is prepared from the syllabus content and from contemporary geographical thought, research and publications. Whilst the GMS captures the essential qualities of responses in 5 mark bands, the indicative content is what the name implies: some indication of the probable content or possible approaches to the questions and titles set. Examiners do not expect to find all the indicative content in any one response and candidates are free to develop their own approaches in their essays.

The quality of written communication was satisfactory to excellent (this has notably improved over the lifetime of the syllabus), outstanding work being seen in the vocabulary for and expression of analysis, evaluation and argument in particular. Candidates showed a knowledge base ranging from sound to impressive. The best candidates focused clearly on the demands of the question and showed a mature understanding of the subject matter, supporting their discussion with appropriate and located examples.

Organisation is one of the assessment criteria for extended writing in Pre-U Geography. Well-structured responses tended to have a discernible beginning (introduction), middle (evidence, analysis and argument) and an end (conclusion). As in previous years, the quality of introductions proved a good discriminator. A purposeful targeted start, which accurately defined key terms in the question, generally led to a well-

structured, focused essay. Many effective conclusions were seen, that drove home the candidate's position and did far more than simply recap the key points of the essay. All essays need a conclusion (the seventh bullet point in the GMS) and those that lacked one were marked down.

There was little evidence that candidates had suffered time issues and there were no infringements of rubric.

## **Comments on specific questions**

### **Section A**

#### **Migration and Urban Change**

##### **Question 1**

Candidates generally struggled to get to grips with this question. Detailed knowledge of 'rural source areas' was weak, despite this being specifically named in the syllabus. LIC examples from the past 50 years would have been appropriate as would 19th and 20th century HIC examples. Rural depopulations in many countries, including the UK and France, are well documented and could have been profitably applied here, but were lacking. Centres may want to amend their Schemes of Work to include such examples. Equally, 'urbanisation' was poorly defined in many cases (the same happened last year), and such inaccuracy often led a response astray. Rural-urban migration is part of the urbanisation process, but candidates should also have discussed natural increase/decrease. Other content (e.g. urban sprawl, green belts, counter-urbanisation and remittances) could have been valid if linked convincingly to 'rural source areas' but few achieved this. Many essays became an exercise in reproducing what the candidate had revised, often ignoring the question. Such approaches included descriptions of the pros/cons of LIC urban slums. Several tried to shoehorn Ravenstein or Lee into their answers (because they had learned them?), generally to little effect. Many candidates might have been better off choosing **Question 2**.

##### **Question 2**

With an exam date one month before the UK EU Referendum and with the subject matter being such a dynamic, fascinating global topic, the quality of responses on this question was generally disappointing. Thankfully no candidates slipped into stereotypical responses. Most gave a 'standard' pros/cons of economic migration description (brain drain, pressure on services, willingness to do low skill jobs, rising social tensions – rarely explained) but knowledge was largely superficial and poorly located. Such arguments have been much debated in recent years and could be profitably be added to Centres' Schemes of Work. Several profitably flipped the question to argue how donor countries might welcome greater international freedom of movement of labour in order to benefit from remittances. Some candidates were very keen to reproduce what they had learned about the 'refugee crisis', but such knowledge had to be specifically linked to the question in order to be creditworthy. No candidate discussed migration controls in any detail, despite being the subject of a line in the syllabus and extremely topical.

#### **Trade, Debt and Aid**

##### **Question 3**

This was the less popular choice on this topic. Candidates were generally able to use their knowledge of FDI in a way relevant to the question, although did revert to a 'standard' pros/cons of TNCs response. The best responses incorporated named and located examples to support the points made. The role of Chinese FDI in Zambia was commonly quoted. Overall, candidates seemed to have grasped how FDI can lead to debt, especially in a majority world context. The HIPC initiative (in Tanzania for example) was also used to examine how debt relief might be achieved. Weaker answers, though still displaying knowledge, tended towards description and lacked the detail required by the command word 'Examine'.

#### Question 4

Candidates benefited by following the structure suggested by the question, tackling the roles of trade, remittances and aid in separate paragraphs. Good answers provided a sophisticated examination, focused on the link between these and globalisation and were supported by convincing exemplar support: trade within the context of NAFTA, remittances within the context of Mexico and the Philippines along with examples of bilateral and tied aid were commonly discussed. Some spent some time examining other factors that have led to the globalisation of the world economy. Weaker responses described trade, remittances and aid but failed to make a clear link with globalisation (focus on the question) or were lacking in supporting exemplar material.

#### People, place and conflicts.

No responses were received on this topic.

#### Section B

#### Energy and Mineral Resources

No responses were received on this topic

#### The Provision of Food

#### Question 9

Good responses adhered to the evaluative thrust of the question and supported their answers with examples such as the Green Revolution and the EU's Common Agricultural Policy, usually pointing to the negative environmental impacts of such policies as reasons why physical geography should not be disregarded. Several candidates profitably discussed ways of adapting to sub-optimal physical geography, e.g. soil, relief, climate, etc., often in the context of the Optima Limits Model. Although many responses were dominated by various types of cultivation, it was good to see that fishing was included by many candidates in their discussions. Pastoral farming was missing from several responses and this could profitably have been included. Lower level responses tended to be descriptive without addressing the evaluative nature of the question.

#### Question 10

The more popular option of the two questions on this topic. A common approach, which generally worked well, was to address local scale initiatives and international initiatives separately and then make an assessment about their impact on global food security. Some candidates failed to accurately and explicitly define 'local' and 'international'. Some of the examples which were to support the discussions included contrasting Singapore and the Sertao region of NE Brazil to illustrate food insecurity, the use of the Green Revolution in Punjab, the EU Common Agricultural Policy, simplified hydroponics in Ecuador and the system of rice intensification (SRI) in Tamil Nadu. The strongest answers focused on 'global' food insecurity and provided some degree of assessment. Some referencing of Schumacher was welcome. Lower level responses, whilst showing some knowledge and understanding of food insecurity in general, did not address the evaluative aspect demanded by the question or address the global scale required. Some responses prematurely dismissed local initiatives as being 'too small'.

#### Tourism Spaces

#### Question 11

Once again, responses on this topic were better: more academically focussed and analytical rather than GCSE level descriptions. This question sought a discussion and better responses discussed sustainability throughout and kept this focus. Theory (Plog, Marlow) was best used to contextualise the discussion and not to lead it. Accurate, contemporary data strongly aided the credibility of some responses.

### Question 12

This question was intended to elicit a broad range of responses and it achieved this. High quality responses answered the (whole) question explicitly and did not just slip into a description of revised knowledge. The term 'modern media' includes the delivery of positive and negative knowledge of tourism spaces to consumers. Some candidates argued that shocks to tourism spaces (e.g. Egypt, Tunisia, Turkey and Greece) override this increase in knowledge without appreciating that news of such shocks spreads further and faster due to contemporary mass media. Some candidates did try to shoehorn Butler and Blackpool into their responses, generally not convincingly. Candidates should broaden their range of contemporary examples as this is such a dynamic, fascinating global topic.

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Paper 9768/03  
Geographical Issues

## General comments

The paper was a very fair test of candidates' knowledge and understanding at this level and across the broad range of geographical concepts and issues. The majority of the candidates performed satisfactorily and excellent marks were achieved by a significant number. There was an impressive range of knowledge and understanding, coupled with the ability to present a cogent argument.

Most candidates performed extremely well on the resource based questions showing a good ability to analyse often contrasting methods of displaying information. Excellent marks were usually achieved for these questions. Some Physical Geography and many Human Geography questions produced excellent responses, but, as in previous years, there was a difference in the levels of knowledge and understanding between the two components. Answers to the Physical Geography questions were sometimes deficient in some areas. There was a slight indication of an increasing standard in the answers involving Hydrological Hazards but these responses are still less strong than responses to the other hazards. This discrepancy between Physical Geography and Human Geography may reflect the different nature of the questions and perhaps a lack of realisation of the precision needed when discussing physical topics. The deficiency often involved an understanding of basic concepts and physical processes. The interaction between physical processes and human activity was better understood. However, it needs stressing that to evaluate this interaction, it is important to possess a thorough understanding of the operation of the physical processes.

The answers to questions in **Section C** were often excellent and the breadth of knowledge and understanding shown by a significant number of candidates was impressive. However, there were some instances where the full implication of the question was missed. This was especially prevalent in answers to **Question 9**.

Overall the paper was completed by most candidates, although there were occasional indications of poor time management. Some candidates failed to note the marks available and to consider the length of time required for sub-questions. This led to the answers to questions in **Section C** sometimes being rushed. The volume of information provided by many candidates was very impressive.

## Comments on specific questions

### **Section A**

#### **Question 1**

- (a) Lahars were understood by most, however occasionally lahars were described as being essentially composed of lava.
- (b) There was an excellent response to this resource with all of the hazards receiving some analysis. There was good use of the locational information provided.
- (c) Although there was a basic understanding of pyroclastic flows, there is still confusion as to their detailed nature. There was often confusion with ash fallout and even lava flows. However, their speed and temperature were well known, thus emphasising their hazardous effect.
- (d) There was often some lack of precision in the discussion of the prediction techniques which meant that responses were not as strong to this question. The question asked for explanation and assessment, thus simply describing the techniques without specifically relating them to prediction limited the credit that could be given.



## Question 2

- (a) This question proved challenging for many candidates. It was expected that candidates would choose two of the categories noted in the syllabus namely; by scale, by nature of the hazard, by scale or intensity such as wind speed. However, some candidates classified them in terms of their effects, such as by the number of casualties. This is a classification of effects not a classification of the hazards.
- (b) Most candidates were able to provide a good analysis of the pattern of drought intensity.
- (c) Many answers to this question failed to define the elements being discussed and some candidates answered the entire question without stating what drought was. There were answers where it would have been impossible to decide what the question was about with lack of water not mentioned once. Answers often mentioned the failure of crops, starvation etc. with no reference to lack of water resources.
- (d) There was some confusion over the nature of regional scale atmospheric hazards. The syllabus lists only tropical storms and cyclones as regional scale meteorological hazards. Tornadoes are local scale as is hail. Thus, much of the discussion received little credit. Also, many candidates found it very difficult to explain the way in which tropical storms and cyclones were related to the global energy budget. Most candidates knew the conditions necessary for cyclone development but few were able to relate it to global energy budgets.

## Question 3

- (a) This question posed few problems with most candidates having some idea of the nature of permeability, although there was some confusion between permeability and porosity.
- (b) Most candidates were able to provide an analysis of the relationship between precipitation and discharge but quite often failed to notice the effect of the second precipitation peak.
- (c) There were many excellent answers to this question with very detailed accounts of the modifications of the river shown in the figure. The only slight discrepancy was an incorrect assessment of the reason for raising the bridge arches.
- (d) This was a good example of a failure to define the terms at the start of the answer. In most answers it was difficult to discover what short-term and long-term meant in the minds of the candidates. If they had been defined at the start, the answers could then be assessed in terms of how well the answers had addressed the two sets of impacts.

## Section C

### Question 4

- (a) Most candidates were able to offer two relevant crimes against people.
- (b) Candidates had little trouble in describing the relationship between percentages of firearms offences and population shown in the figure although there was the occasional misinterpretation of the data.
- (c) Most candidates emphasised economic aspects rather than a balanced account of social and economic characteristics.
- (d) This was a wide-ranging question. Most answers concentrated on border controls but cooperation between international agencies was often discussed.

### Question 5

- (a) Candidates gave good answers identifying the ways diseases may be spread.
- (b) The identification of patterns causes problems for some candidates. Whereas most candidates attempted to describe a pattern or perhaps a lack of pattern, a few described the number of confirmed cases week by week with no general synthesis.

- (c) Many answers developed the theme that spatial variations in health were the result of environmental factors, such as the distribution of the anopheles mosquito and malaria incidence. Others, answered at a national scale with respect to variations in health provision and socio-economic characteristics. All such approaches were valid and there were many excellent answers.
- (d) The key to a good answer here was in the assessment. Many candidates simply described government action and action by other agencies, such as NGOs, with no assessment. Thus, there was often little discussion as to why one approach was better than the other. However, the detail and examples provided were exemplary.

#### Question 6

- (a) This question proved challenging for some candidates who were unaware that there was a generally accepted definition of absolute poverty. Those that did also recognised that relative poverty was poverty compared to the norm for a particular country or area.
- (b) The resource was challenging for some candidates but most were able to interpret the map and produce an acceptable description of patterns. Occasionally, there was confusion over what the map was showing. A sizeable minority interpreted it as showing poverty rather than changes in poverty. However, most candidates produced a satisfactory answer.
- (c) Many answers lacked any description of what entailed multiple deprivation. This made discussion of reasons for the emergence of multiple deprivation very difficult. The question stated that it was the emergence of areas of deprivation that needed explanation. Thus, there was an implied time element, such as why some areas, formerly not deprived, became areas of multiple deprivation. Simply explaining the occurrence of such areas only partially answered the question.
- (d) Very few candidates defined the meaning of infrastructure in their answers and so discussed elements that were not within the definition of infrastructure. A number of candidates interpreted the question as referring to investment in a general sense.

#### Section C

#### Question 7

This was a popular question and responses were usually well-informed. Haiti was the area that most candidates used as their example. Detail was often excellent and many answers were well structured. However, there were instances where answers were in two parts; one describing the physical factors and one describing the human factors, with very little integration or assessment. Thus, the geographical detail was good but was not used efficiently in producing a balanced and integrated argument.

#### Question 8

This was quite a popular question. There was often a limited interpretation of physical geography. Many candidates simply assumed that it related to location, such as located over a major fault line or in an area where tropical storms frequently occurred. Answers were often more detailed when discussing the human factors, especially when the impacts were considered. However, there were some excellent answers where the human elements and factors of physical geography were integrated throughout the answer.

#### Question 9

This was the least popular question in this section. The 'increasing' aspect in the question was often not addressed. Many candidates simply discussed the gap between countries at varying levels of development rather than whether the gap was increasing. Those that did realise that whether the gap was increasing, the same, or decreasing, was the focus of the question produced some stimulating responses. The ability of some candidates to produce a strong, reasoned argument was impressive. The overall structure of answers to this question was good.

# GEOGRAPHY

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<p><b>Paper 9768/04</b></p> <p><b>Research Topic</b></p>
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## **Key messages**

- (1) Overall, the impression is that the general standard on this paper has improved year on year.
- (2) Candidates should be aware that in those questions testing data response skills (**Question 1, 2(a), 5, 6(a), 9 and 10(a)**) no credit is awarded for explanation. Even though these are skills questions a small minority of candidates attempt explanations (“this is due to ...”) which attract no credit.
- (3) Where answers are supported by named and located examples it is important that the examples chosen illustrate different aspects of the answer and do not simply offer a repetition of points already made by the candidate.

## **General comments**

There was no evidence that candidates ran out of time and there were no rubric infringements this year. For the extended mark questions (those worth 10 or 15 marks) candidates need to use the material they have learned in a way relevant to the question. In particular, these questions usually require candidates to make an assessment of some kind. It is good practice to frequently refer back to the question and to have a concluding paragraph which specifically addresses the evaluative aspect.

The syllabus requires the individual research investigation to be worded as a question or a hypothesis. In the 15 mark question based on the investigation candidates are required to begin by “stating the question or hypothesis that you investigated.” Although there is no credit for the question or hypothesis, it provides an important reference for the evaluation which most of these fieldwork questions require candidates to perform. If the title is not framed as a question or hypothesis (e.g. “For our investigation we studied .....”) evaluation becomes much more difficult.

With regard to fieldwork for the individual research investigation, it is understood that for some centres one day out of school is all that is possible. Consequently, investigations must be planned so that enough data to support a meaningful investigation can be collected in the relatively short time available. In such cases, it may be possible to test some of the data collection methods in the classroom or around the School site so that errors can be minimised before the actual fieldwork day. This would be an acceptable form of pilot study.

## **Comments on specific questions**

### ***Section A Small-scale Ecosystems***

#### **Question 1**

- (a) Candidates coped well with this, many scoring full marks.
- (b) Again, most candidates scored well. To get full marks candidates had to include at least one comparison and one contrast.
- (c) Although a complex resource many candidates produced a very good systematic attempts to analyse the trends shown on the resource. The best answers addressed the evaluative demand of the question.
- (d) There were some good answers here which addressed the pros and cons of each of Figs. 1 and 2 and suggested other resources which may be of use, recognising that the question has a much

wider scope than just woodland ecosystems. High quality answers used their discussion to produce an evaluation of the usefulness of Figs. 1 and 2 as requested by the question. An evaluation anywhere on the spectrum was acceptable, as long as it was well supported.

### Question 2

- (a) Most candidates scored well here by describing the main focus for human activity (e.g. the road, car park, toilets, water sports and boat launch) in the north of Beadnell Bay and recognised that the southern area was more protected (e.g. the bird sanctuary and the lack of footpaths through the dunes). Candidates who linked their comments to conservation yet at the same time enabling public access gained full credit.
- (b) A number of candidates wrote about management of small scale ecosystems in general without really addressing the “how far do you agree” focus of the question. The best answers used their knowledge of small scale ecosystem management to address the evaluative nature of the question. Supporting material from Ainsdale Dunes National Nature Reserve near Southport and the work of the National Trust at East Head spit in West Sussex was often well used to support the assessment. It is worth re-iterating that, given the modest mark and time allocation for this question, a wide ranging answer is not expected nor required. The quality of argument is the key to scoring well, though there does need to be some exemplar support.

### Questions 3, 7 and 11

A number of candidates tended simply to describe the primary and secondary data they had used. Their answers would have been improved if they had attempted to assess the contribution of each of these types of data to the overall investigation. The best answers did exactly that by discussing the pros and cons of primary data and secondary data in their investigation and then drawing a conclusion based on their discussion.

### Questions 4, 8 and 12

Good quality answers not only described the limitations of the methods and the data collected, but also went on to provide an assessment by suggesting whether the limitations had a significant or a negligible impact on the study overall. In terms of the data collected candidates discussed sampling, representativeness, reliability, precision and accuracy while in terms of methods of data collection the equipment used, the method itself and sources of error were frequently addressed.

The question is worded in the past tense so that candidates must consider what they actually did. No credit is awarded to comments about what should have or could have been done to improve their investigation.

### **Section B: Managing Rural Environments**

#### Question 5

Too few answers were received to make any meaningful comment

#### Question 6

Too few answers were received to make any meaningful comment

### **Section C: Fluvial Geomorphology**

#### Question 9

- (a) Almost all candidates scored full marks.
- (b) Most candidates coped well with this, supporting their comments with data taken from the graph. For full marks candidates needed to comment about differences within the time frame for the two meanders, for example “a much larger decrease in sinuosity for meander 7 (of 0.5) between 1997 and 2006 than the smaller increase (of 0.3) for meander 8”.

- (c) Many candidates scored well here. The best answers provided both contrasts and at least one similarity, supporting their answers with distances and directions and using technical terms such as channel, neck and cut-off.
- (d) There were some good responses to this question. A successful approach followed by many candidates was to take each resource in turn and assess their strengths and limitations then go on to suggest other resources which might be of use to those studying river meanders. The focus of these answers was assessing the value of the 2 resources, as required by the question. Answers which simply described the data shown in Figs. 7 and 8 could have been improved by following such an approach.

**Question 10**

- (a) Most candidates scored well here by describing the general increase in the height of the river bed while at the same time pointing out the considerable fluctuations which occur (e.g. 1969 to 1970). The best answers supported their observations with dates and heights from Fig. 9.
- (b) There were some good answers to this question with candidates often displaying a sound knowledge and understanding of fluvial landform development. High quality answers focused on the words “sudden” and “dominant” and framed their evaluation around these. A judgement anywhere on the spectrum was acceptable, but had to be supported with named and located examples of landforms.