GEOGRAPHY

Paper 9696/11
Core Physical Geography 11

Key messages

This examination once again produced a wide range of responses in terms of knowledge and understanding. There were some excellent answers, reflecting the sound approach of many candidates.

Description and explanation are usually fundamental to ***Section A*** questions. However, in this instance the focus is on explanations and comparisons. Explanations were frequently done well, but attempts at comparisons were often rather vague and unspecific. General description does not always identify clear comparisons. This was apparent in answers to **Question 1(b)** where intensity of flooding was effectively dealt with, but descriptions of the extent of flooding lacked clarity.

In this examination there was also a need to discuss trends in **Question 2(b)**, but many responses failed to identify changes over time, and just identified a number of numerical but unrelated values.

Examples and case study material continue to be important elements of ***Section B*** answers but were not always sufficiently detailed. All questions in this section offered opportunities for the provision of detailed exemplar material, but few candidates effectively developed their answers in this way. For example, both **Questions 4(b)** and **4(c)** could both have benefitted from detailed exemplar material. There was reference to some examples of hard engineering in **4(c)**, but not soft engineering. Awareness of soft engineering schemes beyond afforestation was limited, and this restricted the development of these responses.

In the past, concerns have been raised about candidates making effective use of the data provided in ***Section A***. In this instance there were no problems in understanding the data, but as referenced earlier, locational detail identified in Fig.1.1 lacked clarity, and general trends in Fig. 2.1 were not often discussed.

Assessment and evaluation are key elements of answers to ***Section B*** questions. As emphasised in previous reports, some candidates display considerable factual knowledge but do not provide an evaluative answer. The best responses incorporate the evaluation into the main text of the answer, and not as a one phrase conclusion written in haste. All 'levels' questions require detailed evaluation to reach higher marks.

There were opportunities throughout this paper to use diagrams to clarify answers. For example, storm hydrograph illustrations could have enhanced answers to **Question 4(a)(ii)**, but there were also opportunities with respect to **Questions 4(b)**, **5(b)** and **6(b)**. Including diagrams is less popular than in the past, though it is still very useful and can add valuable details to an answer. In this paper, **Question 3(b)** required sketch drawing from a photograph, and these sketches were often effectively labelled.

General comments

Generally candidates seemed well prepared for the examination, and the standard of many answers reflected this. There were few rubric infringements, and planning in terms of time allocation was effective.

Comments on specific questions

Section A

Hydrology and fluvial geomorphology

Question 1

(a) Most candidates could identify the very pronounced meander.

(b) Much was correctly written about the intensity of flooding, as candidates effectively used the key. The extent of flooding was less convincingly described, and the use of compass directions might have clarified this aspect of the answer.

(c) Forestry and urbanisation were identified as relevant changes, but some responses required more development and detail. Little was discussed in terms of changing farming practices.

Atmosphere and weather

Question 2

(a) Correctly answered by the majority of candidates.

(b) Most responses discussed the relative fluctuations in summer and spring and did so quite effectively. This question required identifying changes over time, not just references to isolated annual data figures. There is also a clear need for specific comparisons.

(c) Candidates were aware of the need for low temperatures, but responses often failed to differentiate between ice and snow. It was important to include the early stages of evaporation and condensation in explanations too.

Rocks and weathering

Question 3

(a) Correctly answered by most candidates.

(b) Many sketches were of good quality, both effectively drawn and clearly labelled.

(c) Most candidates were familiar with the concept of lubrication facilitating mass movements. However, there are a wide range of possible reasons identified in the mark scheme, and not many of these were discussed in any detail.

Section B

Hydrology and fluvial geomorphology

Question 4

(a) (i) The initial phase of infiltration from the surface was not described by many, but percolation and lateral flow seemed better understood.

(ii) Most were able to relate slopes to lag time and peak discharge, but few developed their explanations to include vegetation or permeability.

(b) Most candidates described and explained gorges in terms of the headward extension of waterfalls, but few took the opportunity to illustrate their answers. Annotated diagrams would have clarified many answers. River processes were not explained in effective detail.

(c) Many responses would have been improved by developing points. Stronger responses showed good understanding of the concept of soft engineering. Others focused too much on forecasting and prediction: for some, soft engineering could be anything which was not classified as hard engineering.

Atmosphere and weather

Question 5

(a) (i) Many responses limited their descriptions to rising air. Heating and condensation were often omitted.

(ii) Most attempted to explain radiation fog, but few considered advection fog.

(b) Not all candidates were clear on the concept of wind belts, and some responses included land and sea breezes. Better responses illustrated answers with reference to the Hadley and Ferrel cells.

(c) Temperature was discussed effectively, and some examples offered. Some responses included a detailed discussion of global warming, which although not irrelevant, should not have been the focal point of the answer. Wind speed and precipitation could have received more emphasis, which would have helped with the evaluation.

Rocks and weathering

Question 6

(a) (i) The processes of heating and cooling were understood, but perhaps not the need for repetitive cycles leading to disintegration. Hydration was not as clearly defined.

(ii) The majority of candidates answered this successfully. Very few were unable to explain at least two of the relevant causes.

(b) Many could describe and explain the general factors leading to subduction, melting and the escape of magma, but not always clearly relating to oceanic tectonic plates.

(c) Stronger responses demonstrated detailed understanding of the importance of both temperature and rainfall in physical weathering processes such as freeze/thaw, salt crystallisation and exfoliation. Chemical weathering was also linked to rainfall and temperature, but with less effective detail.

GEOGRAPHY

Paper 9696/12
Core Physical Geography 12

General comments

This examination once again produced a wide range of responses in terms of knowledge and understanding. There were a number of excellent responses to some questions, although responses relating to the resources in ***Section A*** were highly variable. Some candidates misinterpreted command words and provided irrelevant answers to some questions.

There is usually a need to use data from the resources, and candidates are increasingly aware of the need for careful reference to the data provided to achieve the maximum mark. **Part (b)** questions in ***Section A*** all require some reference to the information provided on the resource whether that is specific data or general observations of what is portrayed in the resource. The following **part (c)** questions, although partially related to the resource, do not usually need reference to the resource in the response. The information and ideas portrayed in the resource will usually be insufficient and not necessarily relevant for answering the question. It must not be assumed that the **part (c)** questions are necessarily specifically related to the resource.

Most candidates appear to be familiar with the relevant geographical issues and concepts, and most were able to apply their knowledge and understanding appropriately. In most questions there was an opportunity to produce relevant diagrams that could have been used to enhance the answers. However, diagrams are often imprecise and sometimes demonstrate inaccurate knowledge and understanding of the issues raised in the question.

As stressed in previous reports, examples do much to support answers. When using specific examples, it is important that sufficient detail is provided, and that the examples are appropriate. Simply naming a country or even a region is usually not sufficient to gain any merit. It is also important that the information provided is accurate and not speculative. Responses to **Questions 4(c)**, **5(c)** and **6(c)** all benefited from relevant and accurate examples and evidence. Evaluation is difficult if the discussion is almost entirely a generic argument. Final evaluations were often unconvincing and not related to the evidence and discussion in the answer.

There were very few rubric errors. Few candidates attempted all three questions in ***Section B***, and planning in terms of time allocation was generally effective.

Comments on specific questions

Section A

Hydrology and fluvial geomorphology

Question 1

(a) Most candidates stated answers within the tolerance. A few candidates omitted the units. It is worth stressing that the units are usually required in answering questions of this nature.

(b) The majority of candidates gained at least two marks, and many used data to support the description. Some misidentified the curves, with the wrong curve being analysed. Some responses discussed lag times and made other references to the features of storm hydrographs, though this was more prevalent in answers to **part (c)** of the question.

(c) Many candidates seemed unclear as to the nature of annual hydrographs, and many responses confused annual hydrographs with storm hydrographs. This meant much of the analysis and

terminology used in the answers was inappropriate, such as discussion of time lags and rising and falling limbs. Relevant factors are those which vary from year to year; many responses identified factors that were more relevant to storm events rather than annual patterns. Constant factors, such as drainage basin shape or size, rock type and soils are not relevant.

Better responses included reasoning for the annual changes, for example explaining how changes in precipitation lead to variation in river discharge. Merely mentioning climate change or vegetation and/or land used changes without a detailed explanation gained few marks.

Atmosphere and weather

Question 2

(a) Most candidates provided accurate answers. Both figures were needed to provide the specific change, simply stating the range was not enough.

(b) Most candidates were able to provide accurate descriptive points.

(c) Although there were many good answers to this question, there were many misconceptions. Most candidates were aware that greenhouse gases stopped radiation leaving the atmosphere, but the mechanism involved was often interpreted wrongly. Greenhouse gases trap longwave radiation, and reflected radiation is usually shortwave: the trapped radiation is re-radiated longwave radiation from the Earth's surface. There were sometimes errors in naming greenhouse gases too. Some candidates still seem to think that the possible hole in the ozone layer has something to do with the enhanced greenhouse effect and global warming.

Rocks and weathering

Question 3

(a) The majority of candidates were able to correctly identify one of the accepted types of mass movement.

(b) A minority of candidates explained the features rather than describing them. The best responses described the features rather than just noting them, such as describing the position, size and steepness of a scar.

(c) Very few candidates understood how heave occurred. Many thought the question related to the resource diagram and attempted to explain that mass movement type. As noted earlier, **part (c)** questions are not always related specifically to the resource although there is often some connection. In answering the question, any processes that resulted in expansion or contraction of the soil, such as freeze-thaw, wetting and drying and possibly heating and cooling were relevant. For a full answer, answers needed to explain how those processes led to soil heave. It was not necessary to extend the explanation to a discussion of soil creep, although it was an added consideration.

Section B

Hydrology and fluvial geomorphology

Question 4

(a) (i) Answers to this question were generally sound and most candidates were able to obtain at least two marks with islands (eyots) and multiple channels being most frequently mentioned.

(ii) There were many good answers although the processes of attrition and abrasion were sometimes confused.

(b) Most responses provided some explanation for the formation of river cliffs and point bars but there was often a lack of detail. Explanations usually started with meanders already having been developed, but better answers explained the initial formation of meanders and then how this leads to the development of river cliffs and point bars. There was uncertainty about the nature and operation of helicoidal flow, with diagrams showing helicoidal flow as a squiggle down the centre of

the channel which is erroneous. Erosion of the outside bend to create river cliffs was often mentioned, but there was little discussion of the nature of the erosion processes involved. There was often a similar lack of clarity about the formation of point bars. There was sometimes a confusion between river cliffs, river bluffs and waterfalls.

(c) There were many excellent, lengthy and detailed answers to this question with many factors other than land use change being discussed. However, the evaluation of the 'extent to which' was often ignored. Thus, evaluation was limited. The range of flows discussed was sometimes limited and few considered channel flow. It was often forgotten that deforestation/afforestation were opposites so simply reversing the effects was not necessarily adding greatly to the answer.

Atmosphere and weather

Question 5

(a) (i) Sensible heat transfer was often defined in terms of convection or heat that could be felt. Definitions of evaporation were often correct.

(ii) Most candidates were able to explain rising air which on cooling, condenses into rain droplets. Some confused frontal uplift with the orographic effect.

(b) Most candidates were able to gain some marks, but responses often showed a lack of detail. Angle of incidence of the incoming solar radiation was prominent in the discussion and sometimes the thickness of the atmosphere that the radiation had to pass through. Better answers referred to the albedo effect especially in polar regions. Far too many candidates still refer to the nearness of the sun for equatorial regions.

(c) Many candidates found this a difficult question and there was often little reference to seasonal variations. Most referred to the different thermal properties of sea and land but were unable to extend the discussion to seasonal variations. The role of ocean currents was often prominent in responses but emphasis on seasonal variations was usually lacking. The effect of latitude and the alternation between summer and winter in affecting seasonal variations in temperature was often missing.

Question 6

(a) (i) Most candidates were able to describe the process of subduction, often with the aid of good diagrams.

(ii) Most candidates were able to provide some relevant detail, but the complete process was often not clear. The production of carbonic acid was well understood but the detail presented for the weathering of calcium carbonate rocks was sometime inaccurate. There was the occasional confusion with hydrolysis.

(b) Most candidates were aware that the terms referred to water flowing over the land surface but did not mention the difference between unconcentrated and concentrated flow. The role of precipitation, both amount and intensity, were the main factors discussed. The steepness of the slope was another relevant factor frequently mentioned. The fact that bare slopes are important for both processes to operate, especially for rills to develop, was rarely mentioned. Many responses did not differentiate between the two processes clearly enough.

(c) The responses to this question were generally good with some excellent detailed specific examples. Hong Kong was the favoured location used to underpin the analysis and evaluation but there were many other relevant examples from other locations. Answers contained a good variety of techniques to stabilise slopes with an evaluation of their efficacy. More substantial answers also discussed when these techniques failed and when human activity actually increased slope instability.

GEOGRAPHY

Paper 9696/13
Core Physical Geography 13

Key messages

There were some excellent answers, reflecting the sound approach of many candidates. Candidates seemed well prepared for the examination, and the standard of many answers reflected this.

Description and explanation continue to be fundamental to ***Section A*** questions. Differentiating between these specific requirements has often been problematic, but this was not an issue for this examination. Few questions required direct contrasts and **Question 1(b)** was well answered in this respect.

Descriptions/locations were sometimes difficult to understand, particularly in responses to **Question 2**. The language used for descriptions should be geographical, and compass directions used to clarify locations rather than 'top' and 'bottom'. Furthermore, simply identifying locations in terms of data from a key can lead to lack of clarity. Identifying locations in regional terms would be helpful.

Examples and case study material continue to be important elements of ***Section B*** answers but were not always sufficiently detailed. For example, much of the evaluation in answers to **Question 5(c)** could have been discussed in terms of located examples, but there was limited detail in this respect. Reference to, and details of global environments where convection or orographic or frontal precipitation dominate, would have been a clear and valid approach. There were some very effective case studies used to illustrate the effectiveness of hard and soft engineering, in answer to **Question 4(c)**, but many responses were superficial in their use of examples, and did not provide sufficient detail.

Assessment and evaluation are key elements of answers to ***Section B*** questions. As emphasised in previous reports, some candidates display considerable factual knowledge but do not provide an evaluative answer. The best responses incorporate the evaluation into the main text of the answer, rather than a one phrase conclusion written in haste. All 'levels' questions require evaluation to reach higher marks, and the most effective responses were detailed and sophisticated.

There were no questions which required the submission of a diagram as a focal point of the answer, but there were opportunities throughout to use diagrams to enhance answers. For example, **Question 1(c)** required information on the shape of deltas, as well as their size, but few were able to illustrate the various types of delta. In addition, **Questions 4(b), 5(b), 5(c), 6(b)** and **6(c)** could all have benefitted from diagrammatic illustration. This is a valid geographical skill which is less popular than in the past, though it is still very useful and can add valuable details to an answer.

General comments

There were limited rubric infringements. Planning in terms of time allocation was effective, and there were very few who were unable to complete the paper in the time allowed. A few candidates completed all three questions in ***Section B***, but this is now very much a limited problem.

Comments on specific questions

Section A

Hydrology and fluvial geomorphology

Question 1

(a) Few candidates identified the feature as a 'distributary'. Many thought that 'tributary' was sufficient, or even the more generic answer of 'delta'.

(b) This was well answered. One mark was awarded for each comparison, and most candidates were clinical in their answers, many achieving full marks. The most common error was to include the flood plain as an element of the delta.

(c) Size was competently discussed. There was understanding of both the role of discharge and the nature of deposition. Flocculation was explained effectively by many. Shape however was ignored by a majority of candidates and as identified earlier, there was limited illustration and few examples offered.

Atmosphere and weather

Question 2

(a) Most could identify the relevant figures, but some omitted the nature of those figures.

(b) The map is complex and could be difficult to understand. However, the question only requires description, and many could identify the global distribution of differences. Many responses could be improved by describing those differences using valid geographical terms.

(c) Some candidates confused the depletion of the ozone layer with global warming. Chlorofluorocarbons (CFCs) act as a greenhouse gas contributing to global warming, but depletion of the ozone layer is another matter. Urban heat islands were prominent in some answers, and although this has relevance, such answers tended to lack balance. Many candidates understood the effect of melting Arctic sea ice, and the release of methane associated with the melting permafrost.

Rocks and weathering

Question 3

(a) Correctly answered by most candidates.

(b) This was well answered by the majority, but valid answers did require reference to both speed and moisture content.

(c) The significance of water was identified by most, but the detail of its role was more confused. Fluidity and lubrication were discussed by many, but discussions of weight and lack of cohesiveness were not as convincing.

Section B

Hydrology and fluvial geomorphology

Question 4

(a) (i) Saltation was widely understood. A few confused saltation with solution. Answers on cavitation were less convincing, and often a more general definition of abrasion was given as an alternative.

(ii) Many answered this question successfully. Some failed to identify that solution was both a process of erosion and transportation.

(b) Factors and stores were understood, but answers were not always as thorough as they might have been. The general concept of stores was understood, but surface and channel stores tended to be neglected, and responses often drifted into discussing flows. Factors identified tended to focus on vegetation, and discussions of climatic and human impacts were limited.

(c) Many responses discussed afforestation in relation to soft engineering, but little else that was specifically relevant. Drainage basin management and wetland conservation were seldom discussed. Hard engineering was more widely discussed, but answers were often generally descriptive rather than evaluative, and did not always clearly relate to the reduction in river flooding. Examples needed to be detailed in order to fully assess the virtues of hard and soft

engineering. The Three Gorges Dam figured prominently, but the most effective answers discussed local initiatives including examples from New Zealand and the UK.

Atmosphere and weather

Question 5

(a) (i) Most candidates only stated one valid characteristic of wind belts. Some attempted to give a detailed explanation of global wind systems, but this was of limited value.

(ii) Many responses discussed both the nature and direction of ocean currents, and also their influence on winds passing over them.

(b) There was limited reference to the night-time energy budget. This was a question in which responses could have been considerably enhanced by the use of diagrams. The day-time components were better understood, but rarely were all six components identified. Latent heat and sensible heat were often omitted.

(c) There were some good responses to this question. Most were able to differentiate the three ways air is uplifted, and there were some useful diagrams to support answers. The most effective evaluation discussed the frequency and location of convectional, orographic and frontal precipitation, but this proved to be the weakest aspect of many answers.

Rocks and weathering

Question 6

(a) (i) Responses were often effective and most candidates displayed an understanding of rainsplash. Fewer recognised the high intensity of the raindrops, but did describe dislodging and moving downslope.

(ii) Most explained how netting protected slopes by preventing loose material from moving, and hence increasing slope stability. Few discussed the fact that this method could be combined with others such as pinning, and that this would further increase slope stability.

(b) Most candidates knew of the Peltier diagram, and some tried to illustrate it. The idea was sound, but of course if inaccurate, such a diagram can have a negative effect. There was little detail relating to specific weathering processes, and the limitations of the Peltier diagram were not addressed.

(c) Many candidates answered this question well. These responses displayed clear and detailed knowledge of the different converging plate boundaries, and there were some clear descriptions of how fold mountains originate. Assessment of the extent to which fold mountains are the main landform usually led to a comparative discussion of volcanic activity and/or ocean trenches, and this was very effective.

GEOGRAPHY

Paper 9696/21
Core Human Geography 21

Key messages

Candidates should read the question thoroughly and carefully consider its meaning before answering the question. Candidates who miss key command words produce less effective or irrelevant responses, especially in ***Section B***. When a question asks for a comparison, such as in **Question 1(a)(ii)**, the answer should clearly state the similarities and differences between different elements.

The mark allocation indicates both the range of points and the amount of detail expected in responses, and also the time that should be spent on that section. Many candidates wrote at length for 2 marks in **Questions 1(b), 2(b), 3(b)** and **5(a)(ii)**. Candidates should remember that the last part of ***Section B*** answers are worth 25 per cent of the total marks. This is often the key discriminator as it is an evaluation, and candidates should leave sufficient time to do themselves justice.

Where the question asks for examples, responses must include specific and appropriate examples to access the higher levels. Africa is not a country, and too many responses refer to it as an LIC. Examples should be recognisable and specific with some details rather than simply the name of a country. Examples chosen should be accurate and relatively recent (preferably within the lifetime of the candidate). Even where no specific reference is made to the use of examples, they are often helpful in developing detail or clarifying a point.

Good case study knowledge is needed, especially in ***Section B***, but it must be appropriately applied to the question. The best answers remain focused on the question and use selected details of the case study, rather than simply repeating everything the candidate had memorised. For example, many candidates wrote at length about all aspects of migration from Central America to the USA in **Question 5(c)**, when the question specifically asked about positive impacts on the receiving area.

Candidates should avoid using vague terms such as 'resources' and 'infrastructure', without clarification. A typical example from **Question 1(c)** was: *'a youthful population will put too much pressure on resources'.* An answer from **2(b)** was: *'because of poor infrastructure'.* Such answers would gain no credit. Candidates should also avoid stereotypical and generalised comments which have little accuracy in reality, and avoid using spurious data to support points.

General comments

- When a question asks candidates to describe a pattern, simply listing data will not gain any marks. For example, in **Question 2(a)**, many responses simply listed the values of net migration for different areas on the map.
- Where questions ask for two aspects it is not good practice to offer more than two and it wastes time in doing so. It is recommended that candidates express each aspect as a new paragraph.
- **Part (c)** questions in ***Section B*** always require an element of assessment or evaluation. This involves a balanced consideration of different aspects of an issue. Many responses could be improved by the candidate expanding on the simple agreement or disagreement expressed at the end of the answer.

Comments on specific questions

Section A

Population

Question 1

(a) (i) This was answered correctly by nearly all candidates.

(ii) Most candidates were able to compare the changes in birth rate and death rate for the two countries. Some candidates did not use data to support their answer, and this limited their mark. Some did not follow the command word 'compare' and simply gave two descriptions, which limited their mark to a maximum of 1.

(b) Most candidates were able to give two valid reasons. Although only short answers were required, some reasons required brief explanation. For example, some candidates simply stated '*government policy*'; stating that a pro-natal policy encourages families to have more children would have been better. Some responses consisted of a detailed explanation of one reason only, which could only achieve one mark.

(c) The best responses explained issues with some development, for example *'With a youthful population there are more young dependents who need education and the government will have to spend more on schools.'* Most candidates were able to identify relevant issues, but many responses were basic and did not get a second mark for a developed explanation. Some responses were too vague to gain credit such as *'a youthful population puts a strain on resources.'*

Migration/Settlement dynamics

Question 2

(a) The best responses made simple statements about the overall pattern of movement from the north and interior to the south-west around Vancouver and the south-east between Toronto and Montreal, and identified the area to the north of Edmonton as having particularly high outmigration. Many candidates gave a general description of the changes shown on the map while showing little or no understanding of the idea of net migration – areas of population gains and losses. The weakest responses simply listed named places and their category of net migration.

(b) As there were only 2 marks available for two reasons, only a brief answer was needed. The best responses gave a simple sentence for each reason, such as *'low incomes from agriculture and lack of other jobs make people leave rural areas and move to cities'* and *'droughts in rural areas force people to look for better opportunities in urban areas'*. Some weak responses contained sweeping and erroneous statements '*…is a poor country with no water and barely any food so people move away'* which needed to be more specific.

(c) The best responses answered in terms of HICs and gave explanations about counterurbanisation, retirees moving to the countryside and the perceived better quality of life in the quieter surroundings of rural areas with less traffic, pollution and crime. However, many gave only very brief statements such as '*because they have a better quality of life'*, with no further explanation.

Settlement dynamics

Question 3

(a) Most candidates found this straightforward, many gaining full marks.

(b) This question only carried two marks, so only a short comment on each benefit was required, and most candidates did this successfully.

(c) This was also straightforward for many candidates, although in this question, as it carried 4 marks, some explanation was required to support a statement. For example, a comment such as *'rents may go up so people have to move away'* was credible, but a more detailed explanation of this point would gain more marks, such as: '*After redevelopment, house prices or rents may increase as the area becomes more desirable. This may make it too expensive for the original residents who may be forced out because they cannot afford to live there.'*

Section B

Population

Question 4

(a) Although this topic is clearly identified in the syllabus many candidates appeared to struggle with this question. Better responses commented on climate hazards and poverty.

(b) The strongest responses showed an understanding of the development of GM crops, hydroponics, vertical farming, remote sensing and the use of advanced systems for irrigation. These candidates were able to give specific and recognisable examples. However, many responded at a very basic level, referring to mechanisation, tractors and HYVs with little or no detail or exemplification. A significant number of responses were about food production in LICs/MICs.

(c) Good responses discussed how economic development can result in improvements in healthcare, housing, diets and sanitation, all which contribute to a decline in infant mortality. However, exemplification was not strong, with many limiting this to one 'cover all' comment such as '*in Uganda…*', and this limited the marks available.

Weaker responses were vague and generalised and simply mentioned a few factors that contribute to changes in IMR (or in some cases, death rates in general) without linking them to economic development, and without any exemplification.

Migration

Question 5

(a) (i) Most candidates were able to give a reasonable definition of the term.

(ii) Most candidates were able to give two negative impacts. The most common responses were loss of skilled workers and 'brain drain', and social impacts on families.

(b) The best responses were based on a well-learned case study, the most common being Mexico (and wider South and Central America) to the USA and Poland to the UK. There were also good responses that chose a case study of the forced migration of refugees escaping conflict, with Syria, Ukraine and Myanmar being relevant examples.

Many weaker responses used a case study in name only. It was not uncommon to see a candidate stating as their case study '*Mexico to the USA'* and presenting a number of general causes such as poverty, lack of jobs or seeking better healthcare and education without any detail or sense of place – in other words, the 'case study' could have been anywhere. Some tried to add details by including spurious figures such as *'250,000 people have moved from Mexico to the USA'.*

(c) As this question was linked to **5(b)**, examiners saw a similar division between those candidates who were able to apply a well-understood case study to the question and those who gave vague and general responses without any focus on impacts on the receiving areas or recognisable examples.

Some of the strongest responses used examples of refugees (such as Syrian refugees in Germany), and considered the economic, social and political impacts, both positive and negative. These answers also had good evaluative conclusions which considered the positive and negative balance of the different impacts.

Weaker responses often used Mexico to the USA as their example, and while they described economic and social impacts these were very often too general, for example '*the migrants work on farms and in factories*' or '*a positive impact is that there are now many Mexican restaurants in the USA'*.

Settlement dynamics

Question 6

Too few candidates answered this question to be able to give meaningful comments in this report.

GEOGRAPHY

Paper 9696/22
Core Human Geography

Key messages

Candidates should read the question thoroughly and carefully consider its meaning before answering the question. Candidates who miss key command words produce less effective or irrelevant responses, especially in ***Section B***. The term 'pattern' seems to be poorly understood by many candidates.

Where the question asks for examples and candidates do not include any relevant or appropriate examples candidates cannot access the higher levels. Africa is not a country, and too many responses refer to it as an LIC. Examples should be recognisable and specific with some details rather than simply the name of a country. In addition, case studies should be accurate and relatively recent (preferably within the lifetime of the candidate). Even where no specific reference is made to the use of examples, they are often helpful in developing detail or clarifying a point, especially in ***Section A***.

The mark allocation not only indicates the range of points expected but also the time that should be spent on that section. So the 15 mark **part (c)** in ***Section B*** is worth 25 per cent of the total marks for this exam, whereas the **part (c)** in ***Section A*** is usually worth 10 per cent or less. The time spent on these two parts should reflect their share of the marks. Many candidates wrote at length for a maximum 2 marks in ***Section A***.

General comments

Section A answers tended to be stronger than ***Section B*** answers, possibly due to not fully appreciating what was demanded by the questions in some parts of ***Section B***. Typically **Question 4(c)** and **5(b)** were not fully understood. ***Section A*** and ***B*** carry equal marks so candidates should spend equal amounts of time on each.

Where questions ask for two aspects it is not good practice to offer more than two and it wastes time in doing so. A number of candidates gave four or more responses when only two were required.

Candidates should avoid using vague terms such as infrastructure, technology, resources and facilities without any clarification of what they actually mean e.g., 'machinery' in **Question 1(c)**. Candidates should also avoid stereotypical and generalised comments which have little accuracy in reality.

Comments on specific questions

Section A

Population

Question 1

(a) (i) Most candidates answered correctly. Incorrect responses often provided a value of 77 million rather than the year 1990.

(ii) Most candidates gave the correct calculation and answer. Some candidates made errors in their workings or did not state that it was in millions.

(b) Responses included a wide range of relevant problems including famine, increased malnutrition and increased prices, however some focused on aspects that were not directly related to global food security such as *'with a growth in population more land will be taken up for housing, so reducing the land available for farming.'* Some candidates wrote at great length for each problem for just one mark. A number of candidates misinterpreted the question to look at the reason for food shortages rather than the problems linked to food shortages.

(c) Most candidates knew and understood two ways in which technology was used in agriculture. There were lots of vague references to 'machinery' which were limited to one mark (if that). Even if a response specified machinery such as combine harvesters, often this did not demonstrate clearly how this was linked into how they were used to increase food production, such as '*increased use of machinery means there is less need for labour so more food can be produced in the same time.'* More effective responses explained this link, for example *'The introduction of genetically modified crops means that crops can be made resistant to pests, drought and diseases so less is lost in food production which then increases supply.'*

The term 'efficient' was frequently used but often these responses lacked explanation and depth about what makes the technology able to produce more food. Many candidates briefly commented on the fact that it will quicken the process, but responses needed to explain how this would happen and the impact on food production.

Population/Migration/Settlement dynamics

Question 2

(a) (i) This was answered correctly by nearly all candidates.

(ii) Some candidates seemed to struggle with identifying the necessary data to answer this question. The strongest responses made clear comparative points supported by data, such as *'students and younger adults are moving into major cities (+5 000) whilst older adults are leaving in large numbers (-26 000).'* Weaker responses often lacked the idea of the direction of migration: *'Migration of older adults are higher in urban areas, especially major cities.'*

A number of responses explained why the two groups differed in their migration, which was not needed. Some overlooked the loss in net migration and gain in net migration shown on the charts. This resulted in some quoted data being inaccurate and incorrect statements and comparisons being made.

(b) This was a well understood topic with a range of social, environmental and economic pushes covered by candidates. Some did confuse push and pull factors or did not offer sufficient detail such as *'people are pushed out of urban areas by the level of pollution.'* A more effective response was: *'The high volume of traffic in urban areas produce noise and atmospheric pollution that can damage the health of both young and old'*.

(c) This question demanded an explanation of the impacts. Weaker responses often merely stated or listed the impact such as *'ageing population', 'empty property'* or *'decline in rural services'*. Stronger responses added explanation that linked each impact to the process of rural depopulation, for example *'the loss of population reduced the demand for goods and services and the workforce so many rural shops and services shut as they were no longer financially viable.'*

The phrase *'less strain on resources'* was used by some candidates. Specific reference to which resource is under pressure would improve these responses.

Settlement dynamics

Question 3

(a) Many candidates tended to list areas of zoning rather than identify patterns. Better responses clearly described a number of patterns such as *'there is a linear pattern along the main road facing the harbour with 21 or more floors facing the harbour with lines of decreasing heights inland behind'.* Weaker responses lacked reference to pattern or were misleading such as *'towards the south east there is zone of 8–10 floors'.*

(b) A good range of reasons were clearly communicated, such as *'building height may be restricted in areas of potential seismic activity to minimise the risk of building failure'.* Other responses focused on the aesthetics and appearance of tall buildings. Weaker responses often seemed to lack understanding such as '*because they are expensive to build*', or '*because they might blow over in high wind*'.

(c) This question required detailed explanation of this feature. Many answers were descriptive rather than explanatory: *'Tall buildings are typical of CBDs because there is a lot of administrative and commercial activities there.'* More effective responses focused on the relative lack of space and high cost of land in the CBD such as *'[the] CBD is the highest land value site as it attracts commerce…as space is limited, it is expensive to build horizontally so buildings tend to be high rise to maximise the use of the space.'*

Section B

Population

Question 4

(a) This question required comparison and a focus on economic issues. Many responses consisted of two separate unrelated lists of issues some of which were not strictly 'economic' in nature such as *'A youthful population will produce a high birth rate so leading to an increased population unlike an ageing population which will eventually reduce in number.'* This is not an economic issue although this point could have been developed into one.

(b) Many candidates seemed unsure what should be included under social factors, with responses such as *'the need for child labour in agriculture encourages rural populations to have a large number of children to work on the farm.'* This then is an economic factor. More effective responses focused on the influences of education, tradition, culture and religion. The most effective responses contrasted the social factors operating in HICs and LICs/MICs.

(c) Many responses were based on China, with many consisting of detailed descriptions of the One-Child Policy rather than directly answering the question about its effectiveness. Many candidates seemed unaware that natural increase is a result of both birth rates and death rates. Those that did evaluate often commented on social consequences and issues resulting from the policy (such as imbalanced sex ratios) which did not fully address the question. Evidence suggests the policy has changed natural increase for the long-term, as having abandoned the policy the natural increase rate in China remains low.

Migration

Question 5

(a) (i) The vast majority of candidates clearly understood the term, explaining the lack of choice and linking this to one or more causes. Many did not state that migration is for at least a year.

(ii) Candidates were aware that the impacts of forced migration on receiving areas can be both positive and negative. Commonly candidates referred to an increase in labour supply which could have an impact on economic development, and stronger responses explained and exemplified this impact.

Many candidates presented mainly negative views on forced migration. This often included a number of misconceptions and generalisations, often about an increased level of crime. Many responses did not keep to economic impacts of forced migration, and instead focused on the social and demographic elements such as *'receiving areas get an influx of people with different beliefs and cultures which can cause friction with the existing population.'*

Many focused on the impact on employment rates and wages in the destination area, for example *'forced migrants are desperate to find work and are willing to work for low wages often in poor working conditions so undercut the existing working population who become unemployed or accept wage cuts.'*

(b) Candidates clearly understood the difference between push and pull factors, but then tended to give well exemplified lists of these factors rather than directly answer the question of how they influence the decision to migrate. More effective responses linked the two, for example:

'It is the balance between push factors, which repel migrants from both their origin and potential destination, and the pull factors that attract them to both their origin and potential destination. For a migrant to move the destination must have more pulls and less pushes than their place of origin.'

(c) More effective responses were clear about 'different types' of migration and recognised that they can be classified on the basis of distance: *'Generally internal migration such as intra-urban migration is short in distance and international migration is generally longer in distance.'* Other responses recognised that distance is a friction that has an impact on migration, but that this can vary depending on the area, for example:

'The [physical] distance between Mexico and the USA is very little but natural barriers such as the Rio Grande river and manmade barriers such as fences mean it is effectively a very great distance apart.'

Some dismissed distance and focused on other factors such as cost, time or social links such as *'In chain migration distance is irrelevant, as it is who you know that encourages you to migrate regardless of the distance.'*

Settlement dynamics

Question 6

(a) This was a descriptive question, but candidates tended to explain the changing locations of manufacturing often in a rather vague or simplistic way. Stronger responses referred to specific examples to support their points.

(b) This question required specific case study knowledge, and although some background knowledge can be useful, responses should be focused on recent changes. The most effective responses included named specific locations within the identified rural area or region, along with other specific details or data. Many responses were broadly descriptive rather than explanatory, and where explanation was offered it was limited such as *'The poor climate and high relief make the Scottish Borders a challenging place to live.'*

(c) This part was the most effectively answered. Most candidates did evaluate, often comparing the relative level of success between the short term and long term. A number of responses were supported with specific details including numbers of jobs created, names of businesses and census figures, as well as developing their ideas to explain the positive or negative multiplier effect.

GEOGRAPHY

Paper 9696/23
Core Human Geography 23

Key messages

Candidates should read the question thoroughly and carefully consider its meaning before answering the question. Candidates who miss key command words produce less effective or irrelevant responses, especially in ***Section B***. When a question asks for a comparison, such as in **Question 1(a)(ii)**, the answer should clearly state the similarities and differences between the different elements.

The mark allocation indicates both the range of points and the amount of detail expected in responses, and also the time that should be spent on that section. Many candidates wrote at length for 2 marks in **Questions 1(b) and 2(b).** Candidates should remember that the last part of ***Section B*** answers are worth 25 per cent of the total marks. This is often the key discriminator as it is an evaluation, and candidates should leave sufficient time to do themselves justice.

Where the question asks for examples and responses do not include any relevant or appropriate examples candidates cannot access the higher levels. Africa is not a country, and too many responses refer to it as an LIC. Examples should be recognisable and specific with some details rather than simply the name of a country. In addition, case studies should be accurate and relatively recent (preferably within the lifetime of the candidate). Even where no specific reference is made to the use of examples, they are often helpful in developing detail or clarifying a point.

Good case study knowledge is needed, especially in ***Section B***, but it must be appropriately applied to the question. The best answers remain focused on the question and use selected details of the case study, rather than simply repeating everything the candidate had memorised. For example, many responses included all aspects of China's One-Child Policy in **Questions 4(b)** and **4(c)** when the question specifically asked about managing natural increase.

Candidates should avoid using vague terms such as 'resources' and 'infrastructure', without clarification. Candidates should also avoid stereotypical and generalised comments which have little accuracy in reality and avoid using spurious data to support points.

General comments

- If candidates are asked to describe a pattern, as in **Questions 2(a)** and **3(b),** simply listing data will not gain credit.
- Where questions ask for two aspects it is not good practice to offer more than two and it wastes time in doing so. It is recommended that candidates express each aspect as a new paragraph.
- **Part (c)** questions in ***Section B*** always require an element of assessment or evaluation. These require a balanced consideration of different aspects of an issue. Many responses could be improved by the candidate expanding on the simple one line agreement or disagreement expressed at the end of the answer.

Comments on specific questions

Section A

Population/Migration

Question 1

(a) (i) This was answered correctly by nearly all candidates.

(ii) Most candidates were able to answer this well, comparing the changes in natural increase for the two countries. Some candidates did not use data to support their answer, and this limited their mark. Some did not follow the command word 'compare' and simply gave two descriptions, which limited the mark to a maximum of 1.

(b) Most candidates were able to give two valid reasons. Although only brief answers were required, some reasons required a little explanation. For example, some responses simply stated *'careers for women'* when a brief comment that this might mean women delay having children would have been better. Some responses consisted of a detailed explanation of one reason only, which could only achieve one mark.

(c) Most candidates were able to explain two difficulties, but many responses were basic and lacked development. The best responses identified two clear separate problems, which were explained for example '*with an ageing population there are more elderly dependents who need pensions, and the government will have to spend more or raise the age of retirement.*' Some answers were too vague to be awarded any marks, such as '*an ageing population puts a strain on the government'.* Some lengthy responses covered many issues related to an ageing population, which was not required to answer the question.

Population/Migration

Question 2

(a) Many responses gave a general description of the changes shown on the map while showing limited understanding of the idea of net migration. Some included erroneous statements such as *'there is more migration in the north and less in the south'*. Use of geographical language (such as compass points) and place names to identify locations would improve some responses.

The strongest answers made simple statements about the overall pattern of movement south to north, referring to negative net migration, or out-migration and positive net migration or population gain and then added further detail such as the Rome area having population gain whilst not being in the north, or comments about the 'toe' or far south and most of Sicily having the greatest out-migration.

(b) As there were only 2 marks available for two reasons, only a brief answer was needed. Stronger responses were focused on negative net migration balance and gave a simple sentence for each reason, such as *'high unemployment and lack of job opportunities will make people leave an area'* or *'a natural disaster such as a flooding or a volcanic eruption may force people to move away from an area'*. Weaker responses tended to give reasons for migration in general, and often gave vague reasons such as *'lower quality of life'* or *'poor infrastructure'*.

(c) This question referred to the impact of migration on population <u>structure</u>, but many candidates explained the general impact of migration on the receiving area, discussing pressure on housing, potential 'brain gain' or hostility to newly arriving people. Stronger responses considered the population structure, with good explanations about an influx of young people of working age, leading to a 'bulge' in this section of a population, or there being a gender imbalance as more males than females tend to migrate for work. Others explained the idea of older people moving for retirement leading to an ageing population structure. The best answers gave a brief example, such as naming cities in LICs/MICs gaining younger people due to rural-urban migration or naming areas popular for retirees.

Settlement dynamics

Question 3

(a) Most candidates correctly identified the key features of higher land values around the CBD, a line of middle values extending to the northwest of the CBD and low land values elsewhere, particularly south of the river.

(b) The best responses explained the desirability of the CBD for commercial land uses because of its accessibility and prestige, leading to competition for space and higher land values. Demand and

therefore the value of land decline with distance from the CBD. Other responses also suggested that good transport links explained the line of middle value land extending from the CBD. A common misconception was that the CBD is primarily residential in land use, and others suggested that the area south of the river was primarily rural and agricultural.

(c) Many responses to this question were related solely to house prices being determined by auctions, which did not answer the question. Some responses showed clear understanding of the concept of bid rent, with accounts of different zones occurring because of different land uses bidding highest for the most desirable locations (such as retail businesses competing for the CBD). Some candidates used a bid rent diagram to good effect.

Section B

Population

Question 4

(a) (i) Most candidates were able to give a clear definition of the term, although some missed one or more elements of the definition (such as per year or per 1000 live births).

(ii) Most candidates were able to give two factors, although some answered incorrectly, giving factors for high rates of IMR.

Many responses consisted of only a brief statement for each factor without any development, for example *'better diets'*, while others were just too vague, such as '*Improvements in healthcare can reduce infant mortality directly'*. This statement would be improved by specifying improvements which would have this effect such as vaccination campaigns or investment in pre- and post-natal care. The best responses achieved the maximum marks with fully developed ideas, such as:

'Improved sanitation can reduce the spread of cholera and other waterborne diseases such as cholera and diarrhoea'

'Vaccinations against measles and polio mean that fewer babies die of these diseases.'

(b) Many candidates used China's One-Child Policy as their case study; the other commonly used case study was Singapore, and some candidates used a case study of Japan and discussed managing natural increase to combat the issues of an ageing population. Stronger responses demonstrated clear and specific knowledge of their case study, for example those using China gave explanations about rapid population growth (with dates and figures), food shortages in the recent past and the pressure on employment, health and education. However, many responses gave general accounts of the policy itself and how it was introduced, which gained little credit.

(c) This question was linked to **Question 4(b)**, and the best responses focused on the success, or otherwise, in managing natural increase in their chosen country, referring to changes in birth rates and death rates and the effect on rates of natural increase. The best responses included up to date information, for example about China's recent changes then abandonment of the One-Child Policy in response to low birth rates and an ageing population.

However, as in **4(b)**, many responses lacked focus on the question. These tended to discuss implementation of the policy and its problems more generally. Whilst it was valid to consider aspects of the policy that had been unsuccessful, better responses selected information from their case study carefully to answer the question.

Some responses confused reductions in natural increase with reductions in total population, for example stating that the introduction of China's One-Child Policy *'quickly brought about a reduction in population'*. However, it is only within the last five years that China has experienced a slight fall in total population.

Some of the best answers to **4(b)** and **4(c)** used Japan as a case study, with details of specific attempts to manage declining natural increase and an ageing population and an assessment of their effectiveness.

Migration

Question 5

(a) Most candidates demonstrated an understanding of chain and stepped migration. However many responses gave two separate accounts and did not compare the two.

(b) Good responses used well-learned case studies to discuss the advantages for the destination areas, common examples being eastern European migration to the UK, migration from Central and South America to the USA, Pacific Island Countries to New Zealand and the Philippines to Malaysia. The best answers named specific places within the receiving country and a range of advantages that were clearly linked to the places described. Weaker responses gave examples in name only, such as *'e.g. Mexico to the USA'*, and described general advantages for the receiving area that lacked sense of place, for example *'Migrants fill jobs that locals do not want to do*' or '*they bring their culture such as restaurants and music*'.

(c) There were some good responses that focused on age and its impact on migration patterns. These answers considered different ages and types of migration such as young people moving for economic reasons both internally (often rural-urban) or internationally and also the movement of older people such as retirees moving to rural areas. The strongest responses also considered situations where age is not a factor such as forced migration when people of all ages move to flee conflict or natural hazards. Weaker responses tended to discuss migration in general with little or no focus on age as a factor.

Settlement dynamics

Question 6

Too few candidates answered this question to be able to give meaningful comments in this report.

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

The response of many candidates was creditable but there were incidences where answers were misdirected and unbalanced because of a misinterpretation of the question or lack of knowledge and understanding. It is important to stress that questions need to be analysed in full rather than concentrating on a few terms as this can lead to responses not fully answering the question. This is especially important in the evaluation essay questions. It is also important to recognise key elements in the question that will direct the answer to a comprehensive evaluation.

It is worth making a few general comments, some of which have been mentioned in previous reports and will be explored in greater detail later. There continues to be a tendency to use concepts and processes in the wrong context, thus demonstrating incomplete understanding. Detailed examples are useful, but simply stating a general location where some issues might occur, such as an entire country, is often not. This was especially true of answers to **Question 8**. Also, as noted in previous reports, it is important that discussion of specific events, such as earthquakes and mass movements, is reasonably accurate.

General performance was variable but there were many excellent responses which showed a broad knowledge and secure understanding of physical geography. There was only the occasional rubric error but no more than in previous examinations.

Comments on specific questions

Tropical environments

Question 1

(a) Candidates had to compare the climatic characteristics of the two locations, Belém and Chittagong, which had been provided in climate graphs. Answers were generally comprehensive with the correct use of data, however, in some answers there was a description of the two climates separately with no direct comparison. It needs stressing that a comparison implies differences as well as similarities.

(b) Answers to this question were quite weak. Most candidates noted that Chittagong was on the Tropic of Cancer and in the Indian sub-continent and that it was in a monsoon climate. However, there was a lack of understanding of the mechanisms of the monsoon and the role of the intertropical convergence zone (ITCZ) with the movement of the overhead sun. Thus, candidates found it difficult to explain the climatic characteristics of Chittagong. Wind systems and pressure changes from summer to winter were rarely mentioned.

Question 2

This was the more popular of the two essay questions in this option. Most candidates had some knowledge and understanding of the concepts of climatic climax and plagioclimax plant communities. There were good descriptions of plant communities of humid tropical (rainforest) ecosystems but detail with respect to seasonally humid tropical (savanna) ecosystems was less well developed. More comprehensive answers did suggest that there were large areas within the tropical rainforest ecosystem where human interference had changed the vegetation communities, possibly to a plagioclimax type. Thus, the more substantial answers argued that, while there were large areas of climatic climax vegetation in tropical rainforests there were considerable areas of plagioclimax and even sub-climax vegetation. Similarly, there were areas within

savanna ecosystems that could be assessed as climatic climax plant communities. Thus, the response was highly variable.

Question 3

This question concerned granite landforms and whether the only difference between them was one of size. Knowledge and understanding of the processes involved in the formation and development of the landforms were limited. In terms of size, tors are clearly the smallest feature and inselbergs tend to be the largest but there is an overlap between bornhardts and inselbergs. Thus, it can be said that, in general, they do differ in size. But they also differ in shape. Tors are blocky, well jointed features. Bornhardts tend to be rounded bare rock domes and inselbergs tend to be more angular or plateau-like. All are mostly formed (with the possible exception of some inselbergs) by the sub-surface chemical weathering of jointed granite followed by exhumation. They vary in the degree of rock jointing, both vertical and horizontal. Some bornhardts and especially many inselbergs may have been formed by the parallel retreat of slopes. It is unlikely that tors, in tropical environments, have been formed in this way. Some of these elements were present in many answers but the detail was limited. Few candidates mentioned the spacing of joints and especially the contrast between tors and bornhardts. Knowledge of the chemical weathering processes was also limited.

Coastal environments

Question 4

(a) Most candidates were able to provide some accurate points of comparison with berms in the summer profile but not in winter and sand bars in the winter but not in the summer. The relative proportion of beach above and below high tide level was also noted frequently.

(b) Candidates had to explain the summer and winter beach profiles. Some candidates were confused by the terms summer and winter and tried to explain the difference in terms of temperature and precipitation. Other candidates tried to argue for changing tide levels. The differences are mainly caused by the types of waves that are characteristic of summer and winter conditions. Summer tends to be characterised by relatively low energy (constructive waves) with a swash greater than backwash pushing material up the beach to create the berm. Winter conditions tend to be characterised by high energy (destructive) waves with a backwash greater than the swash, removing material from the top of the beach and depositing it offshore as sandbars. Many candidates were able to explain the differences in these terms and obtained good marks but there was some confusion concerning the types of waves and the way they broke on the shoreline.

Question 5

Answers had to evaluate the role of wind in the formation and characteristics of coastal dunes. There were two elements to the question but some candidates did not discuss the characteristics of coastal dunes. Formation is controlled by onshore winds but there needs to be a source of sand to be moved such as wide sand beaches at low tide plus an obstacle for the initial accumulation of the sand. The characteristics of the dunes are then developed by the gradual growth of vegetation, decalcification and the development of a rudimentary soil (embryo dunes, yellow foredunes, vegetated grey dunes) with intervening slacks. Initial formation of the dunes was answered quite well, but as noted, some candidates did not develop the discussion to include further formation, stabilisation and the role of vegetation in development and characteristics of more mature dunes. Thus, answers tended to be incomplete.

Question 6

This question was answered better than **Question 5**. Although there were many answers that used inappropriate stretches of coast, such as the whole of the Eastern coast of North America, there were many comprehensive and relevant specific stretches of coast used in the answers. The Holderness Coast of England was very popular but there were many good examples from other localities including Africa and Asia. Evaluation of sustainability often causes a few problems for candidates. There are three main 'pillars' of sustainability: economic sustainability – ensuring coastal communities are able to maintain or improve their standard of living through engaging in economic activities such as fishing, agriculture, industry and tourism; social sustainability – maintaining the quality of life of coastal communities by, for example, ensuring their homes are not destroyed by coastal erosion or damaged by coastal flooding; and environmental sustainability – conserving ecosystems, reducing pollution and maintaining the aesthetic appeal of the coastline. It was encouraging to note that some candidates attempted to answer the question in these terms. In general, answers were very good.

Hazardous environments

Question 7

(a) The resource was a photograph of the Soufrière Hills volcanic eruption on the island of Montserrat. The question asked for a description of the main characteristics of the volcanic eruption visible on the photograph. There were two issues with many of the answers. Firstly, the command word in the question was 'describe', so simply stating lava or pyroclastic flow without a clear description of its characteristics and where it was on the volcano was not sufficient. Secondly, many candidates assumed from their knowledge of volcanic eruptions that certain features must be somewhere in the photograph, so quite often features were mentioned that were not present in the photograph. However, many candidates were able to gain good marks.

(b) The question asked for an explanation as to how volcanic hazards might be related to the type of volcanic eruption. However, some candidates interpreted the question as referring to the type of eruption shown in the photograph. They gained some marks if they identified the eruption as an explosive volcano and then used generic knowledge to explain the hazards. However, some candidates thought it was an effusive Hawaiian eruption which lessened the accuracy of their answers. Effusive (e.g. Hawaiian) are usually characterised by basic lava which flows relatively quickly whereas explosive eruptions (Vesuvian, Pelean) produce viscous lava, which leads to large ash clouds, pyroclastic flows and lahars with only small amounts of lava. The differentiation between the two main types enabled an assessment of their hazard potential. The distinction between shield volcanoes and stratovolcanoes was also relevant. There was sometimes confusion over the nature of viscosity and which type of eruption has high or low viscosity lava. There were some very good answers to this question and most candidates were able to gain some marks.

Question 8

This was a popular essay question and the overall response from candidates was variable. Many candidates demonstrated only a basic knowledge and understanding of what hazard mapping entailed. Many candidates confused it with land zoning. There is some connection between the two as hazard mapping can be used to highlight areas that may be subject to mass movements. However, the general principles are somewhat different. Because of this many candidates dismissed hazard mapping and concentrated on other factors such as monitoring and preparedness. Mass movements are very difficult to predict, but the likelihood can be determined by the nature of the slope, the material it is made of, and the history of mass movements in the area. These are main elements in hazard mapping. There were some unrealistic suggestions, such as removing whole populations from potentially hazardous areas, but evaluation of the question was usually realistic.

Question 9

Candidates were asked to assess the view that it is easier to predict and monitor large-scale atmospheric disturbances (cyclones, hurricanes, typhoons) than it is for small-scale atmospheric disturbances (tornadoes). There were some excellent responses to this essay question with detailed knowledge of prediction and monitoring techniques. Techniques for predicting and monitoring such disturbances are continuously improving, but it is still relatively easier to predict and monitor large-scale atmospheric disturbances. With satellites, ships, land sensors, and weather balloons flown into the cyclone, forecasters measure storm surge, sea surface temperature, size, shape, and wind speed. From this data, a hurricane prediction can be made, such as the storm's expected path and severity. Small-scale atmospheric disturbances (tornadoes) are less predictable, and conditions for formation are not fully understood and it is more difficult to predict and monitor as they develop quickly over land, with uncertain paths and their intensity is variable. Forecasters and storm spotters/chasers have learned to recognise certain thunderstorm features and structure that make tornado formation more likely. Some of these are visual clues, like the rear-flank downdraft, and others are particular patterns in radar images, like the tornadic vortex signature (TVS). It is not yet possible to predict in advance exactly when and where they will develop, how strong they will be, or precisely what path they will follow.

Hot arid and semi-arid environments

Question 10

(a) The resource for this question showed rainfall variability over the semi-arid regions of Namibia, Botswana and north-west South Africa, 1910–2010. The data was portrayed in terms of both

average daily rainfall and the 10-year average rainfall. Candidates were asked to describe the rainfall variability shown, so both rainfall variabilities needed description supplemented by the use of data. Most candidates described the rainfall variabilities well.

(b) The response to this question was very weak. Few candidates were able to make any relevant comments. Most candidates interpreted the question as being concerned with rainfall amounts and not rainfall variability. This led to numerous accounts of the causes of aridity. Also, the question was only about semi-arid areas thus any discussion of arid areas was irrelevant. Rainfall in semi-arid areas is largely governed by how far the intertropical convergence zone (ITCZ) moves north and south from savanna areas and how much rainfall it brings. In some years it is blocked by high pressure systems and does not reach these semi-arid areas. Thus, the answer should be based on an understanding of the mechanics of the ITCZ and the influence of global patterns of pressure and winds. The influence of coastal cold ocean currents could also be relevant. The area is also affected by El Niño Southern Oscillation (ENSO) events. Rainfall tends to be below average during an El Niño event. Thus, rainfall is variable in both time and space. Few candidates were able to advance these ideas.

Question 11

Candidates were asked to evaluate to what extent wind action was the most important factor in the formation of landforms of hot arid and semi-arid environments. There were some excellent detailed answers with a range of landforms discussed related to both wind and water action. The evaluation was mainly in terms of the relative significance of wind and water action with respect to specific landforms. In many answers it was the evaluation that was the weakest part of the answer. Many evaluations were speculative and not based on any evidence produced in the answers. There were some answers which only discussed landforms produced by water action and were unable to evaluate the assertion that wind action was the most important factor. Reference to activity during past pluvial periods often allowed a more critical evaluation to be produced.

Question 12

This essay question was not very popular and asked for an assessment as to whether the fragility of vegetation in hot arid and semi-arid environments was the result of low biomass productivity. There were some good attempts at answering this question with most candidates disagreeing with the statement. As many candidates pointed out, the climate of hot arid and semi-arid environments means that biomass productivity is low (net primary productivity of 90/g/m^2/yr) and species diversity is low. Vegetation growth is slow leading to low biomass productivity. However, most candidates argued that the fragility of the vegetation was caused by natural events (droughts, intense rainfall, high winds) and/or human activity (deforestation, overgrazing, overcultivation) and therefore will take a long time to recover. The fragility of the vegetation is also affected by the low fertility and possible salinity of the soils and limited amount of organic matter. These were sensible arguments indicating good responses to the question.

GEOGRAPHY

Paper 9696/33
Advanced Physical Geography Options

Key messages

Candidates should use compass directions when answering questions that require comments on maps in **part (a)** questions, and they need to ensure that they have detailed knowledge of processes so that the explanations in **part (b)** questions can access the higher levels.

General comments

Overall, this paper seemed to cause a few problems for candidates. Several candidates met the demands of the questions very well but there were a large number of responses that only partially answered the question, providing either unbalanced or incomplete arguments. Quite often the evaluative essays just became a description of factors with no real assessment of the question itself – **Question 5** for example was often answered with a list of threats to coral reefs with no indication that some areas were under greater threat than others. Whilst this will have gained some credit it showed many candidates were not focusing in on the precise demands of the question.

In other cases, there was a lack of specific knowledge when applying examples accurately. Sometimes only the name of a country was given which does not really help in answering the question. Detailed and precise knowledge of located examples is a key to success. This was true once again in **Question 5**, but also in **Question 3** where there was a requirement for consideration of one case study.

The best essay answers, those with sustained evaluation, were the ones that gave value judgements throughout the answer, rather than just in the conclusion. This allowed candidates to focus on the specific demands of the question as they would be constantly referring back to it in their answer.

Comments on specific questions

Tropical environments

Question 1

(a) Candidates were asked to describe the physical features shown on a photograph of a tower karst landscape. The question proved to be straightforward for most candidates. The key was giving a descriptive comment to each element that was identified – tall or conical hills, meandering river, etc. No credit was given for any mention of the settlements shown as the question clearly asked for physical features.

(b) This question on the formation of tropical tower karst was generally poorly answered. Candidates did not seem to have the knowledge of how karst landscapes in general form, or their sequence of development from cockpit to cone to tower karst. There were several vague comments about weathering with little development on the specific types, and the role of the chemical composition of limestone was also often ignored. Some candidates referred to the climate and the change in level of the water table, but most answers tended to be rather limited.

Question 2

This essay question was less popular than **Question 3** and the candidates that did attempt it did not find it straightforward to answer. The question required candidates to assess the differences between the climates of humid tropical and seasonally tropical environments, with a particular emphasis on annual rainfall. Thus,

reference to the intertropical convergence zone (ITCZ) was crucial. Candidates often did not appreciate the difference in the seasonality of the environments both in terms of temperature and rainfall – seasonally humid tropical environments tend to have a wet and dry season (associated with the ITCZ) where temperatures also vary. One or two stronger candidates mentioned the role of the monsoon. Several candidates wrote brief answers and did not address the question of climate, straying into other areas such as vegetation and ecosystem characteristics which are not particularly relevant as the question is about the climates.

Question 3

This was the more popular of the two essay questions in this option and several candidates were able to demonstrate a considerable knowledge of the threats to either rainforest or savanna ecosystems. However, many answers were a description and explanation of threats without really looking at the relative significance of the threats. Often, deforestation was considered to be a threat in itself but it would have been better to consider the relative significance of the different causes of deforestation. Only a few candidates considered that there were also natural threats to ecosystems, with some of the better answers making the link between for example (natural) wildfires and human-induced global warming. Several candidates did not read the question carefully enough and gave information from a range of case studies, where only one was required. The best answers showed understanding of how the threats could be attributed a level of importance compared to one another, evaluating each throughout the body of the essay rather than just in the conclusion.

Coastal environments

Question 4

(a) This was one of the most popular options and as a result many candidates answered this question. There were a range of approaches, but many candidates did not take into account the fact that they needed to describe the global distribution, rather than region by region. Simply listing off the areas where there were sand dunes, as in the key, would be unlikely to gain much more than half marks. Candidates needed much more of a global overview, perhaps more by region/ocean basin with an acknowledgement of where sand dunes were and were not found.

(b) Most candidates had some knowledge of why sand dunes form in certain locations but quite often they misinterpreted the question and went on to describe and explain the formation and succession which occurred. This question required candidates to effectively discuss the conditions required for sand dune formation, such as wide sandy beach, large tidal range, presence of obstacles, strong onshore winds, etc. alongside an explanation of why these conditions allowed for the formation of sand dunes. Some candidates limited their answers to describing only one or two factors, whereas the better answers gave a comprehensive explanation of a range of factors.

Question 5

This was a very popular essay question and many candidates were able to give a fairly comprehensive list of the threats, both physical and human, to coral reefs. However, many of the answers were descriptive, giving a list of the types of threats and concluding that most coral reefs were under threat. Where candidates did not perform well was in the analysis of the fact that different reefs faced different threats to others, and that the level of those threats differed from place to place. As a result, many candidates were stuck in Level 2 as there was no real comparison between reefs. Better answers recognised that some reefs were under more threat than others, whether from human or natural causes, and that most reefs were under similar threats from global factors such as climate change. The best answers assessed the threats in terms of how well specific locations were also able to deal with these threats, linking them perhaps to the level of development or the political will within certain regions to tackle the issues. This question required specific located knowledge to satisfy the demands of the question effectively.

Question 6

This was less popular than the other essay question in this option, but several candidates did still approach it with varying degrees of success. Potentially it was extremely broad as waves needed to be addressed but other factors such as rock type and structure, sub-aerial processes and management were also relevant in the assessment. Most candidates were able to explain the formation of different types of waves in some detail and several were able to give details about how different characteristics were created such as the influence of wind strength, fetch, refraction and depth of sea. However, the main issue that candidates had

was the lack of reference to coastal landforms, both erosional and depositional, which the question required. A few candidates discussed a range of landforms, and the varying factors that affected them alongside waves and were able to give an assessment of the level of influence each factor had on the creation of the landform relative to waves. Most candidates asserted that waves were important without really assessing how important they were.

Hazardous environments

Question 7

(a) This was the second most popular option so this question was answered by many candidates. Candidates were required to describe the distribution of tsunami wave heights of 10.0–11.9 m and 12 m and above. A few candidates gave a description of all wave heights, so some of their answer was not relevant, and many candidates did not distinguish between the North and South Islands. Also, many candidates used top/bottom and left/right which gained no credit, rather than compass directions. However, several candidates secured full marks with relative ease.

(b) This question required candidates to explain two factors influencing tsunami wave height. In general, most candidates could describe one factor, usually the magnitude of the event (whether it be earthquake, volcano or submarine landslide) but often struggled to come up with a meaningful second factor. Many candidates talked about wave fetch which gained no credit, as these are tsunami waves, not wind-generated waves, and some spoke about the distance to shore which is valid, but many suggested the waves got stronger with distance, which is incorrect. The question also required an explanation of how the factors influenced the height of a tsunami – so the magnitude would involve the amount of seabed and the height it was displaced in the case of an earthquake, for example. Often the influence of the factors was not well explained.

Question 8

This was a popular essay question with candidates able to identify a range of mass movement hazards, often based around case study information. However, some candidates did not really take into consideration the requirements of the question, that types of mass movement needed to be compared with each other to determine how hazardous they were. Again, candidates tended to write what they knew about mass movements and then conclude that mass movements were hazardous but did not compare the level of hazard. Type was often not really addressed. It seemed that candidates were unsure as to how to compare different mass movements. One good way might have been comparing speed, level of moisture and possibly also the nature of material. Candidates often simply described case studies without really assessing the difference in level of hazard between them. The best responses had a range of examples of different types of mass movement hazard and assessed both the level of hazard and the manageability of each.

Question 9

This essay question was less popular than the mass movement question but in a similar way many candidates did not really compare the level of significance of the different hazards from large-scale atmospheric disturbances (cyclones, hurricanes, typhoons) such as storm surges, (rainfall) flooding, mass movements and high winds. Some candidates missed out the different hazard types and only focused on storm surges. Other candidates were able to distinguish between different types of hazard but did not compare effectively. The best answers looked at the full range of hazards and compared the impacts of each, usually through the effective use of one or more case studies. The manageability of the hazards and the ability of locations to prepare for the different hazards was also assessed in a few cases, and these answers tended to score very highly as they assessed response as well as the hazard itself.

Hot arid and semi-arid environments

Too few candidates chose to answer questions in this option to give meaningful comments about their responses.

GEOGRAPHY

Paper 9696/41
Advanced Human Geography Options

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

GEOGRAPHY

Paper 9696/42
Advanced Human Geography Options

Key messages

1. Essays are the key area for development. Very few essays achieved Level 3. Firstly, deconstruction of a question is important, and candidates might use this as a basis to plan a response. Very few plans were seen. This planning should include an overall view of the question and to state this within the introduction to guide the direction of the response. Secondly, the evaluative element of each essay holds the balance of the marks on offer. The key part of the evaluative statement was often not addressed, especially where there was a comparative element in the evaluation e.g. in **Question 2** the requirement to assess the relative importance of the difficulties; in **Question 5** and **6**, the importance of environmental impacts and overpopulation respectively. Evaluative comment can be offered via ongoing comments within each paragraph and certainly should for a major part of the conclusion.
2. The structured questions have areas for improvement. In **Question 4(a)**, description of distribution was weak, for **Question 7(a)**, comparisons were simple and for **Question 10(a)**, description of the scatter graph relationship was limited. For the **part (b)** questions there is still a need to identify the requirement within the question (**Question 1(b)** issues, **Question 4(b)** causes, **Question 7(b)** ways and **Question 10(b)** a useful measure) and to respond to the number stated in the question (**Question 1(b)**, **Question 4(b)** and **Question 7(b)** all required two). Sometimes candidates offer more than two or the differences between parts of the response were unclear.
3. Candidates are more likely to be able to recall case study details when the examples are familiar to them historically and have some relevance. There is clear evidence in this exam session that there are some well-founded case study and/or exemplar details from their own country or region. Such support should be based upon detailed place support and evidence, so that they can apply the details to the terms of a question. Case studies from textbooks should be updated with details to support questions and to give a sense of dynamism to enable candidates to deal with changes in the locality chosen.

General comments

Most candidates were able to complete the paper and rubric infringements were rarely seen. Essays above Level 2 were less commonly seen. This is the most important area of development for this exam session.

Comments on specific questions

Production, location and change

Question 1

(a) At this level candidates should do more than simply describe basic differences. They should consider what the data shows overall. Therefore, successful responses recognised that for all the crops the potential food loss was lower with the use of chemicals (pesticides and herbicides) and used exemplar support e.g. the greatest difference of 42 per cent for potatoes, the smallest difference 19 per cent for wheat, all 19 per cent or more. A less successful approach was to describe variations only between the losses with the use of chemicals or losses without the use of chemicals.

(b) Candidates were asked to explain two issues in the use of chemicals in farming. The issues could be environmental, social or economic. The most popular issues were eutrophication, soil fertility, health of workers and cost. Better responses displayed understanding that an issue could be seen as the balance between the advantages of using chemicals in farming against the disadvantages. Simple responses only described the disadvantages and/or used basic explanation such as

'damage soils'. Some candidates suggested that chemical fertiliser use leads to soil salinisation but were not able to explain how this might come about – it is a complicated process. Chemical fertilisers are more likely to lead to soil acidification. There appears to be some confusion over what a high PH value for a soil means with some candidates thinking it is acidic.

Question 2

This was a popular essay question. The key to a successful response was a soundly based case study displaying knowledge of difficulties for agriculture for one country. However, this was frequently not the case. Common examples where details were insufficient were Jamaica, Kazakhstan and India. Candidates often stated the name of the country, with little to no other place details, which would have raised the quality of the response away from the generic, and therefore remained in Level 2 at best. Better informed case studies were seen for Zimbabwe. Other important challenges in the question were the need to consider difficulties at the national scale, to assess the relative importance of these difficulties and to set the response in the context of agricultural change.

Question 3

This essay question was less popular but not more or less successful than **Question 2**. The question was, like **Question 2**, requiring a case study based on one country's industrial policy. So, again, the key to a sound response was specific knowledge about the industrial policy – not just the general economic policy. Candidates must refer to the manufacturing and related service industries in the country and how the industrial policy influences the character, location and organisation of manufacturing industry. The question specifically required knowledge about the issues faced by the industrial policy and an assessment of attempts to solve these issues. Most candidates did not make this breakdown of the question a framework for a response. It would have been good to describe the issues and link these issues to the attempts or aspects of the industrial policy which attempt to solve the issues and/or to consider those issues which have not been dealt with by the industrial policy. Most candidates took the approach of describing industrial/broad economic policies and attempted to describe changes over time in these policies. Again, in previous reports, centres have been advised that this historical approach is frequently not dealt with successfully under exam conditions. Also, references to policies from the 1950's is not within the advice to centres about case study relevance for the candidates themselves.

Environmental management

Question 4

(a) Candidates continue to find description of distributions challenging. To describe a distribution, candidates need to consider the arrangement of the points in the distribution (in this case countries). A good starting point is are they clustered/grouped or dispersed/isolated. They might also consider whether the points are evenly spaced or randomly placed. Description involves more than just counting countries, continent by continent. In this case 4 marks would be awarded for: the countries are concentrated in groups, the largest group is in Africa with a second cluster in Asia (western, south and south-east) and mostly found within the tropics. Care is required when using terms such as 'some', 'a few'. These need to be linked to clustering/grouping or isolated/random examples e.g. a small group in central America or an isolated country/only 1 in South America.

(b) Candidates were asked to explain two causes of water pollution. Better responses focused on the causes rather than the impacts or effects of water pollution. These responses explained how the water (fresh or marine) became polluted, considering the source of the pollutants, the nature of the pollutants and how they get into the water. Less successful responses detailed the effects on the water and/or its users either natural or human.

Question 5

This essay question was equally popular as **Question 6** but was answered slightly better. The key to a successful response was an understanding of what is meant by the term 'overall electrical energy strategy of a country' and to distinguish it from a named located scheme. Most candidates consider the overall electrical energy strategy as the energy mix used to generate electricity, which is a valid aspect but is only part of the overall electrical energy strategy. The overall electrical energy strategy also includes measures to control demand, encourage conservation, promote efficiency, and could also involve extending the reach of grids or encourage off-grid solutions to electrical energy supply. Good responses were seen using examples from China, Norway and Zimbabwe, sometimes using two or more of these as ways to develop the evaluative

element by comparing the importance of environmental and other factors between the countries. The other key to a successful response was the requirement to assess the importance of environmental impacts as a consideration behind the overall electrical energy strategy of a country. This could have been done by comparing different countries and/or through a consideration of other impacts such as sustainability, levels of development, resource endowment, climate, income, energy policy and energy security but could also include impacts related to changes in demand or supply. Of these other impacts the better ones were rising/meeting high demand during industrialisation, level of development and resource endowment. Few candidates were able to argue that there might be a range of factors behind the choices of an overall electrical energy strategy of a country. Less successful responses offered one or more of the following approaches: described the energy mix of a country; used the named located scheme to answer the question, with few links to how it fits into the overall electrical energy strategy of the country; described the environmental impacts of various sources of energy and/or had little evaluative comment on whether the environmental impacts were the most important consideration for the overall electrical energy strategy. Some candidates confused environmental impacts with the opportunities or not of the environment e.g. large/small volumes of water for hydroelectric power (HEP) or sun for solar.

Question 6

Understanding of the term 'constraint' was key to developing a response for this essay question. A constraint could be considered as a physical or human factor which limits, restricts, curbs, poses a challenge or acts as a barrier to the context of the question: 'improving the quality of one or more degraded environments'. Successful responses were able to deconstruct the question as: overpopulation as a constraint, the improvement of quality and set within the context of one or more degraded environments. Less successful responses considered overpopulation only as a cause of degradation even though they had knowledge of other constraints and therefore did understand what a constraint is. These less successful responses looked at causes and/or sources of pollution rather than what makes a degraded environment. Constraints other than overpopulation such as corruption, lack of finance, ignorance, lack of choice were sometimes done well and supported with appropriate exemplification.

Global interdependence

Question 7

(a) Candidates were asked to compare the characteristics of three trading blocs in a table. There were four characteristics available for 4 marks, but many candidates were only able to achieve half marks. There was a reasonable expectation for each characteristic that there should be a comparative statement referring to the three trading blocs. For basic points such as simple ranking and/or identification of highest/lowest there was a maximum of 2 marks.

(b) The question asked for candidates to explain two ways trade agreements affect global patterns of trade. The most common approach was to consider: Firstly, the way free trade works in a trade bloc to create a regionalisation of trade flows by making trade cheaper and easier within the trade bloc and at the same time diverting trade from non-members to trade between members. Secondly, the use of protectionist measures of trade blocs against non-members leading to non-members seeking alternative trade partners and trade agreements. Links to global patterns of trade were not well explained. Many candidates tried to develop an argument about how LICs are disadvantaged by HICs based on the presumption that HICs form trade blocs and LICs do not. Centres should consider the progress being made in the Regional Comprehensive Economic Partnership (RCEP) detailed in Table 7.1 or the African Continental Free Trade Area (AfCFTA).

Question 8

This essay question was relatively straightforward in terms of deconstruction of the question. The evaluative aspect of evaluating the role in the 21st century allowed candidates to consider the present role, how far this has changed and to speculate about the future. Better responses were well founded with factual knowledge about the role of the World Trade Organization (WTO), commonly focusing upon setting the rules of trade, encouraging free trade and dispute resolution. Other roles less commonly seen were monitoring and reviewing of trade policies of members, ensuring transparency of regional and bilateral trade agreements, building capacity of developing countries in international trade matters e.g. Aid for Trade initiative, the Enhanced Integrated Framework (EIF), Standards and Trade Development Facility (STDF), assisting the process of accession and conducting economic research and collecting and disseminating trade data. Areas for development by centres generally revolve around the view that the WTO favours HICs and enables TNCs to exert influence on national economies. This view was frequently presented but was not backed up with

knowledge of the working of the WTO, free trade impacts (often unintended from the opening of domestic markets to competition), the key principle of 'the most favoured nation', the role of subsidised production in HIC economies and the role of trade-related aspects of intellectual property rights (TRIPS). Further development might come from the use of evidence to back up points made such as the view that dispute resolution favours HICs. Evidence from the WTO website suggests that there have been 626 disputes settled across a range of types of economy – though there has been domination by the EU 97 and USA 115 and large areas of the world are underrepresented with only two countries in Africa (South Africa and Tunisia). A commonly used dispute issue revolves around the so called 'banana wars'. Few candidates fully understand this issue. Some candidates are confused by the difference between Fairtrade and free trade. Candidates were mixing up free trade with fair trade.

Question 9

This essay question was significantly more popular than **Question 8** and was answered slightly better. Most candidates had a very basic definition of sustainability which was generalised and not applied to tourism. Two definitions which centres might find useful are: Firstly, sustainable tourism is tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities, with a suitable balance established between these three dimensions to guarantee its long-term sustainability; Secondly, a simpler version, tourism organised in such a way that its level can be sustained in the future without creating irreparable environmental, social and economic damage to the receiving area. Better responses had a broad view considering more than environmental aspects, so included social and economic sustainability and looked at sustainability as an issue for various interest groups such as tourists, the tourism industry, and host communities. These responses also looked at links between these aspects and so considered issues and not simply impacts or problems. Two areas not seen frequently, which might have enhanced responses, were the tourism carrying capacity concept and consideration of various types of tourism or contrasting types of destination.

Economic transition

Question 10

(a) Candidates were given a scatter graph and asked to describe the relationship shown. This was not done well, even though the best-fit line suggests a negative relationship. Candidates achieved 3 marks for a general statement: either there is (some) evidence of a negative relationship or it is hard to say what the relationship is; supported with evidence for the high and low end of the income inequality scale and described an anomaly or identified anomalous countries.

(b) This was the least successful **part (b)** question. Candidates were expected to display some knowledge of a specific measure related to education such as the number of years of (free) schooling, exam performance and adult literacy rates, though it was possible to use 'education' as a broad measure. They were challenged by the phrase 'useful measure of social and economic inequality'. This means how it is used not what it tells us. Education measures (and other social measures) are useful because the data is collected and recorded widely within and between countries and in an ongoing way. It also has a focus on people, reflects the economic state of a place and can (easily) be used to identify inequality through achievement gaps or access gaps.

Question 11

This essay question was not well done. Most candidates lacked specific knowledge of either what is meant by a newly industrialised country (NIC) and/or have insufficient knowledge about one or more NICs and the factors influencing their emergence and growth. Candidates were also unclear about what political factors might include. There should have been consideration of political factors in the NICs themselves towards economic development on a broad scale such as closed-door or open-door policies, creation of SEZs, investment priorities, tax incentives for FDI and general attitude towards FDI or factors linked to infrastructure, workforce, levels of education, wages and employment conditions, attitudes to environmental impacts, laws and regulation of activities. This could have been broadened to cooperation between nations, development of trade blocs, historical ties/colonialism, using FDI to promote capitalism, and the role of the WTO. Some better responses had specific knowledge about South Korea or China.

Question 12

Responses to this essay question were the strongest on the paper but it was answered by a small number of candidates. Candidates displayed a reasonable knowledge of the concept of core–periphery and could support it with reference to one country and its core and periphery regions. Zimbabwe was commonly used with some specific regional details to support the response, with less well supported use of China and Brazil. Better responses considered the idea that the concept can or cannot be used to explain regional disparities in all countries or within one country. For this, there was reference to theories such as cumulative causation, factors including environmental, social, economic, or political factors or how certain events can suddenly lead to change, at differing time scales between regions within a country.

GEOGRAPHY

Paper 9696/43
Advanced Human Geography Options

Key messages

1. In the **part (a)** questions, candidates continue to list a description of each individual category. They can sometimes achieve a few marks for identifying the highest and lowest for each category as this does a simple quantification of the amounts. However, descriptions or comparisons of each data set will not be enough. There should always be some attempt by candidates to interpret the data into groups, to identify patterns if appropriate and to therefore notice anomalies. Then candidates need to make sure that they are addressing the demands of the question, for example **Question 4(a)** 'Describe the relationship …' is different to **Question 10(a)** 'Describe the FDI inflows …'.
2. In the **part (b)** questions, again, candidates need to be careful to address the demands of the question. In **Question 1(b)** the concept was not explained, instead candidates giving detail about the parts of the system. In **Question 7(b)** candidates explained two impacts on global trade, not caused by changes in the global market. Few candidates answered **part (b)** questions in a way that shows their full knowledge and understanding.
3. Candidates who plan out essays (where a plan can be seen) continue to do better than those who do not. Better essays constantly apply understanding to the demands of the question and have detailed knowledge of the examples chosen.

General comments

Some candidates wrote essays which were very long, and often seemed quite disorganised, including sections which went off the topic. Candidates are encouraged to write a plan for their essays before starting them. Additionally, introductions should be kept short and should include evaluative comment to add to the essay.

Comments on specific questions

Production, location and change

Question 1

(a) This question expected candidates to compare but, in general, there was limited use of comparative language. Some candidates stated highest and lowest without a comparison so gained 0 marks. Those candidates who identified similarities and differences and used data to support scored better marks.

(b) As mentioned in key messages above, candidates mostly described an agricultural system, not the concept of one. Candidates could achieve some marks for discussing the different components of the system, but Level 3 answers were reserved for those who showed clear understanding of the concept as a whole.

Question 2

This essay question was not popular. Those who did answer this question tended to do reasonably well at assessing difficulties but did not always keep the focus on the local scale.

Question 3

This essay question required a balance between advantages and disadvantages. However, for the small number of candidates who did answer this question, their understanding was quite limited.

Environmental management

Question 4

(a) As mentioned in key messages above, the command here was to 'describe the relationship' not just 'describe the reported diseases'. Therefore, a reserve for 1 mark for stating the general relationship was present in the mark scheme. Most candidates did identify the relationship and then went on to support it using data from the bar graph, and then would also identify the anomaly of diarrhoea and/or skin irritation that did not fit the trend, achieving 3 marks out of 4. Taking the response that step further to get 4 marks proved a challenge for some, with only the better candidates commenting on <200m combined. Quite a few got the mark for diarrhoea being reported most across all distances from an unplanned waste site, sometimes on its own, if they did not read the question in terms of relationship.

(b) Candidates could use their case studies of a degraded environment to answer this question, and indeed should be made aware than they can bring in their example knowledge to most **part (b)** questions. Often answers for this question were generic and could have applied to any rural area (or indeed an urban area) therefore it was difficult for many responses to get out of Level 2.

Question 5

One issue which was frequently seen in responses was candidates choosing to evaluate the success of the overall electrical energy strategy, not one named located scheme to produce electricity. The syllabus states both should be studied and yet very few candidates seemed to have the knowledge of a scheme in enough detail. Many essays did not even include a named located scheme, instead listing the various aspects of the overall strategy. In these cases, credit could be gained for content relating to issues of changes in demand and supply, however, candidates would be limited to Level 2. Candidates are encouraged to learn about a scheme near to their home, or in a place which is familiar to them. Some centres need to review their coverage of this topic to ensure they are covering all the content from the syllabus.

Question 6

This was the most popular essay question. Candidates did well when they produced essays which had a paragraph agreeing with the statement with an example where the environment had been improved, then a paragraph disagreeing and an example where the problems faced had been too difficult to overcome. This approach works well when there is an absolute statement such as this one, with the word 'always' inserted into it. There were many good essays to this question, with candidates able to assess how far they agreed based on the scale of the environment, the time it takes to solve, what may happen in the future, etc. Candidates know their degraded environments in detail, and it was good to see this in their answers.

Global interdependence

Question 7

(a) Candidates needed to do more than just listing countries where the embassies are present. Also, stating distribution words such as 'scattered' without any qualification of where is not enough. Where are they scattered? How are they scattered? Is it uneven or even? Candidates need to consider whenever they see a map, what am I being shown and how is the data spread? Think about compass points and use them to show where the data is or is not, or how they are spread. Some candidates misread the title of the figure and stated that these embassies were in Türkiye or in Japan.

(b) Many candidates gave two general factors that influence global trade, such as those listed in the syllabus, and did not know how to show their understanding of changes in the global market. Some showed an awareness of the global market, but not changes that have occurred. Some centres need to review their coverage of this topic to ensure they are covering all the content from the syllabus in enough detail.

Question 8

This essay question required candidates to show a balance between exporting and importing countries, however, many candidates gave Level 2 answers. It was clear that they did not have the depth of knowledge necessary. Very few developed the impacts beyond simple explanations. Better responses used a range of countries and developed economic, social and environmental impacts which should be a starting point for candidates to differentiate between when they see the word 'impacts' in any context.

Question 9

This was a popular essay question but similar to **Question 8** many candidates remained in Level 2. For some candidates they were not able to apply their case study of a tourist destination to this unfamiliar question. Some candidates had a narrow view of the tourism multiplier effect, showing their lack of understanding as they tried to answer the question. The tourism multiplier effect is more than just the growth in the number of tourists and tourism in general. It is the socio-economic benefits that come from the growth of tourism in a destination, leading to both direct and indirect impacts. Other candidates had a limited understanding of carrying capacity. Linking the two together was too difficult for some candidates. Sustainability was relevant here if linked to carrying capacity, and some candidates were able to do this effectively.

Economic transition

Question 10

(a) Candidates are encouraged to do more than state the highest and lowest – they must quantify, how high, or how much higher than others. It is too simplistic to read each section of a pie chart. As an example, candidates could get a mark for 'majority is from Japan' but not 'most is from Japan.' It is always good to see candidates doing some manipulation of the data they are presented with and looking for overall patterns.

(b) Most candidates answered this question with two reasons, with most choosing to develop the socio-economic reasons over the others in the mark scheme. As with other **part (b)** questions, most candidates were in Level 2 with few offering examples to develop their explanations beyond simple points.

Question 11

This question was answered by very few candidates. Impacts seen were quite limited, and could have been developed more into social, economic and environmental as well as political.

Question 12

Candidates needed to consider the word 'both' in this essay question and give their view of both being difficult to overcome, which very few did. Many candidates seemed to be more comfortable discussing the social regional disparities and most essays focused on these, which could work if the conclusion considered both social and economic overall.