GEOGRAPHY

Paper 9696/11
Core Physical Geography

Key messages

This has clearly been a difficult year for many candidates and their achievements, as reflected in answers to this paper, reflect great credit on themselves and their teachers.

The candidates' use of English and the structure of the answers continues to improve. General fluency is often impressive but sometimes the candidates need to display clearer understanding as to the precise demands of a question. Terms such as 'describe' and 'explain' are specific directions, and therefore detailed explanations add little to questions specifying description. On the other hand, explanations form a core part of many answers, both in ***Sections A*** and ***B***. However, simply listing factors without additional qualification is seldom adequate. The identification of weathering factors other than rainfall in **Question 6(c)** is an example, where some candidates listed rock structure, relief, temperature, vegetation etc. but without adequate explanation.

Candidates need to be aware of the marks allocated to different questions. **Part (c)** in ***Section B***, is itself worth 25 per cent of the total marks for the paper. The question chosen in ***Section B*** is worth 50 per cent of the total marks. The fact that candidates have to answer three questions from ***Section A*** can influence how they allocate their time. It may mean that insufficient time is spent answering the chosen ***Section B*** question, and the final evaluation/assessment omitted or curtailed. No candidates failed to complete the paper, and there were few rubric errors generally. Some candidates attempted to answer all questions in ***Section B***.

General comments

The examination covered a range of topics and there is no longer a general tendency to avoid questions on Atmosphere and weather. However, in this particular instance, **Question 5(c)** proved difficult, and may well have discouraged some candidates.

The data in ***Section A*** consisted of two diagrams and a photograph. The diagrams were simple, standard and easy to work with. These caused no problems for the candidates. However, the photograph proved more difficult in terms of identifying mass movements, and particularly when trying to identify more than just 'slides'. In this instance, identifying slides in two separate locations was acceptable.

Diagrams are to be encouraged where appropriate. No questions specified diagrams but some were offered by candidates in answers to **4(b)**, **5(b)** and **6(a)(ii)**. The drawing of diagrams is less common than it was and therefore they are sometimes of average quality. This is unfortunate as it is a valuable geographical skill to practise.

However, the overall impression is once again positive. Candidates approach their work intelligently, effectively and with commitment.

Comments on specific questions

Section A

Hydrology and fluvial geomorphology

Question 1

(a) **Parts (i)** and **(ii)** were generally well answered.

(b) Answers were varied and it was surprising that more use was not made of Fig. 1.1.

(c) The majority of candidates simply discussed rural and urban differences, and confined discussion to surface flow. There was little discussion of flows below ground.

Atmosphere and weather

Question 2

(a) There were quite a wide range of differences to choose from and most candidates gave effective answers.

(b) Most gave correct answers, but it is important to display the calculation which led to the final value offered, and to correctly label that value.

(c) This was a wide ranging question with a variety of valid explanations possible. Few achieved high marks by developing those ideas. There was a tendency to list without offering full explanations.

Rocks and weathering

Question 3

(a) Candidates assumed that the two mass movements specified would be different types, but identifying the locations of two slides was acceptable.

(b) Nearly all candidates could offer one valid explanation but not in sufficient detail to score high marks.

(c) There were some valid ideas but sometimes they were listed rather than explained.

Section B

Hydrology and fluvial geomorphology

Question 4

(a) Most candidates made a reasonable attempt to define the terms in **(a)(i)**, 'traction' being better understood than 'cavitation'. The answers to **(a)(ii)** were variable. Some did not understand 'conditions required' as specified and drifted on from traction to other methods of erosion.

(b) Levées were clearly understood, and illustrated, but not to a very high standard. Floodplains were less convincing, with little understanding of the lateral movement of rivers.

(c) There were useful general comments on the effects of the level of economic development and the commitment of governments when attempting to reduce the impact of river floods, but the exemplar material for hard and soft engineering lacked sufficient detail.

Atmosphere and weather

Question 5

Few candidates attempted this question, and so it is difficult to make definitive comments. Over the past few examination sessions, Atmosphere and weather has become a more popular topic, but in this instance candidates found both questions **Question 5(b)** and **Question 5(c)** very demanding.

(a) There was reasonable understanding of the definitions in **(a)(i)**, but explanations of the formation of dew in **(a)(ii)** were confused.

(b) No correct answers.

(c) Explanations were limited and not always confined to 'atmospheric' impacts.

Rocks and weathering

Question 6

(a) Pressure release was not clearly explained in **(a)(i)**, but ocean trenches in **(a)(ii)** were more convincing.

(b) Gravity and water were used to explain movement on slopes but only in a very generic way.

(c) Carbonation and freeze/thaw were popular weathering processes but unfortunately there was a tendency to incorporate erosion into the answer.

GEOGRAPHY

Paper 9696/12
Core Physical Geography

Key messages

This has clearly been a difficult year for many candidates and their achievements, as reflected in answers to this paper, reflect great credit on themselves and their teachers.

The candidates' use of English and the structure of the answers continues to improve. However, candidates need to have a clear understanding of the demands of the question. Terms such as 'describe' and 'explain' are specific directions. Far too often description was provided when explanation was required and, more frequently, explanation when description was required. This was mostly the case in the resource-based questions which usually ask for information obtained from the resource. Explanation was not required as that was usually asked in a later question. Thus, some candidates found themselves repeating explanations in both parts of the question. The examination is not simply a factual test of subject knowledge but also a test of the extent to which candidates have the wider skills of selecting and applying their knowledge to meet the demands of a specific question. This is especially the case of questions in ***Section B***.

Candidates need to assess how much is required in an answer with reference to the total marks available. Far too frequently, answers for which six marks were available, were often very thin with only a few lines in total. The ***Section B*** question, as a whole, is worth 50 per cent of the paper and the **Part (c)** question is worth 25 per cent of the whole. Thus enough time needs to be left after answering ***Section A*** questions for the ***Section B*** questions. It also needs to be emphasised that the **Part (c)** question in ***Section B*** always has some evaluative component. No candidate failed to complete the paper and there were few rubric errors. There were very few who attempted all the questions in ***Section B***.

General comments

Diagrams are to be encouraged where appropriate. No questions specified diagrams but some were offered by candidates in answers to **4(b)**, **5(b)**, **6(a)**, **6(b)** and **6(c)**. The drawing of diagrams is less common than it was and therefore they are sometimes of average quality. This is unfortunate as it is a valuable geographical skill to practise.

However, the overall impression is positive with candidates clearly approaching their work intelligently, effectively and with commitment.

Comments on specific questions

Section A

Hydrology and fluvial geomorphology

Question 1

(a) There were many interpretations of the landform marked A but all variants of gorge or steep-sided valley were relevant and credited.

(b) Questions often ask for description of features or a landscape from a photograph. This is a distinctly geographical skill and is something that needs to be practised. Descriptions in this instance were often very simple and amounted to naming a landscape feature with no attempt at even a basic descriptive element. Some answers even resorted to a simple list of features. There was also a tendency to describe features that were not visible on the photograph but which candidates expected to be there. Many interpreted the river as possessing a meandering channel

when it was only slightly sinuous. Having thought there were meanders, some candidates noted river cliffs and slip-off slopes. Unfortunately this misinterpretation was carried on to the explanation in **part (c)**.

(c) Explanations were determined by the features interpreted from the photograph. As noted above, many candidates assumed that the river was meandering which was inappropriate in this instance. Most candidates referred to erosion by the river as an important process but the level of explanation for river erosion was often limited to listing the erosional processes, abrasion and hydraulic action, without explaining in detail how these processes would have created the features in the landscape. The six marks available invited a detailed explanation.

Atmosphere and weather

Question 2

(a) The majority of candidates answered this satisfactorily but there were some who forgot to place the negative sign or note the units, as required by the mark scheme.

(b) Many candidates interpreted the question as requiring them to describe the relationship between the two components rather than to describe the separate trends. There is still confusion over the term 'trend' with some candidates describing the lines year by year rather than assessing the characteristics of the overall trend. Also, the respective scales of the two graphs were overlooked when assessing rate of change with time.

(c) The question asked why there might be a relationship between global temperatures and carbon dioxide concentration in the atmosphere and whilst most were able to identify the nature of this relationship, relatively few were able to go beyond this and identify other factors which might be involved, such as other greenhouse gases such as methane. There was also confusion between longwave and shortwave radiation and which was trapped by the greenhouse gases and which was reflected or re-radiated from the Earth. A large number of candidates still seem to connect carbon dioxide with the thinning of the ozone layer. In fact, the CFCs in particular which have led to the past thinning of the ozone layer are themselves potent greenhouse gases. It is not that the thinning of the ozone layer lets in more solar radiation of the type which causes global warming but that the CFCs work in common with carbon dioxide and other greenhouse gases to restrict outgoing longwave radiation.

Rocks and weathering

Question 3

(a) (i) Most candidates answered this correctly.

(ii) Interpretation of B was not as successful as for A.

(b) Most candidates were able to provide an answer within the tolerance limits set in the mark scheme, but some omitted the units (mm).

(c) This question was answered well with some very detailed answers with respect to a wide range of weathering processes. However, there was a tendency to name the weathering processes without explaining, in detail, how rainfall influences the weathering. Thus simply naming carbonation as a process without explaining how rainfall (water) was instrumental in the process was an inadequate response. This reiterates the point made in the introduction for the need to explain in detail rather than producing a simple statement.

Section B

Hydrology and fluvial geomorphology

Question 4

(a) (i) This was a relatively straightforward question although a number of candidates were confused between throughfall and throughflow. More generally, candidates should be encouraged not to use

a word in the question in their description or definition. Defining interception by stating that rain is intercepted is not the best way to answer the question.

(ii) This was a relatively straightforward question where candidates needed to identify various stores and flows in the drainage system which might be reduced because of evaporation or make the point that evaporation could be both an output from the system and also a potential for renewed precipitation as an input.

(b) This question was answered generally quite well. Variation in marks awarded related to the detail provided on the effect on the characteristics of the storm hydrograph. There was also a tendency to describe how steep slopes lead to a shorter lag time and greater peak on the hydrograph without explaining why in terms of effect on rates of infiltration. There was also a lack of detail in explanations as to how soils affected the shape of the hydrograph. There was some confusion between soil types and the nature of permeability and porosity. However, it was encouraging to see that some candidates realise that clay is very porous but is impermeable because of the size of the pores.

(c) There were some excellent answers to this question but also some issues. Many candidates correctly read the question as allowing them to use more than one flood event to assess the various factors that are relevant when assessing the causes of river floods. It is very unlikely that a single flood event would allow a range of factors to be discussed. Description of these flood events was often very detailed. However, many answers simply named a river that had flooded and then answered in generic terms whether the factors were relevant to that flood event or not. Assessment of the significance of the various factors was sometimes minimal.

The selection of case studies/examples needs careful thought. If the case studies are too large or too small a scale it can be difficult for candidates to produce convincing answers to questions such as this as either the pattern of events is too large to be manageable in the context of an examination answer or the events are too simple to be able to show a good understanding of a range of factors.

Atmosphere and weather

Question 5

(a) (i) Definitions were required and not just descriptions. Definitions require a precision that is usually lacking in descriptions. Thus, albedo has a specific definition in terms of the percentage (amount) of solar radiation that is reflected rather than a simple description of the process. This is also true of latent heat transfer. Many of these concepts have been examined in previous examination papers and the definitions are accessible in previous mark schemes.

(ii) A straightforward question with good answers.

(b) Many candidates did not appreciate that this should include both day and night budgets and processes. Answers to this question exemplified the point earlier concerning the level of explanation. Many candidates mentioned sensible heat transfer and latent heat transfer without explaining what they were or their significance in the energy budgets.

(c) The response was mixed. There were a few good responses assessing latitude with respect to the effects of land and sea distribution and ocean currents. But there were many answers which struggled with the concept of seasonal variations in temperature.

Rocks and weathering

Question 6

(a) (i) Rainsplash was understood better than sheetwash, where its unconcentrated nature was often overlooked.

(ii) This question was answered well with full marks achieved by many.

(b) It has been noticeable that understanding of mass movement processes has improved and there were signs of this continued improvement in answers to this question. Some of the best answers

used diagrams very effectively in describing and then explaining the differences between flows and slides. However, some of the diagrams tended to detract from the answer rather than aiding it.

(c) The variation in answers was the comprehensiveness of the analysis of the various type of plate boundary and the range of tectonic landforms assessed. The key discriminator was the extent to which candidates were able to apply their knowledge of the tectonic landforms at each plate boundary to an assessment of the view expressed in the question.

GEOGRAPHY

Paper 9696/13
Core Physical Geography

Key messages

This has clearly been a difficult year for many candidates and their achievements, as reflected in answers to this paper, reflect great credit on themselves and their teachers.

The candidates' use of English and the structure of the answers continues to improve. General fluency is often impressive but sometimes the candidates need to display clearer understanding as to the precise demands of a question. Terms such as 'describe' and 'explain' offer specific guidance in how to approach a question. Explanations add little of value to questions specifying description, but candidates are eager to display their knowledge, and therefore can be inclined to deviate from the main thrust of the question. On the other hand, explanations form a core part of many questions, both in ***Sections A*** and ***B***. However, simply listing factors without additional qualification is seldom adequate. Weathering factors in **Question 6(c)** is an example of where some candidates 'listed' without adequate explanation.

Candidates need to be aware of the marks allocated to different questions. **Part (c)** in ***Section B***, is itself worth 25 per cent of the total marks for the paper. The question chosen in ***Section B*** is worth 50 per cent of the total marks. The fact that candidates have to answer three questions from ***Section A*** can influence how they allocate their time. It may mean that insufficient time is spent answering the chosen ***Section B*** question, and the final evaluation/assessment omitted or curtailed. However, few candidates failed to complete the paper, and there were few rubric errors generally. Some candidates attempted to answer all questions in ***Section B***.

General comments

The majority of candidates have displayed a willingness to learn. They have obviously been effectively taught, and have developed a clear understanding of many of the relevant concepts. Indeed, the paper covered a range of topics, and the candidates appear increasingly willing to attempt all of them. There is no longer a tendency to avoid questions on 'Atmosphere and weather', and the answers are becoming increasingly sophisticated. Indeed, some of the best were to be found in **Question 5(c)**, where candidates were able to display their considerable knowledge and understanding of urban environments, such as those of Auckland and Vancouver.

The examination did indeed produce many answers of good quality. Candidates were obviously well prepared for the examination. Answers were often detailed and thoughtful, but of course wide ranging in their effectiveness across a broad ability spectrum. However, the examination did prove accessible to most candidates, and progress of recent years continues to be consolidated.

The data provided for ***Section A*** was varied, with responses required using a graph, map and photograph, in **Questions 1, 2**, and **3** respectively. Most candidates seemed familiar with these types of data and responded effectively. However, the drawing of a labelled diagram in answer to **Question 3** was unconvincing in many cases. A standard block diagram was required, simply drawing what can be seen, and labelling the rills, gullies, rounded ridges and general plateau level. Vegetation is not a landform. Effective answers were limited, and some candidates resorted to one or more section drawings, which were of limited value. Answers to **Question 6(b)** could also have been more effective if the shape of slopes could have been illustrated. Some candidate attempts were commendable but others have neglected this skill.

However, the overall impression is once again positive. Candidates approach their work intelligently, effectively and with commitment.

Comments on specific questions

Section A

Hydrology and fluvial geomorphology

Question 1

(a) The two values of precipitation and discharge were identified by most, but candidates were sometimes careless in their calculations. Furthermore, the units of measurement need to be given as part of the answer.

(b) Simple description is all that is required, but there should be a focus on the discharge, and not the rainfall. Descriptions should quote the data available where appropriate.

(c) Candidates are familiar with storm hydrographs, but a number discussed the two storm events as though they were separate rivers in two distinct river basins. This leads to comparisons of size, shape, vegetation etc. which are not appropriate in this context. However, many were familiar with the concept of antecedent moisture, and used this effectively in their explanations.

Atmosphere and weather

Question 2

(a) Most identified correctly the pressure system and major wind belt in **(a)(i)** and **(a)(ii)** respectively, although a few obviously thought that the 'westerlies' were too far north to still be within the North Atlantic Ocean.

(b) There were four elements to this question, pressure systems/wind belts in January/July. In addition of course, there was a need to identify 'differences'. Some candidates simply offered simple descriptions and differences were at best implicit.

(c) Most identified the reasons correctly, but explanations were not very detailed, and the few attempts to illustrate 'seasonality' through diagrams, were not very successful.

Rocks and weathering

Question 3

(a) As referred to earlier, the standard of diagrams was not impressive. This is a technique that seems to have become unfashionable, but is a very valid way of illustrating geographical data. This is a skill which could be enhanced through practise. In addition, some candidates were not aware of the difference between 'landform' **3(a)** and 'landscape' **3(b)**.

(b) Explanations were encouraging in their detail, but the emphasis on weathering or mass movement, reduced the importance of the water erosion processes, which were clearly evident in the photograph.

(c) Soil creep is often associated with the process of 'heave', but is not a fundamental part of the explanation in the first instance. Many answers displayed convincing knowledge of soil creep but neglected the correct focus.

Section B

Hydrology and fluvial geomorphology

Question 4

(a) (i) The processes of 'abrasion' and 'hydraulic action' were clearly understood by most candidates, and there were some very detailed answers. Only two marks each were available for the definitions, which need to be clear and concise.

(ii) There was some confusion when 'through flow' and 'base flow' were incorporated into the answers, but generally 'percolation' was clearly understood by the majority of candidates.

(b) Most candidates displayed a clear understanding of both levées and deltas. Diagrams were used by many candidates in an effective way.

(c) Meandering channels are now presented in good detail by many. Braiding is not as clearly understood and this certainly weakened the comparison between the two, which was necessary for a clear final evaluation.

Atmosphere and weather

Question 5

(a) Both parts of **Question 5(a)** were well answered. Candidates are becoming increasingly confident at attempting Atmosphere and weather questions, and that has been one of the reassuring aspects of this examination session.

(b) This proved a difficult question for many, who discussed atmospheric impacts as though they were the same as environmental impacts. Thus, much time was spent discussing the melting of polar ice, rising sea levels and the effects on animal species, rather than changes in weather patterns etc.

(c) There were some excellent answers to this question. Candidates displayed detailed knowledge of appropriate examples, and used this knowledge effectively. Auckland and Vancouver featured prominently and very effectively.

Rocks and weathering

Question 6

(a) Both parts of **6(a)** were well answered, although the role of convection currents was rather neglected in defining both 'sea floor spreading' and 'subduction'. Carbonation was clearly understood by most.

(b) Candidates found this question difficult. Most correctly differentiated between slides and flows but failed to give sufficient detail about the shape of those slopes as specified in the question.

(c) There were some good answers, with candidates being able to discuss weathering factors other than temperature. The best answers evaluated the role of these factors, and did not just explain how other factors impacted on rock weathering. It was this lack of evaluation that restricted many detailed answers to Level 3.

GEOGRAPHY

Paper 9696/21
Core Human Geography

Key messages

1 Candidates should appreciate that the marks indicate the number of points expected, so candidates are unlikely to get 5 marks when they give a single undeveloped statement. Likewise, a 3-mark question should get an answer that takes a little over half the lineage of a 5-mark question.

2 Some candidates struggled with ***Section B*** questions possibly due to a lack of time. Candidates need to appreciate that the last part of ***Section B*** answers are worth 25 per cent of the total mark and is often the key discriminator, being an evaluation, so they should leave sufficient time to do themselves justice.

3 Candidates should make careful note of the command words in the questions. Where the command word is 'describe', answers can be quite brief and no explanations are needed. Candidates should not spend time giving explanations, as they will not be credited. However, when the command word is 'explain', candidates should develop the points they are making, either with some additional detail or exemplification.

4 Good case study knowledge is needed, especially in ***Section B***, but it must be appropriately applied to the question. Too many candidates simply repeated everything they had memorised about an example they had studied without applying it to the question properly, which made their answers lack focus. Also, examples must be used to support a point being made. Too many candidates gave an example in name only, for instance 'e.g. India', which does not add a great deal to an answer. Furthermore, the syllabus states that 'Where possible, case studies should be dated no earlier than 1980.'

Comments on specific questions

Section A

Population

Question 1

(a) Nearly all candidates answered this correctly.

(b) Most candidates were able to describe at least some elements of the relationship.

(c) The command word here is 'explain'. To achieve higher marks, candidates needed to do more than just list policies. Examples of weaker responses include:

'Governments could promote the use of contraceptives.'
'To lower fertility rates countries may give benefits to those who have less kids.'

An example of a stronger response was:
'The government may attempt to lower fertility rates by encouraging citizens to have fewer children by providing free contraceptives so that people are more likely to use them.'

Migration

Question 2

(a) Nearly all candidates answered this correctly.

(b) Most candidates were able to achieve good marks on this question by making a number of simple statements such as:

'For all age groups above 15–19, LICs/MICs have a lower percentage of female migrants than HICs.'

Some responses did not compare LICs/MICs with HICs and these answers did not gain credit, for example:

'It is also of note that in the HICs the rate was stable between 25 and 49.'

(c) Some candidates chose to give five or more brief explanations such as:

'A country may lose skilled workers who migrate for better wages.'

Others gave fewer impacts but with more detail or exemplification, for example:

'A country may lose skilled workers who leave for better wages in another country, such as Polish plumbers and electricians moving to the UK. This also means there is less tax revenue for the country they leave.'

Either approach was acceptable and enabled stronger candidates to achieve full marks.

Weaker responses were too vague or made comments such as *'The source area loses population',* without any explanation that could validate their statement.

Settlement dynamics

Question 3

(a) Nearly all candidates answered this correctly.

(b) Most responses included valid simple statements such as:

'All of the settlements have a shorter distance for 5–10 year olds than 11–16 year olds.'

Stronger answers gave data from Fig. 3.1, as the question asked, such as giving the figures for distances in the comparison.

(c) Some candidates were able to give good explanations such as:

'The population in rural areas is often low and widely spread out so it can be too expensive to provide bus or train services as there are not enough passengers.'

'With low populations in rural areas, and many young people migrating to cities, schools have to close because there are not enough children.'

Weaker responses were too vague or inaccurate.

Section B

Population

Question 4

(a) (i) Most candidates were able to give most of the elements of the definition, with some of these being precise and accurate.

Where there are specific terms in the syllabus, candidates should have a clear knowledge of their definitions. Too many candidates gave vague responses such as:

'Infant mortality rate is the number of babies that die in a year.'

(ii) Many candidates found this difficult because they did not have a clear understanding of the two terms and confused them with death rates and birth rates. Others simply gave explanations for why the IMR might be low or decreasing, which is not what the question asked.

There were some good answers that demonstrated the link between the two rates, for example:

'As the IMR decreases so does the fertility rate because women do not need to have a lot of children to make sure that enough survive the early years of life.'

(b) Most candidates were able to give a number of reasons and the stronger responses gave good exemplification:

'In parts of some countries infant mortality is high because a lack of clean water and proper sanitation. For example, in shanty towns such as Kibera in Nairobi diarrhoea is common because of poor living conditions. Diarrhoea can be fatal to babies because they become dehydrated quickly.'

Weaker responses needed to develop beyond simple statements to achieve higher marks. Examples of weaker responses include:

'In some countries the IMR is high because there is poor food security.'

Too many responses gave poor exemplification such as *'e.g. in Bangladesh',* without any further information.

A further issue was the use of 'out of date' examples such as the Irish potato famine in the 1840s. The syllabus states that 'Where possible, case studies should be dated no earlier than 1980'.

(c) Most candidates found this question difficult and there were few strong responses.

The main reason for weak responses was because of a lack of understanding of the concept of 'optimum population', with many candidates simply describing population problems in general. In some instances, candidates just repeated case studies about population change which did not address the question.

Migration/Settlement dynamics

Question 5

There were too few responses to Question 5 to make meaningful comment.

Settlement dynamics

Question 6

There were too few responses to Question 6 to make meaningful comment.

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Core Human Geography

Key messages

1 Read the question thoroughly, identify key terms in the question and appreciate that every word should be considered before answering the question.

2 The mark allocation not only indicates the range of points expected but also the time that should be spent on that section. The 15-mark **Part (c)** question in ***Section B*** is worth 25 per cent of the total for the paper whereas each **Part (c)** in ***Section A*** is usually worth up to 10 per cent. The time spent on these two parts should reflect their share of the marks. Many candidates spend too long on lengthy answers to low mark questions in ***Section A***.

3 When questions state 'Using examples', however detailed and effective their answer, candidates need to use examples to gain access to the higher levels. Simply stating 'e.g. Africa' does not constitute sufficient exemplification.

4 When questions ask for two factors or causes candidates should be aware any more than two will not be credited.

5 Always fully and clearly explain answers, especially how/why a factor explains something, as candidates must not expect examiners to interpret their explanation.

6 The key to ***Section B*** questions is **Part (c)** which demands detailed answers with clear exemplification and thoughtful evaluation. Weaker responses lack one or more of these aspects.

General comments

1 ***Section A*** answers tended to be stronger than ***Section B*** answers possibly due to timing issues. ***Section A*** and ***B*** carry equal marks so candidates should spend equal amounts of time on them.

2 Candidates clearly knew some detailed geography as demonstrated by effective **Part (c)** answers to ***Section A*** questions but often struggled in the more applied questions, typically **Part (b)**, in ***Section A*** questions.

3 Even where no specific reference is made to the use of examples they are often helpful in developing detail or clarifying a point.

Comments on specific questions

Section A

Population

Question 1

(a) Nearly all candidates correctly stated it was Africa.

(b) Candidates tended to describe Fig. 1.1 first and then moved on to describing Fig. 1.2 with the changes. This often resulted in the candidates repeating their points in the first part of the answer rather than considering the idea of the overall pattern. Some responses focused on one area such as Africa, so limiting the description of the pattern. Responses could have been improved by the use of better place knowledge. Many responses referred to the countries as near the equator or near India.

(c) Nearly all candidates gave two appropriate reasons for the low proportion of older people in some countries. Responses mainly referenced healthcare/sanitation/education/wars. Responses typically needed to develop their reasoning as to how these linked to low numbers of elderly so that cause and effect was clearly understood.

Such an answer as:

'Poor health services means there are fewer people living to old age'.

Contrasts with the more effective:

'The lack of a good health service means that diseases and infections such as AIDS are common so reducing life expectancy which means many people die before the age of 60.'

Some candidates chose reasons that impacted on the whole population or other elements of the population such as the very young. Such answers needed to be linked specifically to why it reduced the numbers of elderly to be able to earn higher credit.

Weaker answers often mentioned low life expectancy or high death rate but without any further detail on the causes of these and how they impacted the proportion of over 60s. Some described health/lifestyle issues in HICs such as stress, obesity, etc. However although these are issues in HICs, these countries still have higher proportions of over 60s because of generally higher life expectancy – as shown in the resource.

Migration

Question 2

(a) Most candidates correctly stated 1990–1999 although some gave '1990s' which was equally correct. Some incorrectly stated 1990 which is not a decade. Others gave the wrong decade.

(b) Many candidates gave generic answers with little or no reference to the data in Fig. 2.1. Most agreed that net migration and natural increase did influence change of population. However, candidates tended to describe each line of the graph without providing reference to the 'influence'. Candidates needed to support their statements on 'influence' with data from Fig. 2.1 in order to gain higher marks.

There seemed to be some misunderstanding of the notion of 'net' and a large number of answers showed a lack of understanding of net migration, interpreting this as emigration and therefore giving incorrect answers. Many candidates saw population change as simply the gross number of population. Many confused the relationship between natural increase and net migration:

'As natural increase falls net migration increases so population change becomes negative.'

(c) Again there were often generic responses with little detail of explanation or exemplification such as:

'An influx of international migrants will stimulate the economy of the receiving/destination area.'

Stronger answers explained the 'how' in the question further such as:

'As most international migrants are young economic migrants often with skills and education they inject a new innovative work force into the destination economy who will often undertake poorly paid dirty jobs which the local population won't do. This greatly stimulates the destination economy.'

A number of weaker responses included negative impacts on the destination area or positive impacts on the source area suggesting a more careful reading of the question was required.

Settlement dynamics

Question 3

(a) Many candidates missed the focus on megacities. As a result these candidates gave excessively lengthy answers, also suggesting they had not appreciated that this question only offered 2 marks. Responses showed some confusion over what the data showed such as:

'In continents with lower populations the percentages of people who live in megacities is lower, 7 – 9 per cent.'

Simply listing down the figures does not fully answer the question which focused on 'variations' suggesting some comparison was needed:

'Asia and South America had the greatest number of Megacities (13 per cent) whilst Australasia had the fewest – none.'

(b) This question required a comparison yet many candidates simply listed, usually correctly, the relative proportions for Europe and then for Asia. Candidates should appreciate what the term 'compare' means and how it can be displayed in an answer such as:

'Both Europe and Asia have their greatest numbers living in urban areas less than 500,000 but whilst Europe had 65 per cent of its urban population in that category Asia had 17 per cent less at 48 per cent.'

A significant number of candidates considered the bar chart to be cumulative so gave incorrect totals such as:

'Europe has 90 per cent of its population in medium sized cities whilst Asia has 77 per cent.'

(c) This question was often omitted completely by candidates. Most answers offered two valid urban area issues but many offered generic ones not tightly linked to the LIC/MIC context. Many responses listed urban problems that had little relevance to the planning aspect of the question. Often the chosen issue was not explained in the context of planning or left rather vague such as:

'Another issue is that people that live in the city may not approve of the planning which could lead to people leaving the city.'

Candidates should also appreciate that when two planning issues are required giving more than two wastes time/effort as only two will be credited.

Section B

Population

Question 4

(a) (i) This is not a well-known or understood term. Most candidates simply saw it as having access to sufficient food. Some thought it was about keeping food in secure refrigerated depots.

(ii) Candidates knew at least two ways that food security can be threatened. Weaker responses did not relate the threats to a lack of food security, so lost sight of cause/effect and therefore did not explain how and why their chosen way reduced food security such as:

'Periods of floods or droughts can reduce food security.'

Or

'In a drought the area will have food shortage as they are not going to harvest anything.'

Compared with:

'Droughts can reduce food security as crops either die or are reduced in yield due to the lack of water so there is less food available for the local population so reducing their food security e.g. the frequent droughts in Ethiopia.'

The above response shows good development both in terms of explanation and linkage to an appropriate example. Very few responses provided specific crop or location reference and tended to explain the issue in general terms.

(b) Most candidates clearly appreciated a range of technological and innovative approaches to overcoming food shortages. Weaker responses didn't explain how the chosen technology and innovations overcame food shortages. Typically weaker responses offered superficial cause/effect:

'Mechanisation of farming such as the use of tractors rather than bullock ploughs increases food production so avoiding food shortages.'

A stronger response, below, explained this link:

'By mechanising farming time is saved and so more land can be cultivated or farming can be intensified so increasing crop yields which means there is a greater supply of food so overcoming any shortages.'

Candidates should be reminded that food supply is not just about farm production but also includes harvesting, storage, processing and transport as well as the demand supply. The most common weakness on this question was the failure to give examples or give weak examples such as 'e.g. Africa'.

Candidates would benefit from greater detail about the crop type or location. Stronger answers had well described specific innovations with examples, often from valid local case studies. Candidates tended to describe the changes the technology/innovation has brought rather than focusing on the role. Candidates also tended to focus on the green revolution/GM crops and increased mechanisation. Less focus was provided about innovation.

(c) Candidates clearly knew and understood the characteristics of both a youthful population and an ageing population with some detailed exemplification – a country in Africa for youthful and Japan or the UK for ageing. In many responses more time was given to describing the actual problems than with describing approaches to managing the issues. A wide range of demographic, economic, social and political issues were considered. Stronger responses went on to look at how easy these issues are to be managed by the government. Weaker answers ignored both the idea of managing and offered little in the way of evaluation offering two, largely, separate accounts describing two sets of issues related to youthful and ageing populations.

Like all evaluation questions there is no definitive answers and conclusions differed:

'Youthful population issues are easier to manage as they will grow up and in turn manage those issues whilst an ageing population has little opportunity to manage the issues as there are too few young people to support them financially and manage their care.'

'Ageing populations are easier to manage as ultimately their numbers will decrease whilst youthful populations will always be struggling to manage the ever growing population of young people. The young are less patient at slow progress than are the elderly.'

Migration

Question 5

(a) Most candidates offered a range of largely economic and social impacts on rural areas both positive and negative. Some candidates confused the direction of this migration so described the impacts on urban areas. This was a describe question so no explanation was required although many did offer some explanation.

(b) Most candidates clearly knew and understood the nature of push factors and could give examples of such factors operating in rural-urban migration. Stronger candidates went on to clarify their role in the migration process. Many responses focused on explaining, mostly economic and social, pushes from urban areas but few examined their exact role in the migration process. In the most effective responses their role was explained in the balance between push and pull factors and in comparison with other factors such as inertia, cost, transport availability, etc.

Some of the stronger responses saw both urban pushes and rural pushes with the balance determining who migrated and when/where. Such answers also presented more detailed examples rather than simply:

'Poor air quality in London pushes people out to the cleaner less polluted rural areas.'

Naming some specific places would have developed this example. Many candidates confused push factors with pull factors such as:

'In Brazil farmers are attracted to cities such as Rio where they can gain higher paying jobs.'

(c) Achieving a balance between the 'assess' command word and including supporting detail was the main challenge seen in answers to this question. Some had lots of examples of where distance affected migration and where other factors were important, but lacked any comments on the relative importance of each factor. Others had good, discursive comments about the role of distance but lacked supporting detail about specific patterns of migration.

The most effective responses considered the role of distance, usually via the distance decay model and why this had an impact on the willingness or ability to migrate, then looked at the role of other factors such as transport availability, characteristics of the migrant, etc. Some answers made some perceptive evaluative points:

'With improvement in transport especially air transport distance has less influence on the pattern of migration compared to a hundred years ago when migrants relied on slow sailing ships or long land treks.'

Stronger responses considered the nature of distance in that it was not uniform, varying with the nature of the area e.g. mountains, oceans, etc. or related it to the amount of time, cost and effort involved.

Settlement dynamics

Question 6

(a) Another comparison question which discriminated between those that did compare, such as:

'Counterurbanisation tends to be centrifugal and dispersing whilst re-urbanisation tends to be centripetal and focused.'

And those that simply described the two processes. Weaker responses tended to be separated into two paragraphs with little comparison between the different processes. Where a comparison was made it was often about the geographical location rather than the process.

(b) Responses to this question showed some confusion and were often unclear on how nearby the rural areas had to be. Often answers looked at counterurbanisation reducing competition for land in urban areas and increasing it in nearby rural areas.

(c) This was often answered effectively by considering the role of economic factors such as rent and house prices compared to social factors such as ethnicity, age, etc. and even environmental factors such as levels of pollution. Weaker answers lacked detailed examples to support their evaluation or occasionally examples did not match the requirements of the question. The question had a clear need for a reference to HICs.

GEOGRAPHY

Paper 9696/23
Core Human Geography

Key messages

1 Candidates should appreciate that the marks indicate the number of points expected, so candidates are unlikely to get 5 marks when they give a single undeveloped statement. Likewise, a 3-mark question should get an answer that takes a little over half the lineage of a 5-mark question.

2 Some candidates struggled with ***Section B*** questions possibly due to a lack of time. Candidates need to appreciate that the last part of ***Section B*** answers are worth 25 per cent of the total mark and is often the key discriminator, being an evaluation, so they should leave sufficient time to do themselves justice.

3 Candidates should appreciate that where a question asks for two or three aspects (**1(b), 4(a)(ii), 6(a)**) and they give more than the required number, the best two (or three) will be taken. It is not good practice to do more than the number asked for and should not be encouraged as it uses up valuable time.

4 Candidates should make careful note of the command words in the questions. Where the command word is 'describe', answers can be quite brief and no explanations are needed. Candidates should not spend time giving explanations, as they will not be credited. However, when the command word is 'explain', candidates should develop the points they are making, either with some additional detail or exemplification.

5 Good case study knowledge is needed, especially in ***Section B***, but it must be appropriately applied to the question. Too many candidates simply repeated everything they had memorised about an example they had studied without applying it to the question properly, which made their answers lack focus. Also, examples must be used to support a point being made. Too many candidates gave an example in name only, for instance 'e.g. India', which does not add a great deal to an answer. Furthermore, the syllabus states that 'Where possible, case studies should be dated no earlier than 1980.' References to the Second World War, or the Irish potato famine as examples of countries with high death rates gain little credit.

Comments on specific questions

Section A

Population

Question 1

(a) Most candidates gave correct answers and gained 2 marks.

(b) Many candidates gave responses about general reasons for decreased death rates without any reference to infant mortality as required by the question, such as:

'Medicines have improved.'

'Food security is better and people have better diets.'

Whereas stronger answers gave detail such as:

'There is better access to hospitals with specialist neonatal care so that sick babies can get medical attention.'

'Some countries provide financial support for mothers with babies which enables them to provide safe and clean living conditions and good nutrition.'

Some candidates gave answers about lower fertility rates or lower birth rates which did not address reasons for reduced infant mortality for example:

'Fewer children are being born.'

'There is better education for women so they marry later and pursue careers instead of raising large families.'

(c) Many of the diagrams were poor quality and did little to enhance the answer.

Many candidates gave explanations as to why infant mortality rates reduce without explaining how this affects population structure.

Good answers made a clear link between the two. For example:

'When IMR decreases more children survive and this increases the proportion of youthful (under 15) population. Initially this results in a wide base to the population pyramid. Over time the birth rate falls because families do not need to have more children to ensure that some survive and eventually the base becomes narrower and the pyramid has a more square shape.'

Migration

Question 2

(a) Most candidates gave correct answers to both parts.

(b) Most candidates were able to state that there was a positive relationship (or to say that those with the biggest populations also had the highest percentage of migrants and vice versa). Many also gave supporting data, but few were able to identify Africa as an anomaly.

(c) Some candidates chose to give five or more brief explanations such as:

'Migrants may send money back to their families in their home country which takes money out of the local economy.'

Others gave fewer impacts but with more detail or exemplification, for example:

'If an area has a lot of international immigrants it can put pressure on services such as schools and health care. For example, many Polish families migrated to the UK after the EU expanded in 2004 which put pressure on school places in the towns where they settled.'

Either approach was acceptable and enabled stronger candidates to achieve full marks.

Weaker responses were too vague or made comments such as *'Crime increases',* without any explanation that could validate their statement.

Settlement dynamics

Question 3

(a) Most candidates were able to identify tourism, or an economic activity related to tourism.

(b) Most candidates were able to identify and describe the characteristics of the tall and tightly packed buildings and link this to competition for space in the most desirable locations. Fewer candidates described the characteristics of the buildings on the slopes of the hill.

Some candidate gave detailed explanations of the bid-rent model which while relevant as background information was not required by the question.

(c) Most candidates were able to explain a range of social factors and, as in **2(c)**, some gave up to five or more brief explanations whereas others were able to achieve full marks with fewer but more detailed explanations.

A common mistake was to describe factors other than social, as required by the question.

Many candidates described how wealth and income can lead to segregation, but no marks were given for these elements of their responses.

Section B

Population

Question 4

(a) (i) Many candidates achieved full marks on this question. Weaker responses did not distinguish between the different stages of the model. Examples of these responses include:

'The death rate starts off high and then decreases and ends up low.'

'The death rate fluctuates in stage 1 and then it falls in stages 2 and 3.'

Some candidates gave detailed explanations for the changes in the death rate, which were not required and gained no marks.

(ii) Good answers to this part question gave reasons such as:

'Because it has always been the custom in some countries to have many children to ensure the survival of some into adulthood, it takes time for these customs to change.'

'In some countries, religions forbid the use of contraception, therefore the birth rate remain high even though the death rate is falling because of improved health care and living conditions.'

However, many candidates struggled with this question because they gave general reasons why the death rate falls rather than saying why it falls before the birth rate as required by the question.

(b) Some candidates were able to achieve good Level 3 marks for this question with explanations that were exemplified well.

However, many candidates gave no examples, which limited their mark to a maximum of 3. Likewise, many responses simply used examples like "e.g. Africa" or something similar to support a statement which will not gain marks. Examples of this type of response include:

'In many countries e.g. Africa death rates are high because medical care is poor and there are very few hospitals.'

This answer is so general and inaccurate that it gained no credit.

The prevalence of diseases in some countries was given as a reason, but the development of the response was often inaccurate, such as statements that malaria is spread by contaminated water.

When conflict is given as a reason for high death rate (such as in South Sudan or Syria) it is important to note that this is not solely due to the casualties amongst armed forces but more to do with the wider disruption to health care, water and food supplies and the impact on farming output.

(c) The large majority of candidates used China as their case study, but most of these did not get into Level 4. This was because they simply repeated everything that they had learned about China's population policy without focussing on the specific question which was about the difficulty in managing birth rates. Many answers described China from the 1950s through to the introduction of

the one-child policy and then went on to describe as many aspects of the policy as they could remember. Whilst there were elements of discussion about how birth rates were managed, they were often lost in irrelevant content.

For those that did not have China as their case study, there were some good answers that used Singapore or Japan, and these tended to be more focused.

Migration/Settlement dynamics

Question 5

(a) Most candidates were able to show knowledge of the two types of migration, but many answers had little or no element of comparison and were in effect two separate descriptions.

The best responses gave a brief explanation of each type and then picked out ways in which they were similar or differed. For example:

'Chain migration usually has movement between two places whereas step migration involves a number of movements, often over shorter distances than in chain migration. Chain migration is often international whereas while the initial movement in stepped migration may be international the next ones are usually within the same country.'

(b) Most candidates did well in this question and could give a range of impacts relating to population loss, closure of services such as schools and shops, and social impacts on families. The strongest answers considered both negative and positive impacts, such as remittances from migrants supporting families in the communities from which they moved.

Although the question did not require the use of examples, it is good practice to do so to develop a point.

(c) There were strong responses to this question that covered a range of aspects of migration and the extent to which age influences patterns. Good answers considered the likelihood of migrating of different age groups and also distinguished between voluntary and forced migration, with appropriate exemplification. The best answers considered other factors that influence migration and considered how they varied in their influence – such as distance and barriers.

While most responses discussed international migration there were also strong answers that considered internal migration too.

Weaker responses tended to rely on repeating case study knowledge without applying it to the question. Examples of this were descriptions of the migration stream between Mexico and the USA with accounts of the impact of migration on the source and destination areas.

Migration/Settlement dynamics

Question 6

(a) Most candidates who chose this question were able to give good descriptions of one or two factors, the most common being the growth of informal squatter settlements. However, few candidates were able to give sufficient detail of three different ways to gain full marks.

(b) Many candidates found this difficult with the result being confused responses. The best responses described three or more consequences and gave simple but clear explanations (sometimes supported by an example, although this was not specifically required by the question).

(c) There were some strong answers where candidates applied good case study knowledge of a city in their country – often of which they had personal experience. These answers explained the problems the city was trying to overcome and described schemes that had been implemented, together with an assessment of their effectiveness.

The best of these considered different elements of the transport system such as road building programmes, public transport and the development of mass transit systems. Weaker answers often

had a general description of traffic problems in a city with little focus on how the authorities had tried to overcome the challenges.

A few candidates did not answer the question correctly and described the issues of both transport and power. Inevitably these responses were confused and offered vague descriptions that did not address the question.

GEOGRAPHY

Paper 9696/31
Advanced Physical Geography Options

There were too few candidates for a meaningful report to be produced.

GEOGRAPHY

Paper 9696/32
Advanced Physical Geography Options

General comments

This has clearly been a difficult year for candidates and teachers. Under these circumstances the response to the questions has been extremely creditable. There were many excellent responses especially to **Questions 6** and **8**. The resource based questions caused few problems apart from the resource in **Question 1**. Answers to **Questions 2** and **3**, the Tropical environments essay questions, also caused a few problems. The essay type questions all demanded an evaluation or a reasoned argument based on an assessment. Quite often the factors or issues were discussed in some detail but the assessment or evaluation element was undeveloped if present at all. It is very difficult to obtain a mark above Level 2 without some form of assessment or evaluation.

As noted in previous reports, the concept of sustainability, as applied to Hot arid and semi-arid environments especially, is still not fully addressed. It is often mentioned in answers but with little discussion or evaluation. Candidates are aware that sustainability has environmental, social and economic dimensions but there seems to be little understanding of the concept. As an example, Dubai is often chosen as the case study for a hot arid environment. Its sustainability is rarely questioned. However, there are encouraging signs that some management issues in these environments are being questioned. A few years ago, few candidates expressed doubts about the sustainability of the Great Green Wall across the Sahel region. Now its sustainability is being questioned in a realistic way. These are encouraging signs. This issue is examined in more detail when discussing **Question 12**.

Comments on specific questions

Tropical environments

Question 1

(a) Very few candidates answered questions in this section. Some candidates seemed to ignore the resource entirely and write about granite weathering in general. Others described features that they expected to be present whether they were or not. Others explained rather than described which meant that they needed to repeat the same information in **Part (b)**.

(b) In previous years, questions on granite weathering received a good response. Unfortunately this was not the case here. There was some discussion of the role of joint spacing and hydrolysis was often mentioned as the key weathering process but without detail in the explanation. Often weathering processes that were not relevant, such as frost action, were discussed.

Question 2

Most candidates who attempted this question had some knowledge of the nature of vegetation in seasonally humid tropical environments but few seemed to understand the concept of a climax community. Most of the answers focussed on the adaptation of the vegetation to the climatic environment, although much of the discussion seemed more appropriate to semi-arid environments than to seasonally humid tropical environments. The assessment component of the question was often ignored.

Question 3

This question posed problems for most of the candidates who attempted it. There tended to be two types of response. Some candidates possessed a detailed knowledge and understanding of monsoons and their seasonal patterns. Good maps were produced showing the changing pressure and wind systems with the

Indian sub-continent as the main example. However, a detailed discussion of monsoons was not followed with a consideration of the role of the monsoon in the global distribution and climatic characteristics of tropical environments in general. The other main response was a discussion of climatic characteristics of tropical environments, with the role of the intertropical convergence zone (ITCZ) but with little discussion of monsoons. There were few balanced answers that discussed both elements in the question.

Coastal environments

Question 4

(a) In general the response to this question was good. However, as in previous years, there was a variety of interpretations of 'distribution'. This also applied to many answers to **Question 7a**. General variations in number and type of strategies needed to be described and not a settlement by settlement analysis along the coast. However, many candidates were able to provide three valid points.

(b) Most candidates were able to offer at least two relevant reasons why the type of hard engineering solutions might vary along a stretch of coastline. Reasons addressed both physical factors, nature and strength of marine processes, nature of the coast and cliff line, and human related issues such as cost, need to maintain habitats, tourism and size and importance of settlements.

Question 5

This was the least popular question in this section. Most candidates were able to discuss the respective characteristics of high energy (destructive) and low energy (constructive) wave types but few were able to use these characteristics to explain, in any detail, their influence on the form and development of the cross-section (profile) of beaches. However, the steepening on beaches by low energy, surging waves and the reduction in angle by destructive (plunging) waves now seems to be understood. Inevitably some candidates discussed drift aligned beaches and the formation of spits. Discussion of cliff form and wave cut notches was an indication of the misinterpretation of the question.

Question 6

There were many substantial answers to this question with good detail and the use of relevant examples. Coral reefs are always popular with candidates and this was reflected in the answers. The emphasis was on global warming but the assessment part of the question required consideration of others threats with a reasoned evaluation of relative significance of these threats. The main threat from global warming is the increased sea temperatures and many answers provided good detail on recent bleaching events in the Great Barrier Reef of Australia, in the Caribbean and in the Indian Ocean. In conjunction with the increase in sea temperatures, acidification of the sea and rising sea levels were also discussed. A little too much emphasis was placed on rising sea levels. It is the least significant of the threats from global warming because most corals are able to keep pace with the rising levels. The more comprehensive answers were able to argue for increased storminess as a result of global warming and climate change. A whole range of other threats, pollution, tourism, sediment and chemical run off from land and the Crown of Thorns starfish, were discussed. Although many of the answers covered both sets of threats, some answers were unbalanced with respect to either threats from global warming or other threats.

Hazardous environments

Question 7

(a) The misunderstanding of 'distribution' was evident in answers to this question. Many candidates simply went around the world listing the number of events in each country or continent. However, many candidates were able to make some relevant points about the global distribution shown on the resource.

(b) There was a good response to this question with most answers providing two sound reasons for deaths from mass movement events. The question asked for two reasons, with some candidates providing more than two reasons, although some were variants on the same general reason.

Question 8

This was a very substantial question with two elements (prediction and preparation) related to earthquakes and volcanic eruptions. Answers were often unbalanced with respect to one or more of the elements. Sometimes earthquakes were well understood with little accurate detail on volcanic eruptions and sometimes discussion of volcanic eruptions was more detailed. There was often an issue with the explanatory detail provided. Thus, with respect to prediction of earthquakes, there was often discussion of the use of seismometers, magnetometer and electrical resistivity measurements, measurement of radon gas, without explaining how these may or may not predict when an earthquake was going to occur. There was also uncritical mention of animal behaviour. There is also the general belief that the Richter Scale can be used to predict earthquakes. Prediction of volcanic eruptions was usually more accurate and detailed but preparation was often ignored. The accuracy of examples used to underpin the discussion was sometimes poor such as dates, number of deaths and casualties and other details. However, as stated earlier, there were some excellent responses to a question that required a considerable breadth of knowledge and understanding.

Question 9

This question was not popular and was rarely answered well. Many candidates spent too much time explaining the formation of tornadoes rather than concentrating on the hazards. Most answers discussed the hazard caused by high winds but other hazards were often ignored or not known. Thus, answers were unbalanced and it was not possible to provide a considered assessment of the question.

Hot arid and semi-arid environments

Question 10

(a) Most candidates scored good marks on this question.

(b) Identifying a human factor that could lead to desertification caused few problems although the detail in explaining the nature of the desertification and land degradation was sometimes minimal. The question was about desertification and not the formation of deserts. Thus, explanations in terms of ocean currents, high pressure and the descending limb of the Hadley Cell, rain shadow effect and continentality were not relevant. Climate change as a result of global warming was a relevant factor if related to increased temperatures and increased periods of drought.

Question 11

Most candidates who attempted this question understood the nature of thermal fracture, although exfoliation was often treated as a separate process unrelated to thermal fracture. The detail in explaining thermal fracture was often limited to expansion and contraction on heating and cooling. However, the more substantial answers did discuss the differences between granular disintegration, related to the differing thermal conductivities of various minerals, and block disintegration where the rocks cracked into larger blocks. In terms of the assessment, other weathering processes were discussed but somewhat uncritically with little reference as to whether they were relevant in hot arid and semi-arid environments. It was generally assumed that thermal fracturing was the most important weathering process with little justification for this view provided.

Question 12

There is a general issue with respect to the use of a case study which could also apply to questions in the other options. If case studies or examples are of too large or too small a scale it can be difficult for candidates to produce convincing answers to questions requiring the use of a case study. In this option, China is too large a region to be a useful case study. If China is used, the example should be narrowed down so that it related to a part of China relevant to the environment being discussed. Similarly, the Sahel is probably too large an area for a detailed assessment without reference to individual areas or countries. Far too many answers mentioned a specific area but with little subsequent detail that could be related to that area. Thus, answers were essentially generic that could apply to many locations. Many candidates failed to note the environment they were discussing and some answers related to both environments. However, these comments do not apply to all candidates as there were many relevant answers to this question with most assessments arguing that the fragility of the vegetation was not the most important problem faced by these environments.

GEOGRAPHY

Paper 9696/33
Advanced Physical Geography Options

General comments

This has clearly been a difficult year for candidates and teachers. Under these circumstances the response to the questions has been extremely creditable. There were many excellent responses especially to **Questions 6** and **8**. The resource based questions caused few problems although generally candidates need to adopt a more efficient technique when responding to these skills-based questions. The Tropical environments option and the Hot arid and semi-arid environments option are the least popular sections in the paper, although there were several excellent responses, especially to **Questions 3** and **11**. The essay type questions all demanded an evaluation or a reasoned argument based on an assessment. Quite often the factors or issues were discussed in some detail but the assessment or evaluation element was undeveloped if present at all. It is very difficult to obtain a mark above Level 2 without some form of assessment or evaluation.

As noted in previous reports, the concept of sustainability, as applied to Hot arid and semi-arid environments especially, is still not fully addressed. It is often mentioned in answers but with little discussion or evaluation. Candidates are aware that sustainability has environmental, social and economic dimensions but there seems to be little understanding of the concept. As an example, Dubai is often chosen as the case study for a hot arid environment. Its sustainability is rarely questioned. However, there are encouraging signs that some management issues in these environments are being questioned. A few years ago, few candidates expressed doubts about the sustainability of the Great Green Wall across the Sahel region. Now its sustainability is being questioned in a realistic way. These are encouraging signs.

Comments on specific questions

Tropical environments

Question 1

(a) In describing the climate of Kampala, candidates needed to recognise the main patterns and trends as indicated on Fig.1.1. Many responses failed to include the more straightforward observation that this was a hot and humid environment right throughout the year. Most spotted the double maxima of precipitation but had problems articulating it in the text. The temperature tended to be referred to in rather simplistic terms such as ‘the same’ or ‘constant’. A better route would have been to describe the small range of temperature throughout the year, with some specific values to illustrate the point.

(b) In addressing this question, candidates needed to recognise that their explanation required to focus on the latitudinal position of Kampala. The influence of the overhead sun is constant with two occasions when the sun is directly overhead leading to intense convectional rainfall. This also equates with the passage of the intertropical convergence zone (ITCZ) and the best responses followed its passage and consequences throughout the year.

Question 2

Most candidates who attempted this question had some knowledge of ferruginous soils and the processes that develop in response to the wet and dry seasons. Explanations of the characteristics of red earth soils were extremely variable but many included a good assessment on the effects of various types of human action on the natural development of soils in savanna ecosystems.

Question 3

This question was the most popular in this section. The general comments on sustainability made earlier apply particularly here. However, most responses included at least one management scheme as an illustration of attempts at achieving sustainability, although the degree of detail and accuracy varied widely. There was a tendency to focus on economic and social sustainability and environmental aspects were often covered thinly or totally ignored.

Coastal environments

Question 4

(a) In general the response to this question was good. Once candidates had studied Fig. 4.1 some clear patterns emerged although an effective description of them varied. The general alternation of the processes was often ignored although most recognised the greater incidence of erosion. Description of specific areas often used named locations and the contrast between eastern and western parts of Cape Cod.

(b) Most candidates were able to offer at least one reason for the variations in rates of marine deposition. The resource clearly provided a stimulus for discussion and some tried to base their answer on Fig. 4.1. There was a wide range of factors suggested, ranging from the physical nature of some coasts to human activities and the management of them.

Question 5

There was a wide range in the quality of the responses to this essay. Too many spent time on an explanation of the formation of headlands and bays along a discordant coastline. Although this was relevant to the location of cliffs it rarely involved a discussion of the cliff characteristics. The better responses began by relating geology to cliff characteristics and then considered the relative importance of factors such as marine erosion, sub-aerial processes and human activity.

Question 6

Those candidates with a clear understanding of sediment cells were able to achieve high marks on this question. It was often allied with at least one example which was used as development. Many used a specific case study as the core of the response and this approach proved very effective at accessing the highest level of marks. The weaker answers contained information on coastal management schemes but didn't link them to the sediment cell operating along the coastal environment being discussed.

Hazardous environments

Question 7

(a) Although there was only three marks available, a sizeable minority of candidates found difficulty in accessing them. The key command of 'contrast' for the three hazards caused problems. Although the general difference was that warning times were shorter than duration times, the contrast for each hazard needed a clear and accurate statement of fact. Good examples of this included the volcanoes having the longest warning time and hurricanes having the shortest duration.

(b) Given the technical problems mentioned in **part (a)**, this question was answered much more effectively with many candidates achieving a high Level 2 or Level 3 mark. The warning times often varied according to prediction and precursors and good responses used specific examples to illustrate their ideas. Duration was related to the nature of the hazard and any secondary effects, which many developed effectively.

Question 8

This was a popular question with many impressive responses. Most candidates were able to distinguish between explosive and effusive eruptions but some included a wider range which included types such as Icelandic, Strombolian and Plinian amongst others. The range of hazards resulting from eruptions also varied but a good number of responses discussed lava flows, ash, lahars and pyroclastic flows. Many considered other relevant factors such as the local environment, the frequency and intensity of the eruption and human attempts to control lava flows.

Question 9

This question gave candidates considerable scope to consider sustainable management in all aspects. However, the appropriate choosing of a case study was required in order to achieve the highest marks. A specific local area and hazardous event proved best suited to bringing out detailed knowledge and secure understanding. The weaker, more generic responses tended to use whole continents or countries as the case study, with a particular hazard that can affect it.

Hot arid and semi-arid environments

Question 10

(a) Most candidates were able to describe some characteristics of the rocks, vegetation and soil.

(b) Many candidates recognised the extreme diurnal temperature range in these environments and could relate this to insolation weathering, exfoliation and thermal fracture. The better responses considered evaporation and salt weathering. Unfortunately, few candidates linked the scant vegetation to the temperature.

Question 11

This was a straightforward question which proved popular with the small number of candidates which study these environments. Most responses included a range of human activities which resulted in soil degradation but only the better candidates were able to link population pressure to the human activities and the natural processes of soil erosion. Nonetheless examples were used effectively, especially the Sahel and the Great Green Wall.

Question 12

The few candidates which chose this question needed to thoroughly analyse the global distribution of hot arid environments. Most were able to relate them to the descending limb of the Hadley cell and the resulting high pressure systems. However, more connection was needed to the hot, arid environment which resulted. Candidates often missed the opportunity to link statements and develop their argument. Wind systems could also have been related to the Hadley cell, along with the rain shadow effect. This would have allowed responses to develop into other relevant factors such as ocean currents and continentality.

GEOGRAPHY

Paper 9696/41
Advanced Human Geography Options

There were too few candidates for a meaningful report to be produced.

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Key messages

1 For essay questions, read the question carefully. Deconstruct the question and plan a response based upon the entirety of the question. This was particularly evident in **Questions 2** and **3** where candidates are asked to consider 'change' but many candidates gave this aspect little consideration or only made basic points, whilst in **Question 6** the focus of the question is 'improving degraded environments' and for **Question 9**, many candidates missed the point that the question is about 'different types of tourism'.
2 For resource-based questions **part (b)**'s candidates need to note the number of explanatory factors which are required. Where only two are asked for (**Questions, 4, 7** and **10**), they need to be more selective in their approach.

General comments

Centres and candidates should be congratulated for their efforts in overcoming the difficulties presented by the global pandemic and sitting this examination series. Almost every candidate was able to complete the required number of questions. Centres should check that the case studies used fulfil the requirements of the syllabus. Candidates appear to find difficulty in remembering details of case studies where a historical approach is used, for example, India's industrial policy changes or stages in the growth of a tourist resort or area. These case studies can also be quite dated.

Comments on specific questions

Production, location and change

Question 1

(a) Candidates were expected to describe the pattern of EPZs shown in Fig. 1.1 – a map showing the location of eight export processing zones (EPZs) in Bangladesh in 2012. Most candidates have difficulty describing pattern. The pattern might be described with comment on where and where not the EPZ's are located e.g. found in most areas of Bangladesh but not in the north east. This might then be developed by statements about the pattern in areas where they are present: are the EPZ's arranged evenly spaced, clustered/grouped, random or in a linear fashion? So, it would be valid to say that the EPZ's are mostly found in central and southern Bangladesh, with some linearity (2 to 5 or even as far as 7 and 8) and evidence of grouping: 3 and 4, 7 and 8. Apart from these two groupings they are quite evenly spaced with approximately 150 kms between locations, with Uttara (1) more isolated in the north. The most common approach used by candidates was to use the different types of transport shown on the map: international airport, railway, main highway and river or proximity to the coast and/or capital city. Statements need to be accurate to be given credit e.g. four are close to international airports (not 'most'); all are within 50 km of a railway.

(b) Few candidates displayed understanding that the key purpose of an export processing zone is to produce goods for export. This limited their mark to three out of the 6 available. They commonly displayed general knowledge of the advantages of each of the modes of transport referred to in **part (a)** for different types of goods.

Question 2

A very popular question with some very good responses. These responses deconstructed the question and addressed its component parts: the context of agricultural change for one country (not simply agriculture) and evaluated the extent to which this change was caused firstly by new agricultural technology and secondly by other factors. With respect to the location being described, they also were able to address the idea, that the technology was 'new' in terms of it being relatively recent, a new form, an advanced form or a change from the technology previously used. Most candidates used examples of seed types, mechanisation, irrigation or application of chemicals. These represent the major input changes in the historic example of the green revolution of the 1960's and 1970's, addressing issues of food supply in Asian agriculture. Whilst this approach has some validity, responses based on the green revolution of this period, frequently lack any place support details to raise the response away from the generic maximum of 8 marks. To simply name a country e.g. India is not sufficient. To develop a response from such a starting point, candidates need to have more up-to-date knowledge of changes in agriculture for their selected country. They may also develop specificity through knowledge of named locations/regions or through reference to factors such as the scale of producer, the type of agricultural system or details about the type of agricultural technology or other causes of agricultural change. Irrigation for example, is not new but there are developments in application, monitoring, control, forecasting and assessment of output which represent advancements in technology. Less frequently seen aspects of technology, but often clearly addressing the 'new' aspect of technology were those which give information to producers such as via drones, satellites, the internet and mobile communication systems to support the various stages of production and access to markets. Change in agriculture was also a key aspect to the question. Most candidates could describe changes in inputs (as above) but the resulting changes were frequently only simply outlined. For example, a description of several different input changes with the same concluding sentence that either production or yield increases should be better organised and planned through an introductory point to this effect. Better responses could develop the idea of agricultural change by considering aspects such as: farm numbers and size, labour requirements and skills, capitalisation, intensification, extensification. The evaluative element of the question could be approached by consideration of how far agricultural technology leads to broad change compared to other causal factors and/or how far various aspects of agricultural technology contribute to change. This latter approach was rarely seen. For other causal factors, environmental hazards and issues related to land ownership and tenure were commonly used.

Centres may wish to assess if the case study used is up-to-date and/or covers the full scope and requirements of the syllabus. They may wish to check text-book case studies and add to them. The case study most frequently seen which does not always meet the requirements of the syllabus is that for Jamaica, whilst those with an historical approach are frequently difficult for candidates to deal with under exam conditions.

Question 3

Not a popular question and generally poorly answered. In general candidates have reasonable knowledge about factors influencing the location of manufacturing industry but little about changes in location and the other two aspects: character and organisation. Issues for candidates deconstructing this question include: evaluate the role of government policy, consider how government policy leads to change (or not) in the character, location and organisation of manufacturing industry. The instruction in the question 'with reference to one or more examples' offered candidates the opportunity to broaden the response away from one country to include others if they wished to. A response solely on one country would however have been sufficient for full marks. Evaluating the role of government policy was a challenge to the candidates which most were unable to successfully engage with. Evaluating the role involves a consideration of what is being done, has this changed and is there a need for further change based on the challenges or issues manufacturing industry is facing. The question asks candidates to look at how far does government policy lead to changes. Candidates could approach the question from either end of these two aspects – government policy or changes. Both aspects need further development and clarity from centres. Aspects of government policy might include the balance of ownership between national or private, direct support towards cost of factors (grants, loans, subsidies), indirect support via taxation policies on various aspects of production, policies influencing competition (protectionism, free market, membership of trade blocks, attitude to FDI), support for education and skills. These policies directly and indirectly influence the character and organisation of manufacturing industry, whilst others more clearly influence locational change such as regional policies, local planning, EPZs and industrial estates.

Environmental management

Question 4

(a) Most candidates were able to describe trends in global electricity production from nuclear power as shown by the line graph Fig. 4.1. Some descriptions would benefit from more precise description such as where there is a fluctuating trend, is the overall trend rising, declining or remaining stationary. There was a reserve mark for a description of the overall trend, which might be viewed by centres as a good starting point to avoid candidates spending too much time on describing a range of smaller changes and then missing the overall trend.

(b) For successful explanation beyond 3 marks, candidates needed to refer to specific changes such as the rise, slow-down in growth or decline shown in Fig. 4.1 and to give only two reasons. These reasons could be quite generalised such as increased demand related to population and industrial growth, the environmental advantages, scale of output from nuclear plants or safety concerns.

Question 5

The key element in this question was the need to focus upon the global scale of the environmental impacts of the projected increase in world energy consumption or how far the global community may be able to respond to the challenges of this increased world consumption of energy. Most candidates adopted a quite basic approach to the question of comparing the negative impacts of non-renewable sources of energy with the positive aspects of renewables. Better responses developed the evaluative assessment by considering how factors such as levels of development, resource endowment, technology and energy security might influence the choice and balance of fuel types. Few were able to widen the discussion to consider how accurate such a projection might be in terms of the percentage increase in energy consumption and how far the negative impacts of today may or may not be overcome in the future.

Question 6

Most candidates interpreted the question as being about the causes of environmental degradation rather than the constraints on improving degraded environments. The focus on improving degraded environments was not uppermost in these responses. An argument that the economic desire to exploit an environment and resulting degradation is both a cause and a constraint would have validity, but few candidates were able to develop an argument in this way. The evaluation of 'To what extent do you agree' frequently considered the role of other factors such as political, social, environmental. Better responses were well founded on a specific example(s) of a degraded environment and its improvement.

Global interdependence

Some difference in the success rate for **Questions 8** and **9**, with **Question 9** proving more difficult than **Question 8**, despite an even choice between the two questions. This may emphasise the need to cover all aspects within the option and not to choose a question if the wording and demand are not well understood.

Question 7

(a) This question asked candidates to describe the distribution (whereas **Question 1** was about pattern). Some candidates attempted to describe the location of each trade agreement in terms of its position within the continent such as ECOWAS in the west, COMESA in the north east and east. This was not a valid approach. Distribution in this case involved comments such as the relative size (the largest being COMESA, EAC being the smallest), some countries belonging to more than one trade agreement and some countries not belonging to any trade agreement shown.

(b) Knowledge of the advantages of trade agreements for member countries was basic in many cases. Generally, candidates are aware of the role of trade agreements in reducing barriers to trade such as tariffs and quotas but are unsure about how these work for members as opposed to non-members. Freedom of movement of labour was a common second advantage but again its advantage was weakly developed with little beyond the simple ability to move from one country to another for people. Few are aware of the advantage of this to employers or to the country of arrival in general e.g. filling of skills shortages.

Question 8

The structure of the question and the knowledge base required are clear and explicit in the question. A basic approach was to describe the advantages and disadvantages of development aid and relief aid. More developed responses considered how far each type of aid leads to increased social and economic wellbeing of people and considered criteria of success such as who benefits or not, what is meant by wellbeing, how long the benefit lasts, the nature of the problems overcome and what problems and issues are not solved. Some considered links between the two types of aid, hand-up rather than handout, or developed spatial variations in benefit.

Question 9

Most candidates lacked focus on 'different types of tourism' and interpreted the question as about developments such as building new hotels or about developments in tourism itself. Some candidates did focus on recent developments in types of tourism such as ecotourism, medical, historical, dark, adventure, community. One valid approach was to discuss how a recently developed location, such as Dubai was influenced by tourism. Development of the evaluative element of the question was frequently quite limited to comment on economic impact of recent developments in tourism on existing mass tourism destinations, with limited comment on different types of tourism. Evaluation could have been extended by discussion of whether decline took place and if so, was it economic, social or environmental in nature. Case studies or examples used need more specific place support details. Some candidates attempted to look at the life cycle model of tourism and/or a descriptive approach to the stages of growth of a location. This proved difficult to apply to the question. Candidates do seem to find a historical approach a challenge in terms of specific details for each stage, frequently mixing stages and not fully understanding how a mass tourism destination such as Blackpool or Bali has developed and the changes in scale as time progresses. With respect to different types of tourism, aspects to consider in the future might include the scale or numbers involved, how each is related to variations such as seasonality, the type of tourist involved, including their spending power, duration of stay.

Economic transition

Question 10

(a) This was the least successful resource-based question. Candidates appear to find data tables difficult to respond to. The key to success here was to compare the changes from 1996 to 2016. This means selecting the correct columns and rows to enable the command to be followed. The two columns on level of development were not needed for this but might have been useful in **part (b)**. A comment such as: nearly all (4) have increased with only one decreasing (Japan) would score two marks; with further processing of the data to compare the level of change within the four that increased for the other marks.

(b) Understanding of the new international division of labour was generally weak with this being the least successful **part (b)** of the four resource-based questions. One reason is that candidates miss the instruction to only explain two factors and instead weakly explain more than two factors.

Question 11

Most candidates know what outsourcing of manufacturing industry is. The quality of responses varied according to how developed the discussion was about the balance between positive and negative effects. There was a tendency to describe the positive effects then the negative effects, which make evaluation difficult. Candidates who considered the positive and negative effects on various stakeholders and came to a concluding viewpoint with respect to each group were able to develop the evaluative element more. For example, a discussion of the positive and negative effects on the outsourcing company might involve consideration of the benefits of lower wages and other factors influencing labour costs such as training and employment overheads, the flexibility offered by outsourcing through the ability to respond to variations in demand, take advantage of competition from alternative producer locations, to focus investment on other aspects of the business, overcoming issues related to local laws, taxation regimes etc. To counter this, consideration of some negative aspects for the outsourcing company could be offered such as the danger of losing sensitive company information, the possibility of products being copied, higher costs of communication, loss of control over standards, increased shipping costs and time. A similar approach could also be taken to other stakeholders such as employees, environmental benefits and impacts and other social gains or losses.

Question 12

The key to success in this question was to have specific knowledge of at least two attempts to overcome regional disparity and to consider the factors influencing variations in success of each attempt. Few candidates were able to consider success from the viewpoint of different stakeholders. Disparities between rural and urban areas within a country need to be set in the context of regional disparity. This may be done by using named regions and some contextual information. This contextual information may take the form of information about the proportion of population in the largest city or cities, especially where there is a primate or binary pattern to the rank order of city size and where these areas are more developed economically and socially than the rest of the country i.e. these are the disparities and are arguably there is a core and periphery relationship. By doing this, candidates can bring into play national policies such as rural electrification or education programmes. Some candidates displayed knowledge about a variety of attempts to overcome regional disparities but only gave a basic descriptive paragraph for each with an outline of why this attempt was a success or not. There is often a common theme behind the success, or more likely the failure, such as corruption or social resistance to change. This common theme might be used as the starting point for part of the essay or could be used in a summative conclusion.

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Key messages

Candidates who took this examination received the expected range of results with some good use of diagrams to support essays, and evidence of planning answers used effectively. Resource-based questions were answered well, with good analysis of the Figures provided. Some candidates continue to treat the **part (b)**'s of the compulsory **Questions – 1, 4, 7** and **10** – as essays which then led to time management issues in the paper.

Regarding dated content the syllabus states 'Where possible, case studies should be dated no earlier than 1980'. This date is suggested so that the case studies are relevant and engaging to candidates. Where examples are taken before this date, it is suggested that they are reviewed or summarised along the lines of 'pre-1980 a range of measures were attempted but they were largely successful or not'.

Knowledge of case studies and examples was good, however, some candidates need to practice writing in an evaluative style. Planning a response and their approach to the evaluation questions would enable many to reach Level 3 or 4 which is crucial for a higher grade. Any question which asks candidates to consider the part played by one factor should also bring other factors into the discussion to develop the assessment element. This style of question may be unfamiliar to some candidates, so should be practiced by centres. Quality planning of a response may take time but enables candidates to focus on the assessment objective of Evaluation (AO4) which has 12 marks out of the 20 allocated.

Teachers are reminded of the necessity to teach all content within each option. Where candidates have a favoured part of the option, the essay question may focus on another part of the option.

General comments

For **Questions 1, 4, 7** and **10** the first **part (a)** is point marked about a resource, with clear allocation of skills marks/guidance in the mark scheme of expectation of these skills. The second **part (b)** is assessed by three levels and is along the same theme as the resource, but not necessarily needing the resource as stimulus.

The optional choice of essay is levels marked 1–4. In general, examples should be used throughout a response, whilst candidates should pay careful attention to examples specified by a question. They should be able to determine if a question is focused upon one example or more. The command 'using one or more examples' means that a candidate could score full marks by considering one example (case study) with specific details or by using a variety of examples, which may still include details from a case study.

Examples should be specific. Often countries or continents are used, which are far too sweeping, e.g. many candidates still refer to Africa as a country.

For the essay questions, better responses structured the whole essay as an assessment, whilst a moderate approach was to make assessment comment in the introduction and the conclusion. A better approach is to address this in the introduction, rather than waiting to save all assessment and judgment until the final conclusion.

Comments on specific questions

Production, location and change

Question 1

(a) The photograph showed a pastoral agricultural system and candidates were asked to describe the main characteristics of the agricultural system shown. Their responses should consider the various components which make up the pastoral farm, such as physical, cultural and economic. Few referred to the idea of the farming system, and therefore failed to access full marks. It would be good for teachers to consider coaching candidates to identify the different agricultural system components rather than simply describing a photograph which requires less skill. Most candidates showed an understanding of the term 'pastoral' which was given in the photo description, and went on to describe the soils and relief.

(b) This part-question was connected to the photograph and candidates needed to consider the problems faced by pastoral farmers in the photograph, not farmers in general. Better answers made this connection and clearly developed their explanations with either examples of problems, events or changes in the environmental and economic situation for the pastoral farmers which led to problems. It was good to see some links being made between problems.

Question 2

Very few candidates chose to answer this question, so Examiners can make limited comment and recommendation. However, those who did answer the question tended to focus on describing agricultural changes rather than the difficulties of managing agricultural change. This is a common mistake and one which limits candidates significantly.

Question 3

Some candidates chose to answer this question, and answers ranged in marks. The focus of the answer should be on how far the impacts of the informal sector is underestimated. Candidates were in agreement that the impact is significant, but most missed how far it is underestimated and by whom.

Environmental management

Question 4

(a) Most candidates were able to identify one or two key features of distribution. Many candidates focused on listing where the existing oil and gas fields are located rather than describing the distribution. Centres need to stress that with tasks such as this, a simple description of location does not satisfy the demands of this type of question. Also, the distinction between pattern (clustered or evenly spaced) and spread will help to clarify descriptions of distribution. A significant number of candidates were confused by the maps orientation and tried to use north, east, south and west to describe locations on the map, not realising where the North Pole is located and that the Arctic circle runs east to west.

(b) Many candidates described how increased use of energy resources would cause problems but only hinted at what the risk to the Artic would be or generally said there would be land, air and water pollution. A number made it more specific to the Arctic e.g. ice melting but only a few took this further explaining what the risks involved e.g. impact on habitats. The unique nature of the Arctic environment and how such a fragile zone may be impacted directly and indirectly by all types of energy use and exploitation were features of Level 3 answers. There were a number of answers which misunderstood the question and explained why there is need for more energy in the Arctic or the reasons why the Arctic may be at risk, rather than the ways.

Question 5

A popular question but not well understood by candidates. Many answers were more focused on meeting energy demand rather than energy security. The concept of security was not well understood by most candidates and answers often drifted into quite detailed descriptions of the sources of electrical energy in the chosen country. Centres need to be reminded again that The Three Gorges Dam is rarely going to feature as

a suitable example unless it is taught in the context of energy security/meeting demand/renewable energy etc. Too many candidates quickly drift off into a simple descriptive account of the pros and cons of building the dam. Likewise, with the use of Norway, too many candidates are quick to point out the dominance of HEP but are not able to put this into a wider context of overall electrical energy strategies and meeting future needs. If assessment of energy security did happen, it was often against public opinion of environmental issues. It seemed that even the best of these answers really did not fully understand energy security.

Question 6

Another popular question, even more than **Question 5**, and an example of a more straightforward essay which illustrates the need to teach all content within the topic (see key messages). Many answered reasonably well but candidates often failed to stress effectiveness and many answers were too descriptive, often of the causes of degradation which was not required by the question. Even when measures were discussed not all looked at effectiveness. There was a lot of potential for higher marks in this question, but many candidates still described and explained rather than evaluated.

This topic seems to be quite well taught and a number of well-known examples were called on. Centres have the opportunity to harness the environmental concerns of young people and to equip them with the knowledge and skills to debate these pressing issues and help to move societies forward.

Global interdependence

Question 7

(a) The question was usually answered quite well and the diagram was mostly understood well, providing the opportunity to bring out differences between countries at different stages of development. The biggest issue with responses to this question was when candidates described the charts rather than compared them, or compared the arrows within one diagram rather than to the other. However the most common way of answering this was to compare each arrow. This allowed candidates to reach 3 marks, but many did not reach the reserve comment which was the overall comparison of the two economies.

(b) Some candidates read this as a continuance of **part (a)** which then limited their answers and often kept them in Level 1. **Part (b)** did not have to make reference to **part (a)** in this case. Many candidates were able to identify factors but did not develop them further. Most could see differences in resources and initial advantages as major factors but more subtle influences such as colonial ties and trade agreements were handled less well. The best answers brought in examples and showed clear understanding of the factors affecting export income.

Question 8

A very open question that should have provided candidates with plenty of scope to develop well argued accounts. However, most did not rise to the challenge and many answers were very descriptive and focused mainly on the pros and cons of either aid or trade without bringing out the relative merits of either in assisting a countries development. Candidates seemed far more comfortable with the positives and negatives of aid linking to development. Less were clear on the route to development with trade, often focusing on fair trade at a local level. Many failed to stress development in their answer. The question called for a very clear conclusion and this was not apparent in many answers. Centres need to stress the importance of the development of a point of view, supported by clear evidence.

Question 9

A popular question. Many saw the reference to the Butler model and immediately launched into a detailed description of the model and details about each stage, sometimes in the context of one destination, but often only in general terms. Only a minority addressed the usefulness of the model in any meaningful way. Some candidates will have felt really confident with this question but did not see what it was truly asking. This question illustrates the need for centres to teach topics like this in context and stress to candidates that a model's main role is to be useful rather than to define the real world. Candidates will learn more through the critical evaluation of models than just the rote learning that was apparent in many answers.

Economic transition

Question 10

(a) Candidates had problems comparing the structures, and tended to take the approach of comparing primary across the three pie charts, then secondary, then tertiary, being unable to pick out similarities and differences between the three countries. Very few scored more than 2 marks due to this approach. When three data sets are provided for comparison, candidates should look for overall patterns and anomalies to compare, rather than simple comparisons.

(b) Candidates generally gained at least a few marks for knowing and describing the transition that countries make from dominant primary industry to more secondary as they develop from LICs to MICs. To gain higher marks the continued roles of primary and secondary sectors after this point was needed as they continue to contribute to economic development. Some candidates described the sectors and missed any link to economic development.

Question 11

Of the small number of candidates that answered this question many focused on human factors but did not consider other factors so assessment was limited.

Question 12

Again, answered only by a small number of candidates and in many cases a very straightforward question did not produce the answers that might have been expected. This topic still seems to be neglected by centres and support from models and details of policy in different countries was often missing or poorly developed. Candidates can spend too much time describing disparities rather that the attempts to reduce them, missing the focus of the question.