GEOGRAPHY

Paper 9696/11
Core Physical Geography

Key messages

This examination once again produced a wide range of responses in terms of quality and understanding. There were some good performances, and many candidates approached their work with enthusiasm.

Observation and description remain an essential element of **Section A**. Candidates are increasingly aware of the need for careful reference to the data provided. Identifying patterns is a skill frequently demanded, but there can be a tendency to identify specific changes in such detail that general patterns are concealed. This was particularly true of **Question 2(b)** where candidates sometimes went into so much detail that general trends were often missed. Frequent references to short time periods are not effective.

There remain some topics that continue to cause confusion, the role of the ozone layer in global warming being one of these. **Question 2(c)** illustrated this point. Depletion of the ozone layer is certainly harmful in terms of UV radiation; and chlorofluorocarbons (CFC's) are certainly one of the greenhouse gases responsible for temperature increase. However, it is the trapping of longwave radiation which is considered to be the cause of current temperature increases, rather than damage to the ozone layer itself.

Urban heat islands (**Question 5(c)**) are clearly understood by most, and there are climatic implications for all urban areas in terms of temperature, humidity, precipitation, and winds. However, there is a tendency to confuse the local climatic changes in urban areas with global warming generally. Some factors, such as industrial development, may be common to both, but urban heat islands are distinctly local as opposed to global. It is global assessments that form the basis for understanding the general increase in temperature.

General comments

Examples and case studies do much to support answers, particularly in **Section B**. Case studies were not demanded in this paper, but examples were asked for in all three **Section B** questions. It is important that sufficient detail is provided, and that the examples are appropriate.

Most candidates seem to have been well prepared for the examination. Most appear to be familiar with the relevant geographical concepts and apply them appropriately.

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

This was a paper where diagrams could have been used to enhance several of the answers, but this was an opportunity that few grasped effectively. **Question 1(b)** required a labelled cross-section, but many chose to draw a plan. The cross-section appears to be a technique few candidates were familiar with, but it should be an essential skill for the geographer. There were many other opportunities to clarify answers with diagrams. The features of divergent plate boundaries (**Question 3(c)**), water stores and flood hydrographs (**Question 4**), and the daytime energy budget (**Question 5(b)**).

All questions in **Section B** were attempted, and there was a small increase in those opting for Atmosphere and weather. **Section B** answers often contained relevant and valid information, but the final evaluation could be limited. **Questions 4(c)**, **5(c)**, and **6(c)** all required an evaluation and conclusion, based on the evidence discussed. This final evaluation was too often unconvincing.

Comments on specific questions

Section A

Hydrology and fluvial geomorphology

Question 1

(a)   Most answers were correct.

(b)   As discussed earlier, many diagrams lacked both technique and detail.

(c)   The photograph indicates low flow conditions, so answers tended to focus on deposition as shown. Many discussed the diagram itself, rather than the generic type, as specified in the question. Some candidates drifted into a discussion of meanders.

Atmosphere and weather

Question 2

(a)   Most answers were correct.

(b)   This question was often not convincingly answered. As indicated earlier, responses need to look more at general trends. When responses focus on individual changes from year to year, they tend to obscure the general trends. Furthermore, there was some confusion about the appropriate axis for solar radiation and temperature change.

(c)   There were some very good answers. Global warming is a popular topic, and clearly understood by most candidates. However, some candidates drifted into discussion of ozone depletion and the consequences.

Rocks and weathering

Question 3

(a)   Most correctly identified subduction.

(b)   Comparisons were not always clearly forthcoming. Weaker responses gave separate descriptions of Fig. 3.1 and Fig. 3.2 meaning that any comparisons were often only implicit.

(c)   Although there were few effective explanatory diagrams, candidates were aware of the significance of rift valleys, oceanic ridges, and upwelling magma, although not transform faults.

Section B

Hydrology and fluvial geomorphology

Question 4

(a) (i)   Solution was clearly understood, but throughflow was too often associated with deep transfers of water.

(a) (ii)   Turbulent flow was understood in terms of water movement, but some neglected the need for entrained particles to facilitate erosion.

(b)   It is important to recognise the significance of flows in terms of creating stores. The land use change most frequently identified was urbanisation, and this was effectively discussed by many. Beyond that, however, there was limited discussion.

(c)   Permeability was understood, and this was the main thrust of most answers. Illustrative diagrams of storm hydrographs were unconvincing.

Atmosphere and weather

Question 5

(a) (i) This was clearly understood, and there were some good answers.

(a) (ii) Most attempted to explain radiation fog but were often not successful.

(b) There were some sensible attempts to discuss the six-factor model. Responses would have been enhanced with the use of an illustrative diagram.

(c) Urban heat islands are understood by the majority of candidates. In this instance precipitation was the climatic characteristic most effectively discussed.

Rocks and weathering

Question 6

(a) (i) There were some competent answers, although knowledge of hydration was very general, and salt crystal growth was identified as a coastal phenomenon.

(a) (ii) Weathering is understood and this was well answered.

(b) Candidates found this difficult. Responses needed to focus on chemical weathering, and not stray into explanations of other types of weathering.

(c) There were mixed responses to this question. The concepts of weight and lubrication were discussed effectively, and other factors such as gradient, human activity and earthquakes. Weaker responses needed to go into more detail about the different types of mass movement.

GEOGRAPHY

> **Paper 9696/12**
> **Core Physical Geography**

Key messages

There were some very good answers to most of the questions. Atmosphere and weather was again the least popular option, and Rocks and weathering was marginally the preferred option for candidates.

Candidates need to make sure they read questions carefully before attempting an answer. There were instances where parts of questions, usually the **(a)(ii)** parts of the options questions, were not answered. Also, there were many responses where explanation was offered when only description was needed such as **Question 3(b)**.

The mark allocation should be used as an indication of the amount of detail required in the answer. Eight marks are available in **part (b)** of the optional questions. This gives some indication of the amount of detail required in answers to these questions.

General comments

There seems to be a general issue with answers related to the resources. There is a tendency to see what one expects to see whether it was present in the resource or not. This was especially true of the use of the resource in **Question 1**, the photograph of the river flooding. Candidates were asked to describe the features of the flooding shown in the photograph. While most candidates restricted themselves to features that could be seen, some candidates identified features that are usually associated with flooding but were not present in the photograph.

There were many instances where precise physical geography terms were confused. The most common confusions are erosion for weathering, abrasion for attrition, corrasion for corrosion and the confusion between decomposition and disintegration in weathering. There are also several misconceptions that are still common in many answers. The most frequent is the suggestion that the hole in the ozone layer is responsible for global warming. It is not. Although there tends to be a hole in the ozone layer over Antarctica, its effect has little impact on global warming. While some extra UV rays slip through the ozone hole, their net effect is to cool the stratosphere more than they warm the troposphere. Thus, this cannot explain the warming of the planet's surface. This is the result of the enhanced greenhouse effect. The other confusion is to use the terms hard and soft with respect to rocks. Quite often limestone is referred to as a soft rock. It is not. Testing has shown that many limestones are quite hard, some as hard as granites. Hardness, as a concept, is not absolute and must be related to the process that is attacking it. Hardness is most related to abrasion or corrasion. Reference to limestone being a hard rock is usually with reference to weathering. Limestone might be susceptible to certain types of weathering, but it is not a soft rock. The use of the term resistance to weathering, with respect to specific processes, is a better way to describe rock rather than using the terms hard and soft. Another misconception is that the velocity of rivers decreases downstream. Extensive measurements show this to be not true. Velocity generally slightly increases or is relatively constant. What does reduce is turbulence.

The final general point concerns the use of examples. While many questions are enhanced by relevant and detailed examples many are not appropriate and add nothing to the answer. Thus, to use a common example, simply mentioning Bangladesh in every answer on flooding, without specific detail and whether relevant or not, adds little to the answer.

There were few rubric errors. Very few attempted all three questions in *Section B*. Diagrams are to be encouraged where appropriate. No questions specified diagrams, but some were offered by candidates in answers to **4(b)**, **5(b)**, **6(b)** and **6(c)**. The drawing of diagrams is less common than it was and therefore they are sometimes of indifferent quality.

Comments on specific questions

Section A

Hydrology and fluvial geomorphology

Question 1

(a) (i)   Levée, slip-off slope and point bar were acceptable and identified by most candidates.

(ii)   Many responses identified the feature as a bluff, but embankment and old river cliff were also acceptable.

(b)   Only 3 marks were available for this question, so only a few observations were required, and most candidates were able to obtain reasonable marks. Weaker responses gave features in the photograph which, although expected, were not there.

(c)   This was answered generally well with a variety of reasons suggested for the flooding shown in the photograph. Most of the suggestions in the mark scheme were provided. However, a significant number of answers failed to mention high rainfall amounts as being a factor in the flooding. Also, few candidates suggested that it was conditions further up the drainage basin that might have had an influence on the flooding at the location shown in the photograph.

Atmosphere and weather

Question 2

(a)   This question was almost universally correctly answered.

(b)   Responses to this question were good, although some answers confused west and east, and a very few wrote about right/left instead of using east and west. There were often more than three relevant points.

(c)   It was answers to this question where the misconception of the hole in the ozone layer was prominent. Many candidates discussed the enhanced greenhouse effect but without detail as to how it occurred, or the main gases involved. There was also confusion as to the effect of global warming on precipitation patterns. Quite often in the same answer, global warming was credited with increasing precipitation by encouraging evaporation and convection of air, condensation, and precipitation and later arguing that high evaporation rates lead to water deficit and drought. There was also confusion over drought. Drought simply means a period of time when there is no precipitation which is different to water deficit. Water deficit will be enhanced when there is a lack of precipitation, but it is possible to have water deficit even when there is precipitation. Global warming was sometimes confused with the urban heat island effect as if the pollution and greenhouse gases released in urban areas were responsible for global warming.

Rocks and weathering

Question 3

(a)   Most candidates identified the feature as some type of slide, although virtually every other type of mass movement was mentioned.

(b)   Good comparisons were produced by many candidates although there was a tendency to describe each diagram separately rather than produce a comparison. Many candidates tried to explain the mass movements rather than simply compare the features as shown in the diagrams.

(c)   The precipitation shown in the diagram provided a clue to part of the explanation and there were good responses outlining the effect of water when it entered the slope materials, raising pore water pressure, reducing cohesion and friction. This was often expressed as lubrication, with an increase in weight contributing to a downslope increase in stress and a decrease in strength. There were a few answers where the feature was misidentified as water running over the slope, almost as slope wash.

Section B

Hydrology and fluvial geomorphology

Question 4

(a) (i) This question asked for the definitions of laminar flow and evapotranspiration. Most responses defined laminar flow as a smooth flow with little if any turbulence but the mode of flow in sheets (laminae) was missed by many. Many weaker responses, when defining evapotranspiration, simply stated that it was the combined process of evaporation from water bodies and from vegetation. The specific element of transpiration from the stomata of leaves was rarely mentioned.

(ii) Most candidates were able to describe the nature of abrasion/corrasion but found difficulty in explaining why it varied along a river channel. Velocity was often mentioned but with little explanation as to why it was important in abrasion. It was in trying to explain how abrasion varied along river channels that the confusion over whether velocity increased or decreased downstream occurred. The amount and size of sediment load and the erodibility of river bank and river bed were rarely mentioned.

(b) There were several misconceptions in the answers to this question. The main confusion concerns the velocity of flow over riffles, the location of riffles and the nature of helicoidal flow. In a flowing stream, a riffle-pool sequence (also known as a pool-riffle sequence) develops as a stream's hydrological flow structure alternates from areas of relatively shallow to deeper water. Riffles are formed in shallow areas by coarser materials such as gravel deposits. Pools are deeper and calmer areas of whose bed load (in general) is made up of finer material such as silt. Pools and riffles are present in nearly all channels where the size of some of the bed material is greater than coarse sand and they are relatively stable in their position along the channel. At low water stages, the pools generally have a smooth surface while the riffles may show white water. Streams with only sand or silt-laden beds do not develop the feature. The pools and riffles form spaced at a repeating distance of about five to seven widths of the channel and often appear in stream development long before the stream produces visible meanders. These patterns are thought to be associated with a form of wave phenomenon and may be initiated by a single gravel patch in a channel; the first channel deviation requires an overcompensation of counter-deviation and sets off a chain reaction type of development which causes the thalweg to start swinging from one bank to the other. This then develops into the familiar meander pattern. There is confusion concerning the velocity of flow over riffles and through pools. Most textbooks suggest that velocity over riffles is less than through the pools. Less velocity over riffles is the response that was accepted in answers to this question. However, many detailed measurements of velocity over riffles and pools suggest that velocity is greater over riffles especially at high flows. Thus, because of the confusion, both ideas were accepted in the marking of this question. However, many responses confused riffles with point bars, and this was reflected in the position of riffles in many diagrams of a meander. Also, helicoidal flow, which is the flow from one bank to the next one downstream, is often shown as a tight corkscrew running down the centre of the channel, which is inappropriate.

(c) Stronger responses to this question gave very detailed accounts of the various flows and stores and with relevant specific geographical examples. In this question, as in other questions in *Section B*, examples could refer to geographical examples or examples of processes and perhaps landforms. In this question, examples could be the specific flows and stores present in drainage basins. Weaker responses showed confusion with the term climate in the question, arguing that climate was not the most important factor, but precipitation was, forgetting that precipitation was one of the most important elements in climate. Some responses interpreted climate in the literal sense as climatic types assessing the question with respect to tropical or temperate climates. These responses were valid if the main elements of that climate were related to flows and stores in a drainage basin system. Weaker responses were quite general and needed to discuss different flows and stores. As it was an evaluative question, factors other than climate needed to be discussed in order to answer the question. Vegetation, soils and rock type and drainage basin characteristics, such as size, relief, and drainage density, were most frequently assessed. Rock type is often treated as separate from the soils that are usually on top of the rocks. Thus, discussing the role of rock type in directly influencing infiltration and percolation is only relevant if there is no soil present. However, rock type is important in determining some of the characteristics of the soil that will influence infiltration and percolation.

Atmosphere and weather

Question 5

(a) (i) The atmospheric term deposition caused many problems. Some candidates did understand the term although many confused it with fluvial deposition. Sensible heat transfer was understood by many more candidates.

(ii) Most candidates were able to explain many of the factors involved in radiation cooling.

(b) Most candidates understood the question as relating to the urban heat island effect and there were some excellent answers with respect to both precipitation and winds. Increased convection as a result of higher temperatures was mentioned by most, although there was some confusion over the role of evaporation in urban areas. Some candidates argued that because there was less evaporation in urban areas, because of a lack of trees and water bodies, precipitation was less. The blocking and channelling of winds by buildings was frequently mentioned.

(c) This question was not well answered. Most candidates ignored the 'seasonal variations' element in the question and simply answered generically with respect to the influence of latitude on pressure and wind belts. Other factors discussed were usually the role of ocean currents and land/sea distribution.

Rocks and weathering

Question 6

(a) (i) This question received a good response and many candidates achieved full marks. There was an occasional confusion over whether continental plates were denser than oceanic plates, but most candidates were correct in their assessment of density. Occasionally, the terms lighter or heavier were used which is not the same as density because weight is related to the thickness of the plates as well as density.

(ii) For this question volcanic arcs were frequently confused with volcanic hot spots, Hawaii being often mentioned. Also, there were many instances where volcanic island arcs were related to the subduction of oceanic plates below continental plates.

(b) There was a good response to both parts of this question. The role of roots in binding soil together and trees in restricting the amount of water that reached the ground, thus making saturation unlikely and restricting mass movement, was well assessed. Better answers suggested that trees only restricted quite shallow mass movements and had little influence on deeper mass movements, a result found in detailed investigations in the Himalayas. Weaker responses showed some confusion over slope grading. Slope grading was sometimes confused with slope terracing, although there were often some generic comments about terracing that were relevant to grading. There was also some confusion over the role of afforestation with many candidates discussing surface runoff, slope wash and surface erosion and not mass movement.

(c) There were many good answers to this question concerning the significance of temperature and other factors in the type and rate of weathering. Evaluation was quite strong. Both type and rate were generally discussed whereas in previous years rate had quite often been overlooked.

GEOGRAPHY

Key messages

This examination once again produced a wide range of responses in terms of quality and understanding. Nevertheless, there were some outstanding performances, and many candidates approached their work with enthusiasm.

Observation and description remain an essential element of **Section A**. Candidates are increasingly aware of the need for careful reference to the data provided. Identifying patterns is a skill frequently demanded, but there can be a tendency to identify specific changes in such detail that general patterns are concealed. This was particularly true of **Question 2** where candidates went into so much detail that general trends were often missed.

There remain some topics that continue to cause confusion, the role of the ozone layer in global warming being one of these. Depletion of the ozone layer is certainly harmful in terms of UV radiation; and chlorofluorocarbons (CFC's) are certainly one of the greenhouse gases responsible for temperature increase. However, it is the trapping of longwave radiation which is considered to be the cause of current temperature increases, rather than damage to the ozone layer itself.

Urban heat islands are clearly understood by most, and there are climatic implications for all urban areas in terms of temperature, humidity, precipitation, and winds. However, there is a tendency to confuse the local climatic changes in urban areas with global warming generally. Some factors, such as industrial development, may be common to both, but urban heat islands are distinctly local as opposed to global. It is global assessments that form the basis for understanding the general increase in temperature.

Candidates do attempt to use the source material provided in **Section A** and are usually effective. Observations are generally well considered and offer clarity. However, in **Fig. 1.1**, the oldest positions of the delta are those with the most advanced letters of the alphabet. Some assumed the reverse, and that A, B, C, would indicate the original positions of the delta.

General comments

Examples and case studies do much to support answers, particularly in **Section B**. Case studies were not demanded in this paper, but examples were asked for in all three **Section B** questions. It is important that sufficient detail is provided, and that the examples are appropriate.

Most candidates seem to have been well prepared for the examination. There is evidence of enthusiastic commitment, and the relevant geographical concepts are clearly understood.

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

This was a paper where diagrams could have been used to enhance several of the answers, but this was an opportunity that few grasped effectively. An annotated diagram of a bird's-foot delta, could have clarified some of the appropriate factors suggested in answers to **Question 1(c)**, but even more significant would have been a valid Peltier diagram to illustrate the answer to **Question 3(c)**.

Many candidates did attempt to explain oxbow lake development as part of the answer to **Question 4(a)(ii)** by drawing an appropriate diagram, but diagrams to illustrate braiding and meandering in **Questions 4(a)(i)** were unconvincing. Furthermore, a diagram of the Hjülstrom curve could have been of considerable benefit in answers to **Question 4(b)**, but those that did appear generally lacked detail.

All questions in **Section B** were attempted, but Atmosphere and weather was a much more popular option than in most recent years. In many instances the **Section B** answers contained much relevant and detailed information, but the final evaluation could be rather limited. **Questions 4(c)**, **5(c),** and **6(c)** all required an evaluation and conclusion, based on the evidence discussed. However, this final evaluation was sometimes unconvincing.

Comments on specific questions

Section A

Hydrology and fluvial geomorphology

Question 1

(a) (i)   No problem for the majority of candidates, although some considered A to be the largest delta because it protruded furthest from the land.

(a) (ii)   There were very few incorrect answers to this question, but occasionally the units were not identified.

(b)   Stronger responses gave logical and sequential description of the changes of the position and size of the delta. Weaker responses lacked precision with the direction of movement.

(c)   Stronger responses showed an understanding of flocculation and the blocking of distributary channels. Weaker responses needed to go beyond simple explanations. There were generalities about deposition and transport, and possible marine processes were often not discussed in any detail.

Atmosphere and weather

Question 2

(a)   This question was generally answered correctly.

(b)   Most responses identified the greater range of temperatures in the northern hemisphere, but some were unaware that the figures represented change rather than actual values.

(c)   Many responses showed an awareness of the generic explanation in terms of the build-up of greenhouse gases, and also the thermal capacity of land as opposed to water. Weaker responses did not provide specific or valid explanations.

Rocks and weathering

Question 3

(a)   Most responses identified the type of weathering correctly.

(b)   There was effective use of the photograph. A number recognised the colouration of the rocks and offered explanation in terms of lichen or oxidation.

(c)   Responses showed an awareness of the Peltier diagram. Better answers gave an overview, with some development of specific types of weathering. Weaker responses provided some inaccurate details. Diagrams that were produced lacked accuracy.

Section B

Hydrology and fluvial geomorphology

Question 4

(a) (i) Most responses gave descriptions of both braided and meandering river channels, but specific contrasts were limited. An appropriate diagram would have been beneficial to enhance the responses.

(a) (ii) This was generally well answered in terms of both sinuosity and oxbow lake development. Diagrams were often helpful.

(b) The better answers considered deposition in relation to the size of material, but not in sufficient detail to reach Level 3. Responses did not always distinguish between velocity and discharge, and needed to focus on deposition, as specified in the question. Very few effective diagrams were forthcoming.

(c) Most responses showed an understanding of the role of vegetation in general terms. There was often considerable detail produced on the many other factors that influence stores and flows. Temperature, rainfall, rock type etc. were discussed in detail, but some responses lost focus and drifted into flooding, including detailed examples of such events. Although not irrelevant, this emphasis upset the balance of answers. Weaker responses needed to give sufficient emphasis to the details of specific stores and flows.

Atmosphere and weather

Question 5

(a) (i) Some very competent answers.

(a) (ii) Many candidates were able to distinguish between sensible and latent heat, and describe the processes involved. Weaker responses were unbalanced because of writing in detail about global wind systems.

(b) The differing thermal capacities of land and sea were clearly understood in this question. However, neither the global element nor seasonality were addressed convincingly. Too much time was given to land and sea breezes, and monsoon systems were rarely considered.

(c) Most responses gave a reasonable account of the three main causes of precipitation. Local scale examples were evident in many answers. However, the evaluative element was not always considered through climatic regions or seasonality.

Rocks and weathering

Question 6

(a) (i) Answers were of variable quality. Some displayed clear knowledge of the varied orogenic processes, but some answers could only reference converging boundaries.

(a) (ii) This was well answered. Candidates displayed a clear understanding of freeze-thaw weathering.

(b) Answers were too often separate descriptions without explicit contrasts. The *en masse* movement of slides was not always recognised, but candidates were aware of the possible causes.

(c) Methods of control formed the basis of many answers, but not always in the comparative way that the question demanded. Stronger responses included examples from New Zealand and China that provided supportive evidence to assess the strategies undertaken.

GEOGRAPHY

Paper 9696/21
Core Human Geography

Key messages

It cannot be stressed enough that candidates should carefully read all the parts of a question before they answer it. All too often candidates did not either read or appreciate key words in a question.

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

Many candidates struggled with **Section B** questions, possibly due to a lack of time but mainly because they did not carefully read the question. Too many candidates achieved low marks as they did not correctly answer the question as they misread or misinterpreted the focus of the question. This was particularly the case in **Questions 4(c)** and **5(c)**. Candidates need to appreciate that the **part (c)** questions in **Section B** are worth 25 per cent of the total mark and is often the key discriminator, being an evaluation, so they should leave sufficient time to do this well.

Candidates should appreciate that where a question asks for two or three aspects and they give more than the required number, the best two (or three) will be taken. It is not good practice to do more than the number asked for and should not be encouraged as it wastes time.

Good examples are needed, especially in **Section B**, but they must be appropriately applied to the question. Some candidates simply repeated everything they had memorised about an example they had studied without applying it to the question properly, which made their answers lack focus. Also, examples should be used to support a point being made. Too many candidates give an example in name only, for instance 'e.g. Africa', which doesn't add a great deal to an answer. Candidates must appreciate that where questions ask for examples, they will not be able to access the higher levels of marks without any such examples. The most useful case studies are either current, or from the recent past. The syllabus states*: 'Where possible, case studies should be dated no earlier than 1980.'*

Comments on specific questions

Section A

Population

Question 1

(a)(i) Nearly all candidates answered this correctly.

(a)(ii) There were many incorrect answers due to incorrect reading of the graph.

(b) The key to this question was understanding that a low population growth rate can lead to an ageing population, and candidates who were able to relate their answers to this were able to gain maximum marks. Good responses mentioned provision of health and social care and issues with the size of the workforce.

(c) Candidates who recognised that HICs and countries in Stage 4 of the demographic transition model generally have low rates of population increase were able to answer this question. Weaker responses did not show an understanding of this link and therefore struggled to achieve high marks.

Migration

Question 2

(a)   Most candidates answered parts **(i)** and **(ii)** correctly.

(b)   Most candidates gave at least one valid suggestion, but some did not give the detail needed for the
3rd mark. For example, '*remittances sent by migrants to their families at home increase incomes in
the home country'* was more effective than '*Money sent home'.*

(c)   Most candidates gave simple explanations, but few went into enough detail to get additional
development marks. For example, '*Some countries have physical borders e.g. Trump's wall along
sections of the border between the USA and Mexico make it difficult for migrants to cross*' or '*border
checks require migrants to have the correct work permits or visas'.*

Settlement dynamics

Question 3

(a)   Nearly all candidates answered parts **(i)** and **(ii)** correctly.

(b)   Few responses went beyond general problems such as 'shortage of housing' or 'more pollution'.
More explanation, or exemplification, was required for two marks per problem. For example, '*In Sao
Paulo, the population has grown so fast that there is not enough housing and people live in favelas
such as Rocinha'.*

(c)   Very few candidates knew what is meant by the term 'world city' and simply based their answers on
population size.

Section B

Population

Question 4

(a)(i)   Most candidates showed some understanding of the term 'underpopulation', but some confused it
with low population, or low population density and did not link population to resource availability and
exploitation.

(a)(ii)   Few candidates managed to give convincing answers about two problems, with most simply leaving
their response at 'not enough people' or 'the population is too far spread out'.

(b)   Most candidates were able to give basic answers, mostly relating to hunger and malnutrition, but few
were able to explain other consequences or give appropriate exemplification.

(c)   Many candidates found this difficult because they did not understand the ideas of 'constraint' and
'sustaining' in terms of problems of supporting a population and providing economic growth and
development, such as climate, conflict, food availability, and the concept of 'carrying capacity'. As a
result, they were not able to discuss factors such as the role of innovation and technology, for
example in developing food production, in overcoming these issues in order to sustain a population.
Many candidates answered this question in terms of population management or overpopulation and
simply repeated unfocussed case study material – particularly China's one-child policy – and so
gained little credit.

Migration

Question 5

(a)(i)   Most candidates were able to answer this question, but few included the element of a move being for
a year or more.

(a)(ii) Most candidates were able to give one reason, the most common being related to employment opportunities, but few were able to give a second valid reason. Several candidates did not give an answer in relation to migration between cities (urban–urban) as required by the question and either mentioned migration in general or rural–urban migration.

(b) Most candidates were able to give explanations, but often answers lacked detail or exemplification, so they remained at low levels. Stronger candidates were able to give relevant examples, some from their own personal experience.

(c) Many candidates struggled with this question because they did not focus on the impact on receiving/destination areas but simply gave generalised accounts of migration between rural and urban areas or focussed on causes rather than impacts. Also, exemplification was weak.

Migration/Settlement dynamics

Question 6

There were too few responses to this question to make meaningful comment.

GEOGRAPHY

```
Paper 9696/22
Core Human Geography
```

Key messages

It cannot be stressed enough that candidates should carefully read all the parts of a question before they answer it. All too often candidates did not either read or appreciate key words in a question. For example, the focus on the provision of services was missed in **Question 3(b)**. A further point is that candidates should carefully read what scale is expected. For example, **Question 4(b)** focused on areas in HICs (local or regional scale) not on the HIC itself (national scale).

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

Many candidates struggled with **Section B** questions, possibly due to a lack of time but mainly because they did not carefully read the question. Too many candidates achieved low marks as they did not correctly answer the question as they misread or misinterpreted the focus of the question. Candidates need to appreciate that the **part (c)** questions in **Section B** are worth 25 per cent of the total mark and is often the key discriminator, being an evaluation, so they should leave sufficient time to do this well.

Candidates should appreciate that where a question asks for two or three aspects and they give more than the required number, the best two (or three) will be taken. It is not good practice to do more than the number asked for and should not be encouraged as it wastes time.

Where a question refers to a particular context, such as HICs in **Question 4(b)**, candidates are expected to relate their answers to this context rather than give generic answers.

Candidates should avoid using vague terms such as 'resources' (typically in **Question 1(c)**, **2(c)** and **4(b)**), 'infrastructure' and 'technology' (typically in **Question 3(c)**) without qualifying them with some detail or development. 'Pressure on resources such as food and water supplies' would have been a more effective answer to **Question 2(c)** rather than a simplistic 'Increased pressure on resources.'

Good examples are needed, especially in **Section B**, but they must be appropriately applied to the question. Some candidates simply repeated everything they had memorised about an example they had studied without applying it to the question properly, which made their answers lack focus. Also, examples should be used to support a point being made. Too many candidates give an example in name only, for instance 'e.g. India', which does not add a great deal to an answer. Candidates must appreciate that where questions ask for examples, they will not be able to access the higher levels of marks without any such examples. The most useful case studies are either current, or from the recent past. The syllabus states*: 'Where possible, case studies should be dated no earlier than 1980.'*

Comments on specific questions

Section A

Population

Question 1

(a) Most candidates correctly identified that the 2018 figure was 64.5 but many rounded it up to 67 or simply misread it as 64.2. Questions such as this test the skill of accurate reading of data from a graph and so an exact figure is required.

(b) Candidates clearly understood the factors that led to increasing life expectancy but did not give the detail needed for the third mark. For example: *'Better healthcare will mean that some illnesses that might have been fatal can now be treated.'*

But what form of health care or what illnesses? This example did gain the third mark: *'With improved sanitation and safer drinking water the occurrence of waterborne diseases such as cholera has fallen so increasing life expectancy.'*

(c) Candidates needed to explain cause and effect clearly. Many did not effectively explain how or why a low level of development reduced life expectancy. For example: *'A country at a low level of development often suffers from famine and malnutrition resulting in low life expectancy.'*

This is a valid point but needed more development to be fully effective such as: *'A country at a low level of development lacks the financial resources to invest in modern agriculture so yields are often low resulting in famine and malnutrition.'*

Several responses linked cause and effect in a different, but equally valid, way, for example: *'Foreign companies or TNCs are less likely to set up or invest in a country with low life expectancy – low investment will lead to low levels of development.'*

Migration

Question 2

(a)(i) The vast majority of candidates answered this correctly.

(a)(ii) Most responses correctly identified the percentage as 58 but several considered tectonic to be weather related, so produced an inaccurate answer.

(b) Some candidates ignored the context of 'internally displaced people' so gave generic pull factors, for example: *'Another pull factor for returning to the source area is for employment.'*

A more focused answer offered: *'New job opportunities may be created in the source area due to a labour shortage after people were displaced from the area.'*

Most responses offered the pull factor of family or friends left behind in the source area and the ending of whatever forced the displaced out from the source area. Some responses gave irrelevant push factors such as poor climate or discrimination in the destination area.

(c) This was usually well answered with a range of economic, social, environmental, and political negative impacts. Some candidates either missed the stress on negative impacts or considered impacts on the source area as well, for example: *'But there are some positive gains for the destination area as it gets an increased supply of cheap labour'.* Such answers gained no credit and illustrated the need to read the question wording very carefully. Candidates needed to appreciate that this was again internal migration so it was unlikely that there would bring great differences in ethnicity or culture.

Settlement dynamics

Question 3

(a) This was answered soundly by most candidates with a wide range of observations and good use of Fig. 3.1. Weaker answers merely listed the cities.

(b) Too many candidates missed the context of 'the provision of services', so wrote about the generic advantages of large cities or offered irrelevant points such as: *'They are near the coast, so they have easy access to exports from the sea.'* or *'Excellent transport system that focuses on the city can bring in supplies of goods and services.'*

The main point was about the advantages that a very large city offers to the provision of a wide range of services, for example: *'The sheer population size of such cities offers a large and varied demand for services so making them financially viable. Even specialist services have more than their threshold market size.'*

(c)   Too many candidates did not see this as an either/or question so explained both. More effective answers focused on 'providing' the infrastructure whilst weaker responses looked at the day-to-day problems of the existing infrastructure, for example: *'The biggest challenge for transport infrastructure is the sheer volume of traffic that results in congestion, slow journey times and excessive pollution leading to global warming.'*

Many of the challenges to providing any type of infrastructure in a large city are the same: *'Building new infrastructure in a city means space has to be found which is both expensive and may involve moving residents who could strongly object.'*

Section B

This examination was characterised by variable performances in **Section B** questions where candidates, at times, seemed not to fully understand the wording of the questions.

Most candidates answered either **Question 4** or **5**. Often answers were let down by a lack of evaluation in **part (c)** of the answers possibly as they ran out of time. Those candidates who rely solely on evaluating in their conclusion are taking a risk that they may not have time for one. Candidates should appreciate that exemplification is expected in **part (b)** even if not specifically asked for in the question.

Population

Question 4

(a)(i)   A surprisingly large number of candidates did not appreciate the full meaning of the term 'overpopulation'. Many saw it as purely a large population, so ignored the role of its relationship to resources. This lack of reference to the resource base made it difficult to fully focus the answers on the rest of the question which explains why the performance on **Question 4** was not as strong as that on **Question 5**.

A typical answer was: *'Overpopulation is the term where the population of an area or country has reached its maximum due to the use of resources becoming unbalanced.'* Such answers needed to state more clearly that it is about population numbers exceeding the resource base that supports them so reducing sustainability.

(a)(ii)   The key point was that resources could not keep up with the rate of natural increase, but few responses recognised the resource side of the equation. Most responses recognised that natural increase could create overpopulation resulting from birth rate exceeding death rate or from increased life expectancy.

(b)   Too many responses were focused on the national level rather than looking at variations within a country whilst others contrasted HICs with LICs. This was a question where the scale was not at the national level but at the local or regional level. Some referred to overpopulation in shanty towns which was not appropriate for the context of HICs. Others seemed confused by the concept of overpopulation, for example: *'Some areas in HICs may be overpopulated due to good standards of living therefore people are attracted to these areas.'*

So why does people moving there result in increased overpopulation? All too often the balance between population and resources was unclear. This question showed candidates' misunderstanding of the term – few saw it as overpopulated relative to a particular resource such as housing or employment.

Many saw cities as areas of overpopulation whilst a few focused on rural areas, often with adverse conditions, for example: *'The deserts of SW USA are barren and offer few resources so population was traditionally low but the creation of new estates in the desert, as overspill from Los Angeles, means there are far more people living there than can be supported by the existing resources – especially by the water supply.'*

Too many candidates failed to support their answers with appropriate examples.

(c) Most responses compared the problems between the underpopulated and overpopulated countries with little focus on management. Many responses discussed China and lost the focus of the question. Many examples were not focused effectively. Several responses discussed an ageing population, with Japan as an example, instead of underpopulation. They thought that with an ageing population and potential negative population growth it would mean underpopulation. Other responses were more general, rather than saying how easy/difficult problems are to manage. So there were descriptions of problems in Bangladesh, Japan, Australia, Canada etc. without any mention of management.

Most candidates broadly understood this topic but then did not evaluate effectively. Many responses consisted of lengthy descriptions of China's one-child policy and what countries such as Australia or Canada are doing to boost their populations. So there was little evaluation of which approach was easier and why.

In some responses there were valid conclusions, for example: *'Overpopulation is usually harder to control and reverse as it affects LICs/MICs such as Bangladesh.'* However, they needed more supporting explanation.

So why might an LIC/MIC struggle to deal with overpopulation? Few responses recognised that the ease of managing either situation might vary over time, with the nature of the area and/or of its population and with the character of the managing body, for example:

'Not all overpopulated countries can take the measures that China took to reduce its overpopulation. Democracies find that such measures as the one-child policy would be unacceptable to its voting population.'

It was the stronger responses that appreciated that one answer to overpopulation is to develop resources, for example: *'India developed its resource base via the Green Revolution in the 1960s when HYV were introduced turning an overpopulated country with food shortages into a food exporter.'*

Population/Migration

Question 5

(a) This was effectively answered by most candidates although some gave generic answers with no attempt at exemplification so could not achieve at the higher marks. There was some good use of age/sex structure diagrams to illustrate the impact of an influx of migrant workers or retirees on the existing population structure, for example: *'Many older British retire to Costa del Sol, in Spain, to live in a warmer climate. This increases the elderly dependent population in the area and often, as women live longer than men, also changes the proportion of elderly females in the population structure.'* Some candidates lost focus on the question by describing other economic and social impacts of migrants.

(b) This was well known by most candidates with a range of economic, social, and political push factors and pull factors usually exemplified based on Mexico to the USA or Poland to the UK. Stronger responses quoted detailed data such as relative wage rates or numbers of patients per doctor, for example: *'In Mexico there are on average 1800 patients per doctor whilst in the USA it is 400.'*

Stronger responses recognised that it was not just push factors and pull factors but also enabling factors such as improvement in transport, for example: *'Polish movement into the UK was enabled by the removal of border barriers once Poland joined the EU as they gained freedom of movement throughout the EU which included the UK.'*

(c) This was clearly well known with sound descriptions of the benefits (and problems) caused by international migration to both source and receiving/destination areas but few then evaluated as to which benefitted the most. Responses need to say if they agree or not and then explain why. Too much time/space was spent describing the benefits rather than assessing their relative importance.

Stronger responses recognised that there is a tension between the types of benefits – economic, social, environmental, and political and that benefits could vary over time, location and between the

various stakeholders, for example: *'Initially the movement of young Poles to the UK greatly benefitted Poland by reducing unemployment and pressure on services and housing but so many migrated that there was a labour shortage and many of the services such as hospitals lost the key staff that they needed. A benefit became a curse!'*

Migration/Settlement dynamics

Question 6

(a)   Candidates often lacked detailed examples so gave rather vague generalised statements, for example: *'Many offices and shops have moved out of the CBD and into the suburbs e.g. London.'*

Other responses seemed to miss or did not appreciate the focus on Central Business Districts (CBDs) so gave irrelevant answers, for example: '*Suburban fringes are expanding so once greenfield sites are being built on causing large scale deforestation.'* or *'in the case of Detroit there has been a steady movement out of the CBD by manufacturing especially car making.'*

There was no context for this question so candidates could have answered drawing on changes in CBDs in cities in HICs and/or LICs/MICs although the latter seemed less secure, for example: '*Shanty towns have expanded in the CBDs of many LICs as poor migrants are attracted to the city to find work.'*

This was a description question, so no explanation was expected or required.

(b)   This question was more effectively answered with a range of economic, environmental, social, and political causes of urban renewal often supported with sound exemplification, for example: *'The Albert dock area of Liverpool was run down and decayed. Urban renewal has re-imaged the area turning it into a vibrant tourist and nightlife area. In this way a derelict area has been brought back to life.'*

Some candidates struggled with the concept of renewal so simply explained changes in a range of urban areas.

(c)   Responses frequently ignored the link to 'residential structure' and focused more on the nature of the resulting population changes. There was some recognition that internal migration was one of several influences on urban areas but at times this could have been linked to internal migration, for example: *'Another factor is wealth. More well off people can buy up older larger properties and so change the nature of the area. This is called gentrification.'* A valid point but it needed to link this to a movement back into inner city areas and also it needed to link to the impact on the residential structure.

Few candidates seemed to appreciate what 'residential structure' could mean. Those candidates that considered the growth of shanty towns in LICs/MICs offered a clearer focus on residential structure in terms of building types, layout etc., for example: *'The rural-urban migration in Brazil has resulted in the creation of a number of high density, often illegal, favelas on marginal land in cities such as Sao Paulo. These consist of small unplanned shacks made of scavenged material with no services and at risk from fires or landslides.'*

Stronger responses then went on to consider the role of other factors, so assessing the relative extent of the role of internal migration.

GEOGRAPHY

Paper 9696/23
Core Human Geography

Key messages

It cannot be stressed enough that candidates should carefully read all the parts of a question before they answer it. All too often candidates did not either read or appreciate key words in a question. For example, the command word in **Question 2(b)** was compare.

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

Many candidates struggled with **Section B** questions, possibly due to a lack of time but mainly because they did not carefully read the question. Too many candidates achieved low marks as they did not correctly answer the question as they misread or misinterpreted the focus of the question. This was particularly the case in **Questions 5(b)** and **5(c)**. Candidates need to appreciate that the **part (c)** questions in **Section B** are worth 25 per cent of the total mark and is often the key discriminator, being an evaluation, so they should leave sufficient time to do this well.

Candidates should appreciate that where a question asks for two or three aspects and they give more than the required number, the best two (or three) will be taken. It is not good practice to do more than the number asked for and should not be encouraged as it wastes time.

Where a question refers to a particular context, such as HICs in **Question 4(a)**, candidates are expected to relate their answers to this context rather than give generic answers.

Candidates should avoid using vague terms such as 'resources' (typically in **Questions 1(b)**, **1(c)**) without qualifying them with some detail or development. 'Pressure on health care systems to provide care for the elderly' would have been a more effective answer to **Question 1(b)** rather than a simplistic 'Increased pressure on resources.'

Good examples are needed, especially in **Section B**, but they must be appropriately applied to the question. Some candidates simply repeated everything they had memorised about an example they had studied without applying it to the question properly, which made their answers lack focus. This was often the case in **Question 4(c)** where candidates answered at great length about the population of China, conflicts and famines since 1950 instead of focusing on policies to alter the natural increase rate. Also, examples should be used to support a point being made. Too many candidates give an example in name only, for instance 'e.g. Africa', which doesn't add a great deal to an answer. Candidates must appreciate that where questions ask for examples, they will not be able to access the higher levels of marks without any such examples. The most useful case studies are either current, or from the recent past. The syllabus states: *'Where possible, case studies should be dated no earlier than 1980.'*

Comments on specific questions

Section A

Population

Question 1

(a) Most candidates answered this satisfactorily. A significant number were not able to give geographical descriptions, some using terms such as 'left' and 'right' instead of west and east, and did not describe a pattern, instead merely listing values from the data.

(b) Most candidates were able to give two valid reasons, but some did not give the detail needed for the mark. For example, '*Ageing population*' was too vague, whereas '*An ageing population – money has to be spent on health and social care*' would get a mark.

(c) Most candidates were able to explain how in countries with high levels of economic development a range of factors contribute to high life expectancy such as health care, quality of housing and sanitation, levels of education, food security etc. Several candidates did not answer the question properly, confusing cause and effect, and stated that if people live longer then they will produce more goods and services and so make the country wealthier.

Migration

Question 2

(a) Nearly all candidates answered parts **(i)** and **(ii)** correctly.

(b) Most responses described both variables having a generally increasing trend, but few went further than that. Some described each variable separately, without making any comparisons as the question required. Too many responses described one figure overtaking the other indicating that they did not understand the use of separate scales.

(c) Candidates who understood the question gave good answers about factors such as terrain and oceans, the difficulties of travelling long distances, and 'hard borders', citing examples such as the Mexico-USA wall, some parts of the EU, and North Korea-South Korea. However, many candidates either ignored the word 'physical' in the question or interpreted it incorrectly and described factors such as visa regulations, opening and closing costs, and emotional impact of leaving family and friends. These responses did not gain any credit.

Settlement dynamics

Question 3

(a) Nearly all candidates answered parts **(i)** and **(ii)** correctly.

(b) Most of the valid answers related to economic decline prompting people to move away from cities to find jobs and opportunities elsewhere, and the desire of people to move away from stresses of urban living to seek a different life in rural areas, helped by the use of the internet and remote working. Some also gave valid explanations about declining birth rates. Weaker responses did not provide additional detail or exemplification. Some candidates answered the question in terms of countries rather than cities and these responses gained no credit.

(c) Most responses related population growth to increased demand and its effect on rents or the cost of land. However, few candidates were able to give anything beyond very basic explanations and so not many gained full marks.

Section B

Population

Question 4

(a)(i) The best answers were able to make points about there being slightly more males than females in the very young age groups, and there being more females in the older age groups. In addition, there were valid comments about there being more balance in the 'middle' age groups, or more males of working age. However, many candidates failed to gain full marks for this question, with some giving no valid descriptions. Common errors included describing population structures that were not of an HIC, describing age structure without any reference to gender as the question asked, or simply making statements that were incorrect.

(a)(ii) Good responses gave valid reasons such as the natural slight imbalance in the ratio of male/female births and biological reasons for females having longer life expectancy than males. Candidates who had identified there being more males of working age were able to relate this to economic migration. Unfortunately, if candidates had not understood the first part of the question this significantly affected their answers to the second part, often because they ignored the 'HIC' element of the question. Where candidates had identified variations in the gender balance there were some inaccurate answers and explanations, showing a lack of understanding in an HIC context.

(b) Better answers were able to discuss the social implications of gender imbalances and the potential impact on birth rates. Explanations based on China's one-child policy were common, but often these were rote-learned accounts which were not focused on the question. In some cases, this question highlighted misconceptions about gender and relationships.

(c) There were many answers based on China's one-child policy, but too many of these were general accounts of China's population from the 1950s to the present day without good focus on the impacts on natural increase. There were many descriptions of the details of the policy and its social impacts, and while some comments such as these were valid, they often made the response lack the required evaluative focus on its impacts on birth rates. Many candidates who chose China as their example were clearly using dated case study material and did not bring their account up to date to reflect more recent changes in the policy. Although China was the most commonly chosen case study country, there were some good responses using Singapore as the example. Some candidates used very dated examples such as France in the 1950s which limited the effectiveness of the answers. It needs to be emphasised that the most useful case studies are either current, or from the recent past. The syllabus states*: 'Where possible, case studies should be dated no earlier than 1980.'*

Migration

Question 5

(a) Most candidates were able to give simple comparisons, but there were some responses that brought in chain migration which gained no credit. There were a few good responses which included aspects of scale, number of moves, types of migrants etc. Some candidates ignored the command word 'compare' and gave two unconnected descriptions, which limited their marks.

(b) This was well answered by many candidates, but a small number of candidates misread the question and gave accounts of international migration or migration within cities. Although exemplification was not explicitly asked for, stronger candidates were able to give relevant examples, often from their own personal experience.

(c) There were many good answers using relevant examples. Weaker responses used whole countries (such as Mexico or Poland) as the source area and these answers tended to be very general and so did not achieve higher levels. Some candidates either ignored or did not understand the word 'source' in the question and wrote about the impacts of migration in general which limited the effectiveness of their responses.

Settlement dynamics

Question 6

This question was not chosen by many candidates, so this section of the report is based on a relatively small number of responses.

(a)   Most candidates gave reasons in terms of urban–rural migration and counterurbanisation, but there was little use of examples as required by the question.

(b) & (c)

These two questions were linked, and the quality of the responses was affected by the nature of the case study that was used. However, as most candidates answered this question on the basis of local knowledge the exemplification was generally good. The quality of the responses depended on the detail given, particularly in **part (c)** where knowledge of how the issues described had been tackled was required.

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

Responses to the questions were mixed. However, there were some excellent responses, especially to some of the essay questions. Hazardous environments and Hot arid and semi-arid environments were the most popular options, singly or usually in combination. Tropical environments was more popular than in previous years. The most important general comment concerns the level of evaluation offered in the essay questions. All the essay questions include some form of evaluation or assessment depending on the nature of the question. Some form of balanced assessment or evaluation is required to enable a mark in the higher levels to be awarded. This evaluation was often not present in many of the answers. Knowledge and understanding were often good but were not always used to support an evaluation or assessment. This was most noticeable in answers to **Questions 2, 6, 8, 9** and **11**.

There is a general issue about the use of specific geographical examples. All questions require examples to support the points being raised. These examples need not be specific geographical examples, such as specific earthquake events, but could be examples of processes or landforms. If specific locational examples are used, it is important that the detail included is accurate and relevant to the question. Far too often, locational examples used were either too general, such as simply the name of a country, or the detail reported was not relevant to the argument. The chosen examples quite often detracted from the argument being presented.

There were very few rubric infringements with only the occasional candidate answering questions from more than two options.

Comments on specific questions

Tropical environments

Question 1

(a) There were many excellent answers that used the resource well. Occasionally the command word 'compare' was ignored with answers noting the size of the flows and stores without explicit comparison.

(b) This question was also answered quite well. The resource provided an insight into what might happen to the nutrient cycle following deforestation. The emphasis of the question was explanation; however, many responses described possible changes without fully explaining why the changes were likely to occur. This restricted the marks that could be awarded although there were some excellent high-level responses.

Question 2

There were some very good answers demonstrating thorough understanding of the range of tropical karst landforms with sustained evaluation of the question. However, too many answers were often generic with respect to the chemical weathering of limestones. Knowledge of the factors influencing the weathering was often good but with little reference to the karst landforms and with little attempt to suggest that some of these factors were more relevant to some of the landforms rather than the others. There was the occasional answer with respect to granite weathering and granite landforms. Some candidates tried to explain karst landforms with respect to deep weathering, etchplains, stripping of the superficial material and inselbergs and bornhardts.

Question 3

Tropical soils, either in humid tropical or seasonally humid tropical environments, are quite complicated. Soils in both environments are leached ferralitic soils but with less leaching in the seasonally humid tropics where there is a marked seasonal pattern in the soil processes. Soils in the humid tropics tend to be latosols and those in the seasonally humid tropics, ferruginous soils with laterites. These characteristics are clearly associated with climate and with the vegetation characteristics associated with the climate in the respective environments. Latosols are characterised by rapid decay of the litter layer and intense leaching with eluviation of iron and aluminium sesquioxides. Illuviation, especially of iron at deeper layers imparts the characteristic red layers to the soils. Soils in the seasonally humid tropics are also red but with a lateritic layer towards the surface as a result of upward capillary action during the dry season. However, the soil profiles show little horizon development, the changes being reflected in gradation of colour from the surface litter layer downwards. Few responses to this question discussed soil types and profile characteristics in detail. Most discussed soil development in general terms with an emphasis on climate and other factors, rock type, relief/altitude, and human activities, and received credit for this. Occasionally there were very perceptive comments to the effect that the soils could be very old reflecting the stability of the environments over a long period of time. Weaker responses were clearly influenced by the resource and focused on nutrients rather than the general characteristics of the soils.

Coastal environments

Question 4

(a) Most responses used the resource extremely well. The resource provided ample scope for comparison and many candidates provided more than the four comparisons needed.

(b) Most responses described several risk factors for coral reefs. The risks needed to be related to the conditions needed for coral growth. There might be an argument that all coral reefs are at risk from rising sea temperatures as a result of global warming but that other risks, such as from marine and land-based pollution, human interference (tourism, fishing), storms and others might be location specific. This was a generic question and need not be related to the resource, but the resource might have provided an input to the answer. Weaker responses described the risks but did not explain how these risks affected coral.

Question 5

This was the least popular essay question and was not answered well. Many candidates wrote in detail about the erosion of coastal cliffs and the production of material for coastal transport but did not then use this information to answer the question. Responses often focused on longshore drift, which could be made relevant as a source of sediment, but quite frequently was not. The erosion of coastal cliffs is a major source of sediment, but the most important source of sediment is thought to be from river input. Sediment is also brought to coastal areas from offshore and from beaches to sand dunes and other coastal areas by wind. Some shingle beaches in the northern hemisphere, such as Chesil Beach in England, are thought to have formed from glacial deposits brought onshore by rising sea levels in post glacial times. There also could be discussion of the nature of the sediment. River input is mostly fine-grained material. That produced by erosion of coastal cliffs tends, initially, to be more coarse-grained.

Question 6

There were some good responses to this question, with the Holderness Coast featuring prominently.
A common characteristic of many weaker responses was that they did not effectively assess the advantages of a hard engineering approach against the disadvantages as specified in the question. Responses often gave a discussion of the relative merits of hard and soft engineering in the sustainable management of coasts, which was not the focus of the question. Some disadvantages of hard engineering were sometimes included in the discussion of the advantages of soft engineering, but such an approach did not evaluate the question set.

Hazardous environments

Question 7

(a)   Responses to this question gave many acceptable interpretations for the relationship between the number of tornadoes and the number of tornado-related deaths shown in the resource. The number of tornadoes is highly variable year by year, and the number of deaths seems only marginally to be related to the number of tornadoes. Any reasonable analysis, substantiated with the use of data, received full marks.

(b)   If the answer to **part (a)** was that there was no relationship or a weak negative relationship then analysis could be because the number of deaths might be related to the strength of the tornado, warning times, population density, degree of preparedness, building design and not necessarily to the number of tornadoes. These points were frequently discussed by candidates but were often lacking in detail. Weaker responses needed to give some justification for the reasons suggested.

Question 8

This was a very popular question but there was a lack of evaluation. There were many very good discussions of the hazards resulting from earthquakes but little attempt to assess their relative importance. Evaluation could have been in terms of the relative impacts on lives and properties over both the short-term and long-term, using specific examples of earthquakes. Specific hazards could have been assessed with respect to where these hazards would likely have been greater than other hazards. Thus, liquefaction is likely to be a major hazard of settlements built on sediments, such as alluvium, lacustrine clays or coastal deposits, that were likely to respond in that way to earthquake shocks. Tsunamis would only affect coastal settlements and not inland ones. Landslides would have a greater impact in mountain areas with steep slopes rather than in lowland areas without steep slopes. Knowledge and understanding were often good but needed to be incorporated into the evaluation.

Question 9

There were some good answers to this question, underpinned with some excellent examples, such as mass movements in Hong Kong. Evaluation was prominent in answers to this question. However, many responses were slightly unbalanced with more attention given to the success or otherwise of mitigation strategies rather than to assessing the general problems of preparation. Hazard mapping and monitoring were often mentioned but with little detail as to how they might be achieved. There was little attempt to discuss different types of mass movements, as answers often referred to mass movement in general terms.

Hot arid and semi-arid environments

Question 10

(a)   There were many characteristics of the river channel and river flow that could have been described. Many responses described what you would expect to see during a flash flood in a hot arid environment regardless of whether they were actually present in the photograph. Also, some responses described flash floods in general terms with no reference to the photograph.

(b)   Responses to this question either lacked detail or were misconstrued. Wadis and alluvial fans were often noted as landforms that might be related to the actions of flash floods but there was little detailed explanation as to how this was achieved. Also, a variety of landforms, unrelated to flash floods or fluvial action, such as yardangs and zeugens, were discussed.

Question 11

This was the most popular question in this option. Salt crystal growth was well described and explained. Salt crystal growth is a major process in these environments because of abundance of salt in the wind from eroding topsoils (solonetz, solonchaks) and blown from salt lakes (playas) and coastal areas. But there are other weathering processes such as insolation weathering leading to exfoliation and granular disintegration, root action in semi-arid environments, plus the possibility of chemical weathering from dew and infrequent rainfall. Freeze-thaw is a possibility but only occurs under specific conditions. Knowledge and understanding were good, but evaluation was, in general, speculative rather than authoritative. Stronger responses distinguished between arid and semi-arid environments and even between areas in different arid areas such

as a contrast between coastal and inland deserts and deserts at high altitudes. Evaluation was then given in terms of where and when these processes occurred.

Question 12

There needed to be a description of the variability, both seasonal and diurnal, of precipitation and temperature in both environments. These could be related to climatic controls, pressure and wind systems and degree of cloudiness which will influence variability in temperature and precipitation. Discussion of general variations between the environments was also a valid interpretation as was variability within hot arid and semi-arid environments. Most responses produced a general analysis of temperature and precipitation patterns without detailed comparisons.

GEOGRAPHY

General comments

Responses to the questions were mixed. However, there were some excellent responses, especially to some of the essay questions. Hazardous environments and Coastal environments were the most popular options, singly or usually in combination. Tropical environments was more popular than in previous years. The most important general comment concerns the level of evaluation offered in the essay questions. All the essay questions include some form of evaluation or assessment depending on the nature of the question. Some form of balanced assessment or evaluation is required to enable a mark in the higher levels to be awarded. This evaluation was often not present in many of the answers. Knowledge and understanding were often good but were not always used to support an evaluation or assessment. This was most noticeable in answers to **Questions 2**, **5**, **8**, **9** and **12**.

There is a general issue about the use of specific geographical examples. All questions require examples to support the points being raised. These examples need not be specific geographical examples, such as specific earthquake events, but could be examples of processes or landforms. If specific locational examples are used, it is important that the detail included is accurate and relevant to the question. Far too often, locational examples used were either too general, such as simply the name of a country, or the detail reported was not relevant to the argument. The chosen examples quite often detracted from the argument being presented.

There were very few rubric infringements with only the occasional candidate answering questions from more than two options.

Comments on specific questions

Tropical environments

Question 1

(a) There were many excellent answers that used the resource well. Occasionally the command word 'describe' was ignored with answers explaining the adaptation of the vegetation to the climatic conditions.

(b) This question was also answered quite well. The resource provided an insight into the adaptations of the vegetation and an indication of the reasons for the various characteristics. The emphasis of the question was explanation; however, some responses described the main characteristics without fully explaining them. This restricted the marks that could be awarded although there were some secure high-level responses.

Question 2

This was the most popular essay question in this option. There were some very good answers demonstrating sound understanding of the threats to the chosen ecosystem. However, far too many answers ignored the significance of these threats. Knowledge of the chosen ecosystem was generally sound but needed to be more closely tied to the case study.

Question 3

This was a demanding question with four distinct strands. Only a small proportion of the candidates chose this question and few of those addressed all the strands. A recognition of the latitudinal position of the two

environments and the movement of the ITCZ in conjunction with the apparent movement of the overhead sun held the key to a response which could access the higher levels.

Coastal environments

Question 4

(a) The resource showed the total erosion along the Holderness coast for a 14-year period. In describing the pattern of erosion, the better responses identified patterns moving along the coastline, usually from north to south. In doing so, three or four areas could be identified and defined by the settlements indicated on the map. The most comprehensive answers recognised the patterns relating to the amount of erosion and any anomalies. A small number of weaker responses described a transect along all or sections of the coastline from Flamborough Head to Spurn Head without identifying any of the patterns.

(b) Most candidates recognised several factors responsible for the variability of erosion rates along coastlines. However, there was quite a range to the effectiveness of the accompanying explanations. This was often related to the knowledge and understanding of rock types and structure, wave strength and direction, marine processes, and human activity.

Question 5

This was a question with a range of responses. Most responses discussed some of the conditions necessary for healthy coral growth and the range of factors was closely related to the eventual level of response. The better answers recognised that sea level rise is only one of several threats and that marine pollution, ocean acidification, storm damage and human activities may be just as, or more, significant in the short-term at least. Some weaker responses merely agreed with the quotation without much consideration of other threats to coral reefs.

Question 6

A large proportion of responses did not indicate a detailed understanding of the process of longshore drift. However, many responses recognised the significance of the process in the formation of spits and some tombolos. Stronger responses assessed the significance of longshore drift in the formation of other depositional landforms such as coastal sand dunes, salt marshes, offshore bars, and beaches. A consideration of wave energy, sediment availability and human activity allowed a few to access the highest level.

Hazardous environments

Question 7

(a) This resource showed the trends in frequency of tornadoes in part of the USA and posed some problems to many candidates when trying to articulate their ideas. The more effective responses began by identifying the general patterns such as locating areas of increasing and decreasing frequencies. Some recognised these as core areas with distance decay in most directions. Specific states of the USA were used to elaborate on some of the patterns recognised. Although the main pattern was on an east to west axis, the best responses described some clear anomalies.

(b) The resource was only a stimulus for this more general question. It did not ask the candidate to explain the specific patterns in **part (a)**, but some chose to approach the question in this way. Whichever approach was taken, an explanation of the factors leading to tornado formation was required. The meeting of warm, moist air with cold, dry air would form an ideal situation from which the feature could develop. A combination of moisture, instability, lift, and wind shear were also significant characteristics referred to in the better answers.

Question 8

This was a popular question. Most candidates recognised that tornadoes tend to be more variable and more difficult to prepare for. The ability to track the larger scale atmospheric disturbances allowed for more effective preparation but the unpredictable nature and course was often underplayed. The ease of

preparation largely depended on the level of funding and technology in different parts of the world, another aspect that was often ignored. However, most candidates recognised the main characteristics associated with both types of hazards but often precise detail on mitigation techniques was limited.

Question 9

There were some good answers to this question, supported by good knowledge of the range of hazards resulting from volcanic eruptions. However, the focus of the essay was on pyroclastic flows and many candidates failed to recognise the main characteristics and total destructiveness of them. Significance needed to be assessed in terms of their scale, frequency, consequences, and difficulty of prediction. Most responses considered the hazards associated with lava flows, ash clouds, lahars, and volcanic gases to some degree but it was the quality and extent of the assessment which differentiated at the higher levels.

Hot arid and semi-arid environments

Question 10

(a)   Many candidates found this a difficult resource to interpret and found it hard to express their ideas clearly. The areas of higher relief were often recognised and referred to as being significant. The more successful answers used specific streams and compass directions as reference points.

(b)   Effective explanations revolved around the amount and reliability of rainfall in catchments where relief, geology and climate exert some influence on the surface drainage. Responses often lacked the detail and accuracy to access the highest level.

Question 11

Most responses demonstrated an understanding of how the rain shadow effect can cause an area of aridity. However, the amount of detail and accuracy was variable. The better responses used a specific geographical location to illustrate their ideas. To access the higher levels, it was important to assess other causes of aridity such as the downward sinking of air under the high pressure associated with the Hadley Cell, continentality and cold offshore ocean currents.

Question 12

There were too few responses to this question to make meaningful comment.

GEOGRAPHY

Paper 9696/41
Advanced Human Geography Options

© 2021

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

GEOGRAPHY

Paper 9696/42
Advanced Human Geography Options

Key messages

For essay questions, candidates should deconstruct the question and plan a response based upon the entirety of the question.

For **part (b)** of resource-based questions, candidates need to note the number of explanatory factors which are required and compose a response with this in mind. Sometimes it is difficult to see where a candidate is explaining a different factor.

General comments

Almost every candidate was able to complete the required number of questions. Responses were generally of a suitable length to enable candidates to maintain an argument and to adequately illustrate it with place support and conceptual ideas. Some candidates wrote essays which were descriptive and explanatory in approach (Level 2) where each paragraph was at the same level, with little evaluation regarding the question.

Centres should check that the case studies used fulfil the requirements of the syllabus. Candidates appear to have difficulty remembering details of case studies where an historical approach is used. Some candidates display a sound and detailed knowledge of the examples and case studies, and this is frequently aided by the choice of local, regional, or national examples which are familiar to the candidate. This gives an authenticity which conveys a sense of place.

Comments on specific questions

Production, location and change

Question 1

(a)   Candidates used the two maps to identify contrasts between the two locations. Success was determined by the extent to which the contrasts were direct i.e., a difference between a common characteristic such as transport, settlement etc. and the development of the contrast. Most responses made simple contrasting points with few developing the contrast to demonstrate understanding that the locations are industrial sites. An example would be B is nearer a larger settlement (1 mark), so has greater access to a labour force/market (1 mark). Most candidates made direct contrasts with only the occasional example of two separate accounts.

(b)   Candidates understood that proximity to a market saves on transport costs. They offered a range of factors to explain how markets affect the location of manufacturing industry. These factors were related to the product of manufacturing industry e.g., weight or volume gaining products tend to locate close to the market, or related to the market itself e.g., export-oriented industries may require access to a port or airport/transport hubs. Some candidates used the factor of perishability of a manufactured product correctly, but some were clearly describing an agricultural product. In this case there should be reference to a degree of processing or packaging of the agricultural product and would need to consider the location of this aspect of the product cycle rather than the growing phase. Centres and candidates should note that Von Thunen's theory is related to agricultural land use patterns and distance.

Question 2

Most candidates displayed knowledge about agricultural change. There was still a tendency for responses to be descriptive rather than analytical. Responses needed to demonstrate knowledge of difficulties of food production, set in the context of agricultural change, primarily at the local scale and an evaluative element of 'how far the difficulties of food production can be overcome by effective management at the local scale'. Weaker responses tended to interpret difficulties of food production in a simple way such as a general lack of food production or famine, described agricultural change in a basic way such as mechanisation and the scale element was either absent or focused on the national scale (actions of the government). Stronger responses linked a difficulty of production to a specific change in agriculture and to how far this change is influenced by management at the local and other scales, for example: *'the difficulty of food production by hand labour methods is that it leads to low yields over smaller areas and limits the production of a farm (for a variety of reasons).'* This difficulty can be overcome with better equipment (but still hand produced) and/or through mechanisation (with explanation of how this removes the difficulty). The evaluative element is then a discussion of what makes management of this change effective, firstly at the local scale and secondly at other scales (the syllabus states national as the other scale). For example: *'factors such as access to capital, education/training, appropriateness of technology would be influential at the local scale and at other scales.'* The requirement to consider the local scale is by reference to terms such as the farm, the farmer, the holding and/or the producer i.e., who is conducting the change.

Question 3

Successful responses to this question demonstrated specific knowledge about industrial policy rather than only broad economic policy for one country. In this question, the focus is on changes in the character and organisation of manufacturing. Weaker responses that attempted to describe a series of different policy changes over various time periods struggled to link these to specific changes in character and organisation of manufacturing and often mixed up the time periods. Case studies need to allow candidates to display an understanding of the current characteristics and organisation of manufacturing industry and what the difference is between the two. An example of a characteristic is the degree to which ownership is private or state, with or without foreign involvement, formal or informal and how this characteristic is related to industrial policy and an assessment of the extent to which ownership has changed and the extent to which this is related to industrial policy.

Environmental management

Question 4

(a)   Comparisons could include both similarities and differences within one sector or from one sector to one or more other sectors. Very few responses achieved full marks. Some candidates were distracted by the reference to projected changes and only considered 2030 to 2050 changes rather than the whole period. Too many responses quoted figures straight off the table rather than considering the degree of change and/or carrying out simple manipulation of the data to enhance comparisons. Other responses were limited by reference to only the changes in a single sector, so for credit they had to make statements about change over both intervals of time e.g., domestic increases from 2020 to 2030 but then decreases to 2050, 1 mark.

(b)   This question was often answered well and most suggested a variety of ways to improve water supply. A lack of development of these ideas, however, did hold some responses back, though most gave named examples. Candidates might benefit from focusing upon a smaller number of examples but developing the explanation. The question required examples, so two well developed examples was sufficient for 6 marks. To satisfy the country scale in the question it was expected that there should be reference to large-scale and/or extension into areas or activities with a previous lack of supply.

Question 5

A very popular question but most of the responses did not answer the question as they were often about 'supply' and not 'demand'. A common approach in such responses was a paragraph about each of wind, water and solar describing how the climate element enables production or supply of energy. Each paragraph not adding to the quality of the others, and not on task with respect to 'demand'. A reasonable approach would have been to argue that climate has more influence over supply than demand, with a summary combining comment on these three sources. The climate element was best argued with reference to climate

change, noting that in this case the argument is stronger over an increase in demand for renewable energy. Seasonal variations in temperature or hot/cold climates may also lead to variations in demand related to uses such as heating/cooling/air conditioning/refrigeration etc. Other reasonable arguments included negative aspects of fossil fuels such as their finite nature and environmental impacts. Most candidates did not note that the question requires some reference to trends in demand for renewable energy. This may have included the general rise in demand for energy, the role of renewable sources in meeting this growth, the ability of renewables to meet demand in areas not currently on the grid for fossil fuel produced energy, the advantages of renewables at a variety of scales, particularly at the individual, small-scale and off-grid possibilities. The evaluative element of the question might have considered factors such as population growth, rising incomes, increased accessibility to supplies, industrialisation and economic growth as factors influencing the global increase in demand. Other factors might also contribute to decisions to switch from fossil fuels to renewables such as, sustainability, levels of development, resource endowment, income, technology, pollution, energy policy and energy security.

Question 6

The key to a successful response was to have knowledge of how attempts to improve a degraded environment can create issues and to link this to successful management. Candidates might have approached the question from these issues or from considering what makes successful management. Some candidates were aware of issues but tended to have a narrow view of mainly environmental issues with other social and/or economic issues given less attention. Issues might have included environmental such as the scale/extent of the problem, accessibility, inhospitable environments; political issues such as provision of capital, corruption, transboundary issues, instability of government; economic issues such as a lack of funds to implement, monitoring or maintain improvements, lack of technology; and social issues such as attitudes, cultural, literacy, accountability. Factors which make management successful or not should also have been considered such as the extent to which environmental degradation had been reversed, stopped, slowed, or failed and also from the perspective of different stakeholders.

Global interdependence

Question 7

(a)   Most candidates noted the varying types of transport: rail, road and water but did not engage with the question in terms of how the location encourages trade. Responses needed to show that trade involves imports and exports referring to the shipping of the containers, the space used for storage of goods requiring export and those that have arrived on ships and the modern and large-scale equipment visible.

(b)   Clear ideas were apparent in many responses but again were not developed. Responses covered a wide range of advantages at a low level of explanation, rather than developing detail on a more limited number. The most seen advantages were coastal/river port versus landlocked, resource endowment, accessibility at regional or global scale e.g., shipping lanes, proximity to major trading nations/markets.

Question 8

Better responses focused on the extent to which the lives of people in receiving countries are or are not improved by international aid. They discussed how international aid can improve lives of people socially through examples such as clean water, education, health, and support at times of disaster or economically through opportunities of employment creation at a variety of scales. These responses demonstrated knowledge and understanding of various types of aid and discussed the extent to which these types of international aid improve the lives of people. They also discussed how international aid may benefit some members of society and not everyone. Many presented arguments about the effectiveness of bottom-up (grass-roots development projects) and top-down approaches to aid delivery. Less successful responses did not focus on improving the lives of people (the scale element) and were quite generalised, lacking specific examples of aid projects.

Question 9

The key to a more successful response was to focus on both the local scale and economic impacts. Many candidates did not note the local scale of the question and commented generally on impacts or described impacts at the national scale. One example being foreign currency and its use within an economy. It is

possible to argue that foreign currency is important at the local scale, as tourists may be asked to pay in their own currency e.g., the US dollar, which could have greater value than the domestic currency and overcome problems of domestic inflation for local people or businesses. Comment on social, cultural, or environmental impacts had to be linked to economic impacts.

Economic transition

Question 10

(a)   Candidates were expected to describe the trend for each sector as either increase or decrease along with a qualifying statement about the relative rates such as: agriculture decreased rapidly overall; service employment increased steadily/significantly; industry has a slight overall decline. Stronger responses commented on either the change in order of the sectors e.g., services and agriculture cross over in 1995/96 or agriculture was the largest sector in 1991 but services are the largest in 2018 or manipulated the data to support comment on the relative scale of change for at least two sectors.

(b)   Candidates were expected to suggest reasons for each of the three sectors. Stronger responses gave some reference to factors specific to female employment for Level 3 such as, emancipation of women and increased educational opportunities.

Question 11

Most candidates who attempted this question gave very general answers and were unable to identify a reasonable range of factors. Some candidates misunderstood the demands of the question and described a newly industrialised country (NIC), not the factors leading to its emergence and growth. Factors expected in a response include government policy (towards the economy and sectors such as education and training, provision of infrastructure), political change; the role of FDI; social characteristics such as attitudes of people to education and work, along with physical factors, such as accessibility, deep harbours. The question asked about emergence and growth of NICs therefore both were expected in a good response. Centres should make sure that the exemplar countries used demonstrate both emergence (the earlier phase) and growth (the later stage) and that candidates understand that there is more than one stage and how emergence comes before growth. In terms of the emergence stage, this is frequently led by government policies building upon social characteristics of the people in an economy where there is a shift from dominance by agriculture to a more industrialised economy in a rapid and concentrated time period. In the growth stage there is export-led growth, greater economic stability improvements in average income and standards of living, the multiplier effect within the economy and a shift to a more urbanised society.

Question 12

Regional disparities are not well understood, and most responses tended to focus on Foreign Direct Investment (FDI) in terms of the development of the whole national economy. Candidates should know about regional disparities in at least two regions of one country for their case study and should also know about how the core-periphery model works and be able to discuss cumulative causation, spread and backwash effects, regional divergence and regional convergence. From the core-periphery model they should be aware that the model considers the flow of capital, labour and resources between regions within a country. For this question, the model could have been a starting point for the assessment, since it raises the point that flows of capital (FDI being a source of capital) are important in creating regional disparities and that there are at least two other factors involved: labour and resources.

GEOGRAPHY

Paper 9696/43
Advanced Human Geography Options

Key messages

For essay questions, candidates should deconstruct the question and plan a response based upon the entirety of the question.

For **part (b)** of resource-based questions, candidates need to note the number of explanatory factors which are required and compose a response with this in mind. Sometimes it is difficult to see where a candidate is explaining a different factor.

General comments

Overall, candidates performed well on the **part (a)** questions, with the majority using the stimulus effectively. Candidates were prepared to interpret a range of resources, such as photographs, infographics, a range of different graphs, maps with complex keys, information tables, etc. Rather than just lifting information, candidates showed that they could apply their own understanding and manipulate the stimulus to find patterns or trends if required.

The use of examples in **Questions 1(b)**, **4(b)**, **7(b)** and **10(b)** demonstrated secure knowledge into Level 3. Examples can be strategies, techniques, organisations, events etc. and do not always have to be in named locations.

For the essay questions, the better candidates structured the whole essay as an assessment (a Level 3/4 response); some provided assessment in the introduction and the conclusion (a Level 2/3 response); some omitted it or made a simple statement (Level 1). Examples should be used throughout, as requested by the question, and the best responses do more than a narrative approach of learnt content but apply knowledge and understanding to the question being asked. Once again, there was evidence that when candidates plan out essays, these generally perform better.

Comments on specific questions

Production, location and change

Question 1

(a) The photograph stimulus provided a lot of ideas which could be used as evidence, as listed in the mark scheme. Candidates demonstrated good understanding of intensive farming systems.

(b) Candidates did well to explain how various examples of agricultural technology work. Level 3 answers needed an obvious and explicit link to increasing food production. This can be done by providing context of a location with high demand for food, or a technology specifically aimed at increasing yield.

Question 2

There were too few responses to this question to make meaningful comment.

Question 3

There were too few responses to this question to make meaningful comment.

Environmental management

Question 4

(a)   Overall, this question was answered very well. Most candidates understood that distribution means the spread over an area, and answered appropriately, looking for patterns, anomalies, nodes, scarce areas on the map etc. There was good use of the Key to name places and pipelines accurately.

(b)   Answers to this question were more mixed. Some candidates explained three ways that countries can increase their energy supply, calling it energy security and their answer could have been applied to meeting demand. Meeting demand is an aspect of energy security, but there is more to energy security than demand only. Candidates need to understand the different aspects of energy security and how it leads countries to act. Some responses used Fig. 4.1 to illustrate imports of gas as a way of securing supplies, and the idea of cooperation within regions, such as that shown in Southeast Asia in Fig 4.1.

Question 5

This was a very popular question and there were some excellent responses. Those that did not do so well wrote extensively about a whole country strategy. Limited credit was given where a scheme was discussed within the overall strategy. It should be noted that the focus of the essay should be on meeting changes in demand for power, not general demand for power. Better essays considered the change over time, throughout the day or seasonal demand and this often distinguished a Level 4 response.

Question 6

This was also a popular essay choice with responses agreeing with the statement. The extent of their agreement was strong, and this was suitably illustrated by case studies where sustainable management had or had not been used and the resulting consequences of this management. A few responses wrote about climate change rhetoric, with no real content on sustainable management. Responses needed to show what sustainable management looks like as well as give practical solutions that offer real hope for a sustainable future. Candidates who considered what appropriate management looks like and that all management is not necessarily sustainable did well in this essay. There was a good variety of case studies being used, from deserts to lakes. Those candidates who considered a variety of scales also did well.

Global interdependence

Question 7

(a)   Mostly responses picked out the overall relationship and commented on different variables. Some did not show an understanding of carrying capacity, and this inhibited their ability to describe how the variables related to each other.

(b)   Most responses demonstrated good understanding of the social impacts of tourism. Very few wrote about economic or environmental impacts only. Both can usually be linked to an impact on society, so there was a wide variety of ways that knowledge could be applied here. Most responses wrote about the raised standard of living as incomes and job opportunities improved. There was a good focus on cultural impacts which could be both positive and negative with the use of examples where cultures had adapted due to tourism causing a loss of their identity, or where tourism was used as an opportunity to preserve and promote unique traditions.

Question 8

This was a popular question and allowed candidates the opportunity to showcase their knowledge of the role of the World Trade Organization (WTO). Many responses displayed a sound understanding of the work the WTO does in promoting free trade, but some missed the second part of the question and solving trade disputes was covered less comprehensively. Some responses effectively weighed the two elements against each other although this was not necessary, as long as the success of both elements was assessed.

Question 9

This was also a popular essay choice. A critical evaluation of ecotourism was needed here and whether or not it's aims are met. Most responses used examples of ecotourism destinations appropriately, with discussion of whether the desired outcomes had been achieved, or the extent to which they had. There were a few responses that missed the direction of the question and explained in depth the strategies used at ecotourism destinations, without the necessary focus on whether they actually work. These answers generally remained in Level 2. A few other responses showed an incorrect view of ecotourism, describing it to be Wildlife tourism, going on Safaris or visiting Zoos.

Economic transition

Question 10

(a) Comparing the changes was generally done well. Very few responses listed each change. Candidates clearly picked out patterns, trends, anomalies, etc. and grouped regions together based on their similarities. Comment on the rate of change was also seen.

(b) Responses to this question were reasonable overall and showed knowledge and understanding of how economic measures are used. Responses needed to make the link to both social and economic wellbeing. A consideration of what wellbeing means needed to be integrated in the answer.

Question 11

Responses to this question were mixed. The focus of this essay should have been on the influence of TNCs, with the relevance of other factors included. An understanding of the global shift, both of manufacturing, services and most recently some quaternary industry to emerging regions forms a good backdrop for this essay.

Question 12

Those few candidates who answered this question showed an understanding of cumulative causation and described the process reasonably well for their chosen country. Responses needed to show the initial advantages (or disadvantages) for their chosen case study and explain the resulting disparity in these terms, to address the question fully.