

# GEOGRAPHY

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Paper 9696/11  
Core Physical Geography

## General comments

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. Many candidates still confuse 'pattern' with 'trend'. Most candidates appear to be familiar with the relevant geographical concepts and apply them appropriately. 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.

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

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** essay questions. It is important that sufficient detail is provided and that the examples are appropriate. **Section B** answers often contained relevant and valid 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. This final evaluation was too often unconvincing.

All questions in **Section B** were attempted, and there was a small increase in those opting for Atmosphere and weather.

## Comments on specific questions

### **Section A**

#### **Hydrology and fluvial geomorphology**

##### **Question 1**

- (a) (i) The majority of candidates correctly stated the discharge, although there were a few who forgot to give the units.
- (ii) Most candidates calculated the range that was within the tolerance noted in the mark scheme. However, a sizeable minority used the incorrect graph for the calculation. This emphasises the need to read the question very carefully.
- (b) This question was answered very well and maximum marks were obtained by many candidates.
- (c) No specific knowledge was expected in order to answer this question, but there were some geographical clues in the latitude differences and drainage basin sizes. The large June peak on the hydrograph for River à la Baleine suggested that snow melt was involved. This was noted by most candidates. Other differences were related to the size of the respective drainage basins and possible seasonal rainfall patterns, vegetation and land use. It was essentially a generic question, so candidates would have had to base their answers on knowledge of the factors that affected annual hydrographs.

## Atmosphere and weather

### Question 2

- (a) Most answers were within the tolerance range, although a few candidates failed to show their working.
- (b) It was in answers to this question where there was confusion between 'pattern' and 'trend'. Many candidates described the trend and not the pattern. Also, a sizeable minority described both incoming (shortwave) radiation and outgoing longwave radiation or just the outgoing radiation; an example of misreading the question.
- (c) There were many good answers to this question with all the main elements in the mark scheme being noted. However, some candidates still attempted to explain the deficit by reference to the distance from the sun.

## Rocks and weathering

### Question 3

- (a) There were many highly variable attempts at producing a sketch of the main features of the weathered rock. The sketch did not have to perfectly match the photograph, although some accuracy was necessary. The features identified needed to be features which suggested that the rock was weathered, such as: scree, fractures and cracks in the rock, and trees growing in cracks of the rock. Many features that were noted were not related to weathering.
- (b) This question was answered very well, and the majority of candidates gained maximum marks.
- (c) The emphasis in this question was on rate of weathering. Many candidates simply described factors influencing weathering and not rate of weathering. However, this was not always the case and there were many detailed and accurate answers.

## Section B

## Hydrology and fluvial geomorphology

### Question 4

- (a) (i) The full definition of evaporation was provided by most candidates. The definition of percolation was more variable in precision. The vertical (downward) movement of water was often omitted as was the initial infiltration.
- (ii) Most candidates had some idea as to what a flood recurrence interval was but were often unable to provide a brief and accurate explanation. Return period was often used as a synonym and related to frequency of discharges, but without relating it to flooding.
- (b) Response to this question was highly variable. It was clear that some candidates had little knowledge and understanding of deltas. Flocculation was frequently mentioned but not often explained accurately. Diagrams, if provided, were often less than informative. However, there were excellent answers explaining the processes, the differences between topset, foreset and bottomset beds and noting the variation in the shape of the deltas, a result of the interaction between the river process and marine processes.
- (c) Reference to the Hjulström curve would have been a good start to a discussion of this question. Many candidates approached the question in this way. Any diagrams provided were mostly accurate. Velocity is, of course, the main factor influencing sediment deposition, but the better answers were able to discuss situations where velocity, although still important, was tempered by other factors, such as discharge, patterns of flow, channel type, gradient of the river and amount of sediment load. This was quite a challenging question, and the response and evaluation were generally very creditable.

## Atmosphere and weather

### Question 5

- (a) (i) Albedo is a concept that seems familiar to most candidates, and there were some very good answers substantiated with appropriate examples of the nature and colour of the surfaces reflecting the radiation.
- (ii) Most candidates were able to describe one way in which longwave radiation was prevented from leaving the Earth's atmosphere, with many offering the two ways stipulated in the question. Clouds were almost always mentioned but sometimes without the detail to obtain the extra mark.
- (b) Answers to this question were very good. Most candidates who attempted it were able to explain seasonal differences in temperature with respect to the different heat capacities of land and sea. The issue with this question is how sea temperatures can influence land temperatures. The role of wind in influencing temperatures of the near shore zone was explained and how this influence waned as distance from the coast increased. The role of ocean currents was also noted. Unfortunately, a few candidates described daily land and sea breezes. Seasonal variations were sometimes ignored.
- (c) There were many authoritative answers to this question which thoroughly discussed the most significant cause of the enhanced greenhouse effect. They included detailed knowledge of the main greenhouse gases and how their increase is related to specific human activities. There was sometimes an overconcentration on the urban effect, and holes in the ozone layer still appear as an explanation.

## Rocks and weathering

### Question 6

- (a) (i) Good marks were generally obtained for this question. Subduction was well known as a process. Sometimes the term subduction was used without providing an alternative term. Conservative plate boundary was sometimes confused with a constructive plate boundary.
- (ii) An understanding of the formation of fold mountains in the past has often been weak. However, there were encouraging signs that the processes were better understood. This was especially true of fold mountains formed by the collision of two continental plates. Compression and upfolding of sediment are processes that now appear prominent in explanations, although there are still diagrams showing what appears to be a 'train crash' as the two plates meet.
- (b) The surface movement of sediment on slopes involves rainsplash, sheetwash and rills, and heave leading to soil creep. Mudflows would also come into this category. Many candidates described deep-seated landslips which were not surface movements. However, most candidates understood the processes which needed explanation.
- (c) There were many excellent and detailed answers to this question. Hong Kong was the most frequent example chosen to answer the question. The evaluation was thorough and often integrated throughout the discussion. This meant that many high marks were awarded. Some other examples were not discussed in similar detail. Simply referring to a country where perhaps pinning and bolting had been applied to slopes as a strategy to reduce mass movement was not appropriate. Purely generic answers without reference to any specific example made it difficult to evaluate the attempts.

# GEOGRAPHY

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Paper 9696/12  
Core Physical Geography

## Key messages

**Section A** questions incorporated elements of both ‘explanation’ and ‘description’, and successful responses distinguished between them. Weaker responses gave detailed explanations when only a simple description was required.

In this question paper, candidates were asked to distinguish between ‘patterns’ and ‘trends’. ‘Trend’ suggests changes over time, and this emphasis was not always made. However, identifying frequent changes over very short time periods can also obscure general trends.

Hydrographs are an integral part of Hydrology. Candidates were clearly aware of the factors influencing storm/flood Hydrographs but were less familiar with annual hydrographs and what they represent. Visually, both annual hydrographs in **Question 1** contained seasonal elements of rising and falling discharge, but clearly not responding to a single input of rainfall. Before attempting an answer, candidates should have a clear understanding of the data before them.

## General comments

There were some very successful responses. Many candidates attempted the Atmosphere and weather question in **Section B**.

Some candidates continue to confuse ozone damage with global warming. The role of chlorofluorocarbons (CFC’s) is one of absorbing longwave radiation, and therefore contributing to global warming. Depletion of the ozone layer is a different issue.

Global warming and urban heat islands can also cause confusion. There is some overlap between the two topics, but one is global and the other local. Urban heat islands are clearly related directly to urban development and pollution, but global warming includes issues such as deforestation and agriculture.

The use of examples is essential to attain high marks, but detail was sometimes limited. In this question paper, all **Section B** essay questions required the aid of examples. A case study was not specified, but in **Question 6(c)**, for example, many stronger answers included a detailed analysis of mass movements in Hong Kong, and how the problems were addressed.

Compiling a sketch map is a valid geographical skill. **Question 3(b)** required a labelled sketch map to explain the freeze thaw process. Many chose to draw generic diagrams, which was acceptable, but they did not label their diagrams effectively. A lengthy explanation was not required in this instance. Many candidates included effective diagrams to explain meander formation in **Question 4b**. Some diagrams drawn to illustrate the Hjulström curve in **Question 4(c)** were well intentioned but lacked accuracy and detail.

There were few rubric errors; a few candidates attempted more than one question in **Section B**. Most candidates generally completed the examination paper in the allotted time.

## Comments on specific questions

### **Section A**

#### **Hydrology and fluvial geomorphology**

### Question 1

- (a) (i) Most answers were numerically correct, but a few omitted the units.
- (ii) This question was well answered. The most common error was to take the lowest value as the start of the graph in January, rather than in March.
- (b) Many candidates found this question difficult in terms of identifying ‘trends’ rather than ‘patterns’ and being explicit in terms of comparison.
- (c) Many candidates gave sensible generic differences. The most successful reasons discussed related to latitude and the size of catchment area, details of which were provided in Fig. 1.1 and Fig. 1.2.

### Atmosphere and weather

#### Question 2

- (a) Most candidates calculated the difference correctly.
- (b) Some candidates concentrated on changes (trends), so clear patterns were difficult to identify. However, most candidates gave effective descriptions of the clear elements of pattern.
- (c) Some factors, such as varying albedo, were clearly understood and discussed effectively. However, some candidates continue to identify distance from the sun as a valid explanation of why equatorial regions have excess energy. In fact, the 150 million kilometres distance from the sun invalidates any distance comparisons in terms of the earth’s latitudes. Many candidates were aware of the high angle of the sun in lower latitudes, but illustrative diagrams often confused rather than clarified the explanation. The angle at which the rays of the sun pass through the atmosphere was also a valid concept in explaining the loss of energy in high latitudes, but not a general discussion of the thickness of the atmosphere.

### Rocks and weathering

#### Question 3

- (a) This question was well answered.
- (b) Most candidates clearly understand the repetitive process of freezing, expanding and thawing, in terms of weakening the structure of rocks. However, the question specified ‘labelling’, and some weaker answers simply wrote a general explanation after the diagram(s).
- (c) To respond to the question, many candidates chose temperature and/or precipitation. The Peltier diagram offered a basis for an initial explanation, and many answers effectively discussed the fluctuations in temperature.

### Section B

### Hydrology and fluvial geomorphology

#### Question 4

- (a) (i) There were many successful answers to this question. Some candidates confused ‘throughfall’ and ‘throughflow’, and some did not recognise ‘stemflow’ as an external process.
- (ii) Answers generally lacked clarity, but several candidates did incorporate Hot Springs.
- (b) Most candidates understood meander formation, with Pool/Riffle development and Helicoidal flow forming integral parts of many answers. Meander development in terms of sinuosity was clearly recognised.

- (c) Most candidates could link sediment size to the Hjulström curve, but the diagram, when drawn, generally lacked detail and precision. Velocity was rightly considered to be another very important factor, and a variety of other factors were correctly discussed. Many weaker answers moved from deposition into transportation.

### Atmosphere and weather

#### Question 5

- (a) (i) Convection was clearly understood, but not wind belts.
- (ii) Most candidates recognised the importance of clouds and the earth's surface in reflecting solar radiation, but not atmospheric dust particles.
- (b) Most candidates recognised absorbent surfaces, industrial and residential buildings, and vehicles, as major factors influencing urban temperature. However, weaker answers drifted into global warming, and discussed deforestation and agricultural expansion.
- (c) There is some overlap between urban heat islands and global warming, but they are of different scales and need to be distinguished from each other. Stronger answers also considered natural factors such as volcanic activity, solar cycles and sunspot activity.

### Rocks and weathering

#### Question 6

- (a) (i) Sea floor spreading was competently defined, but ocean trenches were generally described rather than defined.
- (ii) This question was well answered by most candidates.
- (b) Many answers concentrated on the role of water in terms of weight and/or lubrication. Stronger answers also incorporated geology, vegetation, human impact, etc.
- (c) There were some excellent answers, particularly those using the case study of Hong Kong. Stronger answers discussed the effectiveness of a variety of approaches to controlling mass movements, and the factors that could limit their implementation.

# GEOGRAPHY

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Paper 9696/13  
Core Physical Geography

## Key messages

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The use of examples is essential to attain high marks, but detail was sometimes limited. In this question paper, all **Section B** essay questions required the aid of examples. A case study was not specified, but in **Question 6(c)**, for example, many stronger answers included a detailed analysis of mass movements in Hong Kong, and how the problems were addressed.

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## Comments on specific questions

### **Section A**

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### Hydrology and fluvial geomorphology

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# GEOGRAPHY

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Paper 9696/21  
Core Human Geography

## Key messages

Before answering a question, candidates should read it thoroughly and appreciate that every word must be considered. Many candidates missed key command words so gave irrelevant responses. Where the question asked for examples, candidates should include them and be sure that they are relevant and appropriate.

Africa is not a country; too many candidates consider it an LIC. Examples should be more detailed than simply the name of a country, and case studies should be accurate and relatively recent. The syllabus requires that where possible '*case studies should be dated no earlier than 1980*'. It is not appropriate to use nineteenth century migration from Ireland to the United States as an example, when more recent examples can be used to good effect.

The mark allocation not only indicates the range of points expected, but also the time that should be spent on that section. So the 15-mark **part (c)** questions in **Section B** are worth 25 per cent of the total for the paper, whereas the **part (c)** questions in **Section A** are usually worth 10 per cent or less. The time spent on these two parts should reflect their share of the marks.

## General comments

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

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

Candidates should avoid using blanket terms such as: infrastructure, technology, resources, and facilities, without any clarification of what they mean e.g. transport infrastructure.

## Comments on specific questions

### **Section A**

#### **Population**

##### **Question 1**

- (a) Candidates correctly identified Asia as the appropriate world region. Unfortunately, some candidates then assumed, incorrectly, that Asia would be part of the next question.
- (b) The command 'compare' means that Africa and South America should be compared point by point, not as two separate accounts.

Many candidates did not read 'changes' so focused on the gross amounts as a comparison, for example:

*'Africa in 2005 has nearly three times as many undernourished as South America.'*

Not only is this not a comparison of a change but it also lacks supporting data. This is an example of a more effective response:

*'Between 2005 and 2010, Africa decreased undernourishment by 2.1 per cent, which was less than South America at 2.5 per cent.'*

- (c) When there is an 's' at the end of reasons, more than one reason is expected. Most candidates identified two or more reasons for the slow improvement in nourishment, but several did not develop them in sufficient detail, for example:

*'Africa has lots of droughts which make farming difficult so reducing food supplies.'*

compared with:

*'The current drought in South Sudan combined with the continuing insecurity, means any crops that do grow are difficult to harvest and transport to feed the urban populations, so reducing their overall food supplies and nourishment.'*

Both examples needed to explain why drought reduces food supplies, but the second example did link food supplies to undernourishment and offered an appropriate example.

## Migration

### Question 2

- (a) (i) Most candidates answered correctly. Some clearly misread the graph and concluded it was males 25–44, as they had looked at those leaving the UK.
- (ii) There were several possible answers and nearly all candidates correctly identified one of these.
- (b) Nearly all candidates correctly calculated the answer, but some gave the answer as 45 rather than 45 000. If they had thought about the meaning of the data, they would have realised their error.
- (c) Some candidates considered factors such as tradition, education levels, and types of work, with a clear link to why more males migrated and fewer females did, for example.

*'In many LICs/MICs tradition means women are not allowed to migrate by themselves, such as in Afghanistan under the Taliban, as they are expected to stay at home and look after their children and elderly parents.'*

Some candidates struggled to go further than, for example:

*'Men are expected to be the breadwinner and so go out to work, often migrating to find it, while females stay at home to look after the children.'*

Some candidates complicated the question by assuming it related to the UK, as **parts (a) and (b)** did. Unless directed by the question, candidates should not make such assumptions.

## Settlement dynamics

### Question 3

- (a) Generally, candidates correctly identified a range of evidence from the photograph that clearly suggested the site was not in use. Some gave features that were not there such as, *'missing roofs'*. The question asked to state evidence but some candidates gave explanations to attempt to make it more relevant to the lack of use, for example:

*'The pipe, lower left in the photo, is clearly not in use and is covered in mould suggesting that no processes that produce liquid wastes are occurring.'*

Explanation was not necessary and could have wasted time.

- (b) The question was about the site rather than the building, but many candidates focused on the state of the building, for example:



*'The lack of glass in the windows means it would be too unsafe for modern industry. Health and safety laws would prevent it.'*

Regulations / standards / safety were frequently mentioned; in many responses, candidates wrote at length about several features that were all various forms of safety issues.

A tighter focus on the nature of the site relative to the needs of modern manufacturing was needed, for example:

*'The site is clearly in a valley with limited space. Modern manufacturing requires large areas of flat land, so a single storey layout for through processes using large machines is required which is not possible at this site.'*

- (c) This was a question about industrial inertia. Candidates identified the costs of re-locating as a limiting factor, as well as the attractions of the urban location, for example:

*'The original urban location offers the nearness to a large urban population. This means there is an abundant supply of workers, often skilled due to higher education in urban areas, and high demand for their product, as urban populations are usually wealthier.'*

Other candidates considered factors such as government policies including land use zoning, transport links and the disadvantages of non-urban locations. Responses would have benefited from offering more reasons or more detail, such as some supporting examples.

## Section B

Generally this was a sound section unless the candidates had left insufficient time to give it their full attention. **Questions 4** and **5** were most popular, and the relatively few candidates that attempted **Question 6** often produced weaker responses.

In many responses, **part (a)** of all three questions was weak, often as candidates did not appreciate that it was a description question not an explanatory question.

**Part (b)** answers required examples. More effective responses gave more detailed located examples, often with relevant data; weaker responses tended to ignore this instruction or gave thin examples, such as 'e.g. London'.

The key to these questions is in **part (c)** which demands detailed answers, with clear exemplification and thoughtful evaluation. Weaker responses lacked one or more of these aspects.

## Question 4

### Population

- (a) This question was poorly answered. The five stages were often not correctly described with candidates confused over stage 2 and 3 death rates, for example:

*'At stage 2 death rates start to fall slowly as health and food supplies improve then fall drastically in stage 3.'*

Or candidates combined stages, for example:

*'In stage 3 and 4, the death rate stays relatively level.'*

Too many candidates explained the changes, often together with the changes in the birth rate, and offered examples, often out of date or incorrect, with no indication of what their death rates were. The DTM has five stages, so candidates should appreciate that for a seven-mark question something more than listing the death rate for each stage is required. In this case, some idea of what constituted a high or low death rate was expected.

- (b) More effective responses clearly linked lower death rates to increased economic development, demonstrating a clear cause/effect relationship, for example:

*'With increased economic development the government has higher tax revenue which it can invest in improving health care such as building more hospitals, so that more people can be treated for what were previously fatal illnesses such as malaria.'*

Besides improved healthcare, candidates considered the impact of improved transport, better sanitation, higher disposable incomes, improved farming techniques and improved housing on the death rate.

Many candidates offered no examples or gave vague ones with no supporting data, for example:

*'As the country develops, people migrate into urban areas, e.g. India where death rates are lower as there are more hospitals than in the rural area they left.'*

- (c) Most candidates agreed with the statement and supported their evaluation with reference to Japan. Stronger responses went on to suggest the impacts on demography, society, politics, and the environment, although at times some of these impacts were a little questionable.

Candidates generally discussed the economic and social strains that an ageing population can have upon a country; their examples tended to focus on Japan and the UK. A few candidates discussed China but left the original question to discuss the One-child policy.

Candidates tended to focus on the negative aspects first, often generic detail, for example:

*'An ageing population means fewer workers so fewer pay taxes so governments struggle to fund the increased demand for pensions and care homes.'*

References to the countries were often in name only and with very little place-specific detail. Very few case studies focused on places within the country, although there were some effective accounts of the impact of ageing populations in Devon and/or the Isle of Purbeck.

Positive aspects included the idea of grandparents being able to take care of the grandchildren and the notion of the grey pound boosting expenditure. Candidates often focused on the social aspects, such as the mental health of carers because of caring for an ageing population.

Few candidates looked at the environmental impacts of an ageing population; those that did commented on the fact that the ageing population tend to travel in a more sustainable way using bus passes, for example:

*'As older people drive less, an ageing population means there will be less traffic on the road, so levels of air pollution will fall so the environment benefits.'*

There were some effective discussions of the impacts on politics, with much focus on the Brexit vote being the result of the more elderly voting for it.

Many candidates drifted away from the question on impacts to look at the cause of the ageing population or management strategies.

## Population/Migration

### Question 5

- (a) The concept of 'classifying types of population movements' was clearly challenging for most candidates. Many merely listed some types of migration, for example:

*'Movements can be urban to rural or rural to urban. The first is common in LICs/MICs and the latter in HICs, as urban areas prove expensive or too congested, so encouraging people to move to cheaper more peaceful rural areas.'*

In this example, there is no notion of what the classification is (direction) and like many responses it tries to explain, which was not the focus of the question. The command is plural, so a single way

such as *'forced v voluntary'* does not fully answer the question. Several candidates supported their classifications with current detailed examples, such as those people forced to migrate due to war, compared to the voluntary decisions of economic migrants.

- (b) Stronger responses considered the roles of transport, increased levels of education (and thus aspirations, especially of women), political policies, the rise of the media and even increased birth control, for example:

*'In the past women did not leave their village as they were almost constantly producing children. With families of six or seven children, the women could not just migrate. With modern family planning birth rates have fallen, so now with two or three children the women could migrate taking them with her.'*

Many candidates ignored the requirement to give examples or gave simplistic ones, such as *'e.g. Africa'*.

Other candidates missed the focus on internal migration so explained increased migration to HICs from LICs/MICs: such an answer is irrelevant. Many candidates used this as an opportunity to discuss rural-urban migration, basing their explanation on the increase in the relative push and pull forces, for example:

*'In Brazil rural poverty drives many to leave the countryside and seek work in the cities such as Sao Paulo. Often this is fuelled by the mechanisation of agriculture so reducing rural employment.'*

This response has some relevance but misses the key reasons identified in stronger responses, for example:

*'As transport has improved more people can afford to migrate in search of work, education or/and security. In the past, it took days for a rural worker in the Amazon basin to reach the bright lights of Rio, but now it is hours away via plane or on one of the all-weather roads that now cross the Amazon basin.'*

- (c) This question was generally well answered with stronger responses demonstrating an appreciation that out-migration from the source area has both negative and positive impacts. Weaker responses tended to then compare this with the impacts on the destination. The examples tended to be based on Polish migration to the UK, or Mexican migration to the USA often with data:

*'In a year over \$6 billion is sent back to Mexico by Mexican workers in the USA. This money can be used to improve health care and the education system in Mexico.'*

Some candidates gave contrasting examples where the out-migration had largely negative impacts, such as in Bulgaria, against examples such as Mexico where there were largely positive impacts. Other candidates looked at movements within countries, so considered the impacts on rural areas that had lost population such as north-east Brazil or western China, for example:

*'Many of the villages in western China, such as Guachin, have lost the majority of the working age males so the village has a predominately female population. This has some positive impacts in that females have greater freedom and now take on many of the trades in the village, but the negative impacts are loneliness and a low birth rate.'*

The most effective responses considered demographic, economic, social, and political impacts to give a thoughtful conclusion, for example:

*'In the case of Mexico, the economic impacts on the source area are largely positive but the social impacts have been largely negative.'*

## Population/Migration/Settlement dynamics

### Question 6

- (a) Most candidates explained why residential segregation occurs, basing their answers on income differences and ethnicity and supported their responses with examples, rather than describe the processes involved. Few were able to describe the processes that lead to segregation, such as filtering, although some responses hinted at it, for example:

*'At first when urban areas were created everyone lived in the CBD. As some people gained more wealth, they would move away from the CBD. The more wealth a person had the farther they would move from the CBD.'*

- (b) Most candidates were aware of bid-rent impacting on land values and usually supported their responses with a diagram showing circular zones of land values. Few candidates went beyond this simplistic explanation, and few supported this approach with relevant detailed examples. There was some confusion over the bid-rent model, for example:

*'The theory also states that living costs are the least expensive while living in the CBD. These costs start to rise the further away from the CBD you are.'*

- (c) Candidates seemed to struggle over the need to exemplify this evaluation. Their responses tended to consider the impact of rivers, including flooding risk, relief, and type of bedrock, for example:

*'With a weaker surface, it is easier to dig into, so it costs less money to dig out. Therefore, there could be more swimming pools in such an area.'*

The responses tended to ignore the types of activities or kept them simple, as in the example above. Few candidates offered any effective evaluation by contrasting environmental factors with other economic, social, or political factors.

# GEOGRAPHY

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Paper 9696/22  
Core Human Geography

## Key messages

Many candidates did not read or appreciate the key words in questions. For example, in **Question 5(b)**, several candidates discussed international migration, not internal as required by the question. Others referred to LIC/MIC countries, when the question asked about HICs. Candidates should carefully read all the parts of a question before they answer it.

The number of marks indicate the number of points expected so a 5-mark question needs more than a single undeveloped statement. Likewise, the number of lines needed to write an answer vary according to the number of marks: for example, a 3-mark question will take a little over half the lineage of a 5-mark question.

The mark allocation not only indicates the range of points expected but also the time that should be spent on that section. So the 15-mark **part (c)** questions in **Section B** are worth 25 per cent of the total for the paper, whereas the **part (c)** questions in **Section A** are usually worth 10 per cent or less. The time spent on these two parts should reflect their share of the marks.

Candidates should appreciate that where a question asks for two aspects (e.g. **Question 2(b)**) and they give more than the required number, the best two 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.

## General comments

Candidates need good case study knowledge, especially in **Section B**, and to apply it appropriately to the questions. Some did not focus their answers and repeated everything they had memorised about an example. When answers give examples, they should support the point being made. Too many just gave a name, for instance 'e.g. *India*', which did not add much to an answer. Several erroneously used 'Africa' as an example of a country: for example, '*In many LICs such as Africa....*'. Where questions ask for examples, they need to refer to recognisable and relevant case study detail which should be accurate and relatively recent. As stated in the syllabus, where possible, '*case studies should be dated no earlier than 1980*'. It is not appropriate to use nineteenth century migration from Ireland to the United States as an example, when more recent examples can be used to good effect.

**Part (c)** questions in **Section B** use wording such as 'how far do you agree with this statement?' or 'to what extent do you agree with this view?' Candidates should evaluate a variety of arguments and give a conclusion. Several candidates either gave no evaluative remarks or concluded with a simple statement such as '*Yes, I agree with this statement*'.

## Comments on specific questions

### **Section A**

#### **Population**

##### **Question 1**

- (a) Most candidates answered correctly, with a minority giving a list of the years rather than stating the number of years.
- (b) While most candidates were able to gain marks in this question, a common error was to give a point-by-point description of the graphs rather than describing the changes.



- (c) Most candidates gave health issues such as obesity and diabetes and linked these to the pressure on health services, but few went beyond this. Stronger responses included problems such as increasing prices, how the increased demand for food could be met and the potential impact of the intensification of farming. Some weaker responses suggested that an increase in calorie consumption by some would lead to food running out causing famine and starvation for others in the same country. These suggestions gained no credit.

## Population/Migration

### Question 2

- (a) Most candidates were able to identify the differences in the reasons for migration for males and females and gave data to support their answers. Several candidates gave their answer in two paragraphs, one about males the other about females, which limited their ability to make comparisons.
- (b) Most responses included two valid reasons. Some weaker responses gave assertions such as *'men are stronger and therefore better workers'* that were not substantiated and gained no credit.
- (c) Stronger responses considered the improvements in communications from the dimension of phones, social media, the internet, and the resultant flow of information about destinations, and the ability to keep in touch with families, together with comments on improvements in transport:

*'People can use the internet to find out about job opportunities in an area before they travel. They can also gain knowledge of the place they want to go to. Migrants can use mobile phones and things like WhatsApp to keep in touch with their friends and family after they have moved which makes them feel happier and safer. Also, cheap flights with low-cost airlines make it easier for people to travel internationally.'*

Weaker responses included one reason then repeated it several times.

## Settlement dynamics

### Question 3

- (a) Most candidates were able to identify three pieces of evidence.
- (b) Most candidates answered this question well and used the photo well. Some weaker responses thought that locating a car factory near a forest area would be good because of its proximity to raw materials.
- (c) Weaker candidates answered this question as if it were linked to the car factory in the previous question and these responses were largely irrelevant. There was also some misunderstanding relating to populations of CBDs and their likely characteristics which produced answers that were too vague. Explanations involving high footfall because of the number of employees working in the CBD were valid, but many candidates suggested that CBDs have a high resident population. The accessibility of the CBD, as a transport hub, was also cited by many. Few candidates went beyond this, but stronger answers discussed the advantages of complementary services locating near each other, and the ability for businesses to benefit from proximity and personal contact. For example:

*'Services locate in the CBD because this is the area with the highest footfall due to the concentration of shops and offices.'*

*'Services such as banks, lawyers and accountants often locate near each other in the CBD so they can meet clients and exchange ideas.'*

## Section B

### Population

#### Question 4

- (a) Most candidates were able to describe how the birth rate changes in the different stages of the demographic transition model (DTM), but nearly all only used descriptors such as ‘high’, ‘decreases’ and ‘low’, without indicating what was a high or low birth rate. Several candidates included a diagram of the DTM but did not refer to it or give a scale other than ‘high’ and ‘low’.

Many weaker responses described both the birth rate and death rate changes and gave long explanations of why these rates change, which was not required by the question as the command word was ‘describe’ not ‘explain’.

- (b) Most responses gave basic reasons for the reduction of infant mortality rates, but many were very general and lacked sufficient detail to gain Level 3, for instance, ‘*better health care*’ and ‘*better levels of education*’.

Stronger responses included an explanation, such as: ‘*As a country becomes more economically developed, governments have more money to spend on health care such as clinics, hospitals and trained medical workers. Vaccine programmes are introduced – such as against measles, which is a big killer of infants in some countries.*’

The question asked for examples. Many candidates did not include examples or gave a very basic one, such as ‘*e.g. Kenya*’. Stronger responses showed specific knowledge of examples, such as ‘*In Kenya, in rural districts in the the Rift Valley, greater use of insecticide-treated mosquito nets has significantly reduced infant mortality caused by malaria.*’

- (c) Candidates who knew what was meant by the term ‘youthful population’ and had good case study knowledge of a country (such as The Gambia, Kenya or Uganda) were able to produce strong responses.

Some stronger responses discussed the idea of a demographic dividend when talking of a future shift and the opportunity for governments to get some benefit from the inputs made to accommodate the youthful population.

Many weaker responses showed a lack of understanding of what is meant by a ‘youthful population’, with many seeming to think it was about the working age population. Others did not know which countries have a youthful population and quoted China, the UK or Japan.

Many candidates were unsure of the issues of a youthful population and gave vague and contradictory accounts.

## Population/Migration

### Question 5

- (a) Few candidates understood what is meant by ‘classification’ – the process of dividing things into groups according to their characteristics – and described different types of migration without attempting to group them. Stronger answers attempted to identify types of population movement, such as differentiating between forced and voluntary migration or national/international migration and gave examples to illustrate them.
- (b) Stronger answers gave good explanations such as the process of counter-urbanisation leading to movement from urban to rural areas, or the process of gentrification in some cities, and included recognisable examples. Some stronger answers gave contemporary examples of migration to small towns and villages in HICs through increased opportunities to work from home during the pandemic. Many weaker answers were too general and described movements to and from cities, simply giving ‘London’ or ‘Los Angeles’ as an example.

There were two common errors. The first discussed internal migration in countries that are not HICs (mostly using examples of rural-urban migration in LIC/MICs). The second discussed migration between countries (i.e. international) when the question was about internal migration.

- (c) Most candidates were able to form an argument about the negative and positive impacts and reach a conclusion. Stronger answers offered examples that showed good case study knowledge, such as quoting locations, numbers, dates and so on. The strongest included up-to-date knowledge and contemporary examples; for instance, some excellent responses focused on the impact of

Rohingya migration on Cox's Bazaar in Bangladesh. Many weaker responses discussed the statement in very general terms such as employment, cheap labour, school places, cultural fusion, etc. and simply referenced '*Polish migration to the UK*' or '*Mexican migration to the USA*'.

### Population/Migration/Settlement dynamics

#### Question 6

- (a) This question was generally not well done. Many candidates did not understand the term 're-urbanisation'; several confused it with urban growth, rural-urban migration, and urban regeneration.
- (b) As in **part (a)** above, answers were generally weak through not understanding the term 're-urbanisation'.
- (c) There were few strong answers to this question. Most candidates did not understand the terms 'political factors' and 'location of activities'. Most weaker answers saw 'activities' as meaning 'physical recreation' and wrote about the location of playgrounds, skateparks etc., which gained little credit.



# GEOGRAPHY

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Paper 9696/23  
Core Human Geography

## Key messages

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## General comments

Candidates need good case study knowledge, especially in **Section B**, and to apply it appropriately to the questions. Some did not focus their answers and repeated everything they had memorised about an example. When answers give examples, they should support the point being made. Too many just gave a name, for instance 'e.g. *India*', which did not add much to an answer. Several erroneously used '*Africa*' as an example of a country: for example, '*In many LICs such as Africa....*'. Where questions ask for examples, they need to refer to recognisable and relevant case study detail which should be accurate and relatively recent. As stated in the syllabus, where possible, '*case studies should be dated no earlier than 1980*'. It is not appropriate to use nineteenth century migration from Ireland to the United States as an example, when more recent examples can be used to good effect.

**Part (c)** questions in **Section B** use wording such as 'how far do you agree with this statement?' or 'to what extent do you agree with this view?' Candidates should evaluate a variety of arguments and give a conclusion. Several candidates either gave no evaluative remarks or concluded with a simple statement such as '*Yes, I agree with this statement*'.

## Comments on specific questions

### **Section A**

#### **Population**

##### **Question 1**

- (a) Most candidates answered correctly, with a minority giving a list of the years rather than stating the number of years.
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- (c) Most candidates gave health issues such as obesity and diabetes and linked these to the pressure on health services, but few went beyond this. Stronger responses included problems such as increasing prices, how the increased demand for food could be met and the potential impact of the intensification of farming. Some weaker responses suggested that an increase in calorie consumption by some would lead to food running out causing famine and starvation for others in the same country. These suggestions gained no credit.

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### Population

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# GEOGRAPHY

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Paper 9696/31  
Advanced Physical Geography Options

## General comments

The response of the candidates was highly creditable and there were many excellent responses. The general performance was variable. All options received attention with Coastal environments and Hazardous environments being the most popular. Tropical environments, as in previous examinations, received less attention. There was the occasional rubric error but no more than in previous examinations.

It is worth making a few general comments, some of which will be explored in greater detail later. Abbreviations such as LSD, for longshore drift, and ITCZ for Intertropical Convergence Zone should be spelt out initially. Some candidates use concepts and processes in the wrong context, therefore demonstrating incomplete understanding: equifinality, endogenous, exogenous, flocculation, and liquefaction are a few that are often applied incorrectly. To offer specific examples is useful, but simply stating a general location where some issues might occur, such as an entire country, is often not. It is important that, if specific events are discussed, such as earthquakes or volcanic eruptions, the specific details are reasonably accurate. There was confusion over hard and soft rocks, especially the suggestion that limestone is a soft rock.

Responses to the resource-based question were generally excellent and a great many candidates presented much good physical geography.

## Comments on specific questions

### *Tropical environments*

#### **Question 1**

- (a) There was a good response to this resource of the subtropical anticyclone over Australia.
- (b) Some candidates found it difficult to explain the role of anticyclones in tropical climates, though some were able to discuss their relationship with the Intertropical Convergence Zone. Some noted their role in the seasonal monsoon.

#### **Question 2**

This was the most popular question in this option. Both granite and karst landforms were discussed, with karst landforms being better understood than granite landforms. The emphasis was on rock type, so both rock mineralogy and structure were relevant. For both rocks, the role of joints was stressed in allowing weathering to occur. Carbonation for limestone and hydrolysis for granite were often accurately explained, apart from the occasional confusion between the two. The question is an evaluative one, thus factors other than rock type needed discussing. Climate was the major factor discussed as well as the role of vegetation and exhumation for granite landforms. Apart from the few answers where neither group of landforms were understood, there was a generally good response.

#### **Question 3**

There were few good responses to this question. It was anticipated that answers would discuss the development of climatic climax, plagioclimax, and sub-climax plant communities. This was rarely the case with answers concentrating on how human activities had destroyed the vegetation. The development aspect of the question was either ignored or misinterpreted.



### **Coastal environments**

#### **Question 4**

- (a) There were many characteristics of the spit that could be described. Most candidates were able to describe enough to answer the question successfully.
- (b) Many candidates thought it was sufficient to mention just longshore drift but without explaining it in detail. Diagrams purporting to show longshore drift were often confusing and inaccurate. The question asked for how the spit shown in the photograph had formed; therefore, the direction of prevailing winds and longshore drift could be interpreted from the photograph. Diagrams could have been drawn with the correct orientation and direction of longshore drift shown. Discussion of other spits, such as Spurn Head, was only useful to make a few generic points. Some answers confused spits with deltas. In general, answers were weak.

#### **Question 5**

This was the most popular question in this section and there were some excellent, detailed answers with the Holderness coast being prominent. There were encouraging signs that sustainability, as a concept, and in all forms, was receiving more considered attention. The emphasis of the question, namely 'problems', was sometimes overlooked with answers concentrating on strategies of coastal management rather than the problems. Some case studies were limited in terms of the variety of problems and strategies that could be discussed.

#### **Question 6**

Answers to this question were often unbalanced with very little discussion of landforms related to sea level change. Thus, having stated that there were few landforms related to sea level change, without reference to any, there was detailed discussion of many depositional and erosional landforms unrelated to sea level change, as well as detailed discussion of marine and sub-aerial processes. Those candidates that did discuss landforms of sea level change were often confused between eustatic and isostatic processes, and whether the land was going up or the sea level dropping. However, there were a few excellent answers, and it was encouraging to note that many candidates were discussing tombolas, such as Chesil Beach, in terms of sediment being pushed on shore by rising sea level and not longshore drift. Coastal bars were explained in the same way.

### **Hazardous environments**

#### **Question 7**

- (a) It is important to note that a comparison involves both differences and similarities. Many candidates chose to note differences and not similarities. However, there was sufficient information on the map to enable most candidates to answer the question successfully.
- (b) The general comment is like that noted when discussing **Question 4 (b)**. The question asked for an explanation of the mudflows shown on the map. Thus, discussion of the lahars from Nevada del Ruiz and other mudflows was appropriate for a few generic comments but did not fully answer the question. Some candidates did not understand mudflow mechanisms. A few thought they were, in effect, highly mobile lava flows or hot pyroclastic flows mixed with water. There was confusion between mudslides and mudflows with discussion of lubrication of slide planes and sliding down slope. Past questions that asked for the differences between slides and flows were generally answered well. But there was considerable confusion in many answers. However, there were excellent answers relating to the fact that these mudflows originated on the side of a volcano and that there was probably a connection. Melting snow and high precipitation amounts interacting with volcanic ash, increasing pore pressure and loss of stability, was the basis of excellent answers.

#### **Question 8**

To answer this question, the candidates needed a good understanding of the nature and formation of tornadoes. Many answers were detailed and accurate in exploring the intricacies of tornado formation. In most answers, the evaluation of the importance of the factors influencing the formation of tornadoes was often impressive. There was only the occasional confusion with hurricanes and tropical cyclones.

### Question 9

Many candidates found this question challenging. The emphasis was on perception of risk of the respective hazards rather than the risk of the hazard itself. Some misinterpreted the question as risk rather than perception of risk. Most candidates argued quite convincingly that, while the type and nature of the specific hazard did influence the perception of risk, other factors such as the level of development of the country, prediction, mitigation strategies, education and personal experience were often more important. It was a challenging question and many candidates responded to the challenge admirably.

### *Hot arid and semi-arid environments*

#### Question 10

- (a) The response to this question was good with general statements substantiated with data from the resource. In this instance, many similarities as well as differences were noted.
- (b) Explanations of the mechanisms involved in salt weathering generally were sound, if sometimes lacking in detail. However, the source of the salt was often discussed in accurate detail, as well as the type of salt crystals and their propensity to expand on heating following evaporation. It was sometimes forgotten that the water needed to get inside the rock joints and pores of the rock for salt weathering to have the greatest effect.

#### Question 11

This was, by far, the most popular essay question in this section. The results were often detailed with the use of a variety of specific desert locations to substantiate the evaluation of the relative significance of the causes of aridity. Sub-tropical high-pressure systems, continentality, the rain shadow effect and cold ocean currents all featured prominently.

#### Question 12

There were few answers to this question. The range of landforms discussed was sometimes limited. Some answers were unbalanced with respect to the role of wind transportation, as opposed to other processes such as water action. Some candidates seemed to suggest that there was almost no water action currently occurring and that it had all occurred in former pluvial periods. The formation of mesas and buttes was often discussed in highly speculative and mostly inaccurate terms.

# GEOGRAPHY

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<p><b>Paper 9696/32</b> <b>Advanced Physical Geography Options</b></p>
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## General comments

The response of the candidates was highly creditable and there were many excellent responses. The general performance was variable. All options received attention with Coastal environments and Hazardous environments being the most popular. Hot arid and semi-arid environments, as in previous examinations, received less attention. There was the occasional rubric error but no more than in previous examinations.

It is worth making a few general comments, some of which will be explored in greater detail later. Abbreviations such as LSD, for longshore drift, and ITCZ for Intertropical Convergence Zone should be spelt out initially. Some candidates used concepts and processes in the wrong context, thus demonstrating incomplete understanding: equifinality, endogenous, exogenous, flocculation, and liquefaction, are a few that are often applied incorrectly. To offer specific examples is useful, but simply stating a general location where some issues might occur, such as an entire country, is often not. It is important that, if specific events are discussed, such as earthquakes or volcanic eruptions, the specific details are reasonably accurate. There was confusion over hard and soft rocks, especially the suggestion that limestone is a soft rock.

Responses to the resource-based question were generally excellent and a great many candidates presented much good physical geography.

## Comments on specific questions

### *Tropical environments*

#### **Question 1**

- (a) There were few strong responses to this resource of the soil profile. Many candidates simply repeated phrases taken directly from Fig. 1.1 without any descriptive interpretation of them. Hence, for example, the depth was referred to as 5–10m rather than deep or preferably very deep. Several candidates missed the fairly clear descriptive points regarding organic horizons, mineral matter and colours.
- (b) Some candidates found it difficult to explain the role of climate in influencing the profile of the oxisol/latosol. Stronger responses mentioned, though not all explained, leaching and deep chemical weathering.

#### **Question 2**

This was the least popular question in this option. Most candidates were able to identify cone, tower and cockpit karst and describe the process of carbonation, although joint spacing and pattern were poorly developed in many responses. The stronger responses considered hydrological, geological and tectonic conditions and suggested that time was important in the evolution of different tropical karst landforms.

#### **Question 3**

There were few strong responses. Rather than describing and explaining the characteristics of the air masses affecting tropical climates, many responses gave information about the ITCZ which, although mainly accurate, was not always tied to the air masses or the tropical climate. Stronger responses considered the monsoon climate and linked the air masses to the variations in the rainfall pattern.

### ***Coastal environments***

#### **Question 4**

- (a) There were many variations in the rates of salt weathering that could be described. Most candidates were able to describe enough to answer the question successfully. A small minority chose to simply quote specific rates for all five years without any processing of the data.
- (b) Many candidates identified the higher temperatures and, therefore, evaporation rates in summer as being significant. Greater detail could have been included when considering the confined spaces where salt crystals form, and the pressure exerted when they expand. More complete answers included suggestions for the variations across the time frame as well as the two seasons.

#### **Question 5**

This was the most popular question in this section and there were some excellent, detailed answers with the Holderness coast being prominent. There were encouraging signs that sustainability, as a concept, and in all forms, was receiving more considered attention. The emphasis of the question, namely 'problems', was sometimes overlooked with answers concentrating on strategies of coastal management rather than the problems. Some case studies were limited in terms of the variety of problems and strategies that could be discussed. The strongest responses interlinked specific problems with the management solution within the case study and assessed the level of success.

#### **Question 6**

Answers to this question often began with some observations on wave energy and factors affecting its variations. Geological characteristics of a coastline were identified as significant but needed to be more carefully developed. Often candidates referred to hard and soft rocks, rather than resistant and less resistant rocks when subjected to weathering and erosion. Hence, limestone was frequently considered as a soft rock. Relative resistance is the key to the formation of some erosional landforms along with the rock structure. Many stronger answers considered sub-aerial processes and human activity as significant factors in the formation of erosional landforms.

### ***Hazardous environments***

#### **Question 7**

- (a) Most responses included some of the many patterns that could be described on this resource. Stronger answers included information to illustrate those patterns, which was an effective technique. A large proportion of the candidates recognised some anomalies and were able to elaborate using the data.
- (b) Most responses recognised the location and significance of the epicentre: this required some relationship with the patterns identified, and there were a range of levels of response. It was important to recognise that the data showed reported intensities and not actual intensities. Stronger answers highlighted this point and suggested reasons for it.

#### **Question 8**

This was a question which provided opportunities for the candidate to show their detailed knowledge and understanding of large-scale atmospheric disturbances. Many included case studies and examples to illustrate and elaborate on their ideas. Some stronger responses recognised that flooding was a consequence of storm surges, therefore coastal, with river flooding resulting from intense, heavy rainfall. Many assessed the significance of high winds and mass movements with their impacts on human activity.

#### **Question 9**

This was the most popular question in this section and a wide range of hazardous environments were discussed. Some responses overlooked the emphasis of the question, namely 'problems', and concentrated on the methods of hazard management rather than the problems that the technique was attempting to solve or mitigate. Some candidates chose more than one case study which, in many cases, reduced the depth of evaluation and led to repetition.

***Hot arid and semi-arid environments***

**Question 10**

- (a) The response to this question was good with general statements substantiated with data from the resource. Specific discharges were accurately quoted but specific dates less so.
- (b) Reasons for the hydrological regime centred around the infrequent and intense rainfall events. Many candidates linked this to the convectional uplift due to high temperatures in Arizona. The strongest responses referred to ephemeral streams, infiltration capacity and a lack of vegetation.

**Question 11**

This was, by far, the least popular essay question in this section. Climatic conditions were central in assessing the causes of low biomass productivity, resulting in a limited amount of organic matter available for the thin, dry and infertile soils which are frequently subjected to erosion. The stronger responses considered the high evaporation rates which led to capillary action and salinisation.

**Question 12**

This question focused on the differences in global distribution, rather than the causes of hot arid and semi-arid environments. Clearly, some causes had implications for the distributions but often candidates did not make the link strongly enough. Consequently, sections of text bore little relevance to the wording of the question. With a question of this type, the ability to name and locate specific geographical areas is very important, and answers were highly variable in this respect.



# GEOGRAPHY

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<p><b>Paper 9696/33</b> <b>Advanced Physical Geography Options</b></p>
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## General comments

The response of the candidates was highly creditable and there were many excellent responses. The general performance was variable. Coastal environments and Hazardous environments were the most popular options. There were no responses to Hot arid and semi-arid environments. There was the occasional rubric error but no more than in previous examinations.

It is worth making a few general comments, some of which will be explored in greater detail later. Abbreviations such as LSD, for longshore drift, and ITCZ for Intertropical Convergence Zone should be spelt out initially. Some candidates used concepts and processes in the wrong context, thus demonstrating incomplete understanding: equifinality, endogenous, exogenous, flocculation, and liquefaction, are a few that are often applied incorrectly. To offer specific examples is useful, but simply stating a general location where some issues might occur, such as an entire country, is often not. It is important that, if specific events are discussed, such as earthquakes or volcanic eruptions, the specific details are reasonably accurate. There was confusion over hard and soft rocks, especially the suggestion that limestone is a soft rock.

Responses to the resource-based question were generally excellent and a great many candidates presented much good physical geography.

## Comments on specific questions

### *Tropical environments*

#### **Question 1**

- (a) There were few strong responses to this resource of the soil profile. Many candidates simply repeated phrases taken directly from Fig. 1.1 without any descriptive interpretation of them. Hence, for example, the depth was referred to as 5–10m rather than deep or preferably very deep. Several candidates missed the fairly clear descriptive points regarding organic horizons, mineral matter and colours.
- (b) Some candidates found it difficult to explain the role of climate in influencing the profile of the oxisol/latosol. Stronger responses mentioned, though not all explained, leaching and deep chemical weathering.

#### **Question 2**

Most candidates were able to identify cone, tower and cockpit karst and describe the process of carbonation, although joint spacing and pattern were poorly developed in many responses. The stronger responses considered hydrological, geological and tectonic conditions and suggested that time was important in the evolution of different tropical karst landforms.

#### **Question 3**

No candidates answered this question.

### *Coastal environments*

#### **Question 4**

- (a) There were many variations in the rates of salt weathering that could be described. Most candidates were able to describe enough to answer the question successfully. A small minority chose to simply quote specific rates for all five years without any processing of the data.
- (b) Many candidates identified the higher temperatures and, therefore, evaporation rates in summer as being significant. Greater detail could have been included when considering the confined spaces where salt crystals form, and the pressure exerted when they expand. More complete answers included suggestions for the variations across the time frame as well as the two seasons.

### Question 5

There were some excellent, detailed answers with the Holderness coast being prominent. There were encouraging signs that sustainability, as a concept, and in all forms, was receiving more considered attention. The emphasis of the question, namely 'problems', was sometimes overlooked with answers concentrating on strategies of coastal management rather than the problems. Some case studies were limited in terms of the variety of problems and strategies that could be discussed. The strongest responses interlinked specific problems with the management solution within the case study and assessed the level of success.

### Question 6

Answers to this question often began with some observations on wave energy and factors affecting its variations. Geological characteristics of a coastline were identified as significant but needed to be more carefully developed. Often candidates referred to hard and soft rocks, rather than resistant and less resistant rocks when subjected to weathering and erosion. Hence, limestone was frequently considered as a soft rock. Relative resistance is the key to the formation of some erosional landforms along with the rock structure. Many stronger answers considered sub-aerial processes and human activity as significant factors in the formation of erosional landforms.

### *Hazardous environments*

#### Question 7

- (a) Most responses included some of the many patterns that could be described on this resource. Stronger answers included information to illustrate those patterns, which was an effective technique. A large proportion of the candidates recognised some anomalies and were able to elaborate using the data.
- (b) Most responses recognised the location and significance of the epicentre: this required some relationship with the patterns identified, and there were a range of levels of response. It was important to recognise that the data showed reported intensities and not actual intensities. Stronger answers highlighted this point and suggested reasons for it.

#### Question 8

This was a question which provided opportunities for the candidate to show their detailed knowledge and understanding of large-scale atmospheric disturbances. Many included case studies and examples to illustrate and elaborate on their ideas. Some stronger responses recognised that flooding was a consequence of storm surges, therefore coastal, with river flooding resulting from intense, heavy rainfall. Many assessed the significance of high winds and mass movements with their impacts on human activity.

#### Question 9

A wide range of hazardous environments were discussed. Some responses overlooked the emphasis of the question, namely 'problems', and concentrated on the methods of hazard management rather than the problems that the technique was attempting to solve or mitigate. Some candidates chose more than one case study which, in many cases, reduced the depth of evaluation and led to repetition.

### *Hot arid and semi-arid environments*

No candidates answered this option.

# GEOGRAPHY

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Paper 9696/41  
Advanced Human Geography Options

## Key messages

For essay questions, deconstruct the question and plan a response.

For **part (a)** resource-based questions, candidates should note the command and focus on the specific demand rather than describe everything, for example in **Question 1(a)** 'compare' and in **Question 4(a)** 'main changes'. For **Question 10(a)**, candidates often substituted the requirement to describe the distribution for comment on the pattern.

In **part (b)**, such as **Questions 7(b)** and **10(b)**, candidates need to note the required number of explanatory factors. Sometimes, it was unclear where the candidate was explaining a different factor.

## General comments

The responses were generally of a suitable length to maintain an argument and illustrate it adequately with place support and conceptual ideas. Weaker responses had only a descriptive and explanatory approach to essays, where each paragraph was at the same level and with little evaluation with respect to the question and therefore limiting the response to Level 2.

Some centres and/or candidates have developed case study details beyond a single source, and these are now more closely linked to the demands of the syllabus. These case studies had also been updated. Candidates still appear to find difficulty in remembering details of case studies where a historical approach is used.

## Comments on specific questions

### *Production, location and change*

#### Question 1

- (a) Stronger responses were able to make comparisons between the main changes in animal farming and crop farming. Many responses did not compare these two groups but described the differences within either crop or animal activity. Credit was awarded for recognition of the degree of change which occurs in only one of animal or crop activities, e.g. '*only arable crops increase in area and number.*' Direct comparisons included: both categories of crops increase in area but only one of livestock (dairy) increases in area; decrease in farm numbers for livestock is greater than the decrease in crops/horticulture; three types increase in area but only one is animal farming.
- (b) There were few strong answers. Most candidates achieved some basic credit for stating that larger farms can produce more food, that it is easier to use machinery and inputs can be bought in bulk. Some stated that yield would increase but did not define how yield is measured. Few candidates developed their ideas which may have been achieved by linking ideas such as larger field size: it is easier to use machinery as less space is wasted and efficiency of tasks such as ploughing or harvesting increases using specialised equipment.

#### Question 2

Most responses comprised several short paragraphs describing physical or economic factors, sometimes with basic examples, and with little evaluative comment. Most included the physical factors such as



temperature, rainfall, relief and soil, and economic factors such as money and markets. Stronger responses engaged with the question, explaining, and evaluating how far physical factors are more critical in determining the possibility of agriculture and that economic factors decide how the land is actually used: these arguments were supported with robust examples.

### Question 3

Very few candidates attempted this question. Stronger responses showed knowledge of the issues faced by manufacturing industry and could link these issues to attempts to solve them. They also remained focused on manufacturing industry. Assessment of the extent to which the issues were overcome should have considered whether these issues remained or had become worse. The question also invited candidates to consider whether stakeholders other than the government were able to solve the issues.

### *Environmental management*

#### Question 4

- (a) The key to this question was recognition of the importance of 'main' changes and to move away from describing the change in each type of source, with repeating data off the graph. The main changes were the large growth in numbers overall, solar lighting grew the most from 1 to 100 million, solar home systems were the main source from 2007–2011 but were overtaken by solar lighting in 2012, and mini grids have increased but quite slowly, hydro being the biggest source and remaining so. Stronger responses developed their points, for example, commenting on the pace of growth, such as: the variable rates of growth, at a maximum in 2012–2014 / steadily increasing until 2011, faster growth until 2015, or recognition that the three forms of solar were dominant throughout.
- (b) The responses could focus on energy supply issues in LICs/MICs and/or the usefulness of off-grid energy sources. Awareness of energy supply issues were better explained, for example the cost limitations of extending grid supplies to remote regions or issues in densely populated urban areas such as shanty towns / informal settlements or rising demand due to population growth and increased affluence. The usefulness of off-grid energy sources to users or the areas of supply included: cost competitiveness, empowerment of local communities, using local resources including waste, and environmental sustainability. Stronger responses were related clearly to the LIC/MIC context through examples used such as micro-hydro schemes in Nepal or off-grid provision in countries such as Kenya.

#### Question 5

A slightly less popular question choice than **Question 6**. The most common approach was to consider climate as a factor before considering other factors. Other factors included resource endowment, energy policy, energy security, international pressure, other political factors, and economic capabilities. Stronger responses were able to analyse climate as a factor and with a generalised comment such as all the renewable types (nuclear excepted) make use of an element of climate. These responses also recognised the importance of climate change as a factor influencing the type of energy used to generate electricity, and how the importance of this varies from place to place and is changing as a factor over time. Weaker responses described how each individual type of renewable energy source is related to climate and/or described a range of other factors, again individually. Some candidates did not recognise that HEP is clearly related to climate through levels of, and seasonality of, precipitation. These weaker responses were characterised by many descriptive paragraphs, each adding little to the evaluative element, though some included a simple conclusion confirming a view stated in the introduction or coming to a final view. Some candidates focused on factors within one specific country, Norway being a common example: these were often characterised by good place and exemplar support and some were very successful.

#### Question 6

Some candidates were able to engage with the contention that the causes of environmental degradation are complex and the solutions simple and were based on one clearly defined degraded environment. Some very strong responses were seen using Mumbai, Delhi, the Aral Sea region, or Lower Lea valley in London, while weaker exemplars were the Pearl River or Niger River where place support was frequently limited, and the London Docklands, where detail about environmental degradation was sparse or absent. Some candidates also used Namibia as a case study, again with limited place support. Most candidates considered complexity as multiple causes, while some developed this to consider difficulties of identification or understanding, the

interlinking of factors, and circular causation. The simplicity of solutions was less successfully discussed. Some responses included valid development through recognition that stopping the source of pollution or degradation may be simple but is complicated by factors which influence human behaviour, at a variety of scales and for a variety of reasons. Common themes included economic factors such as profit maximisation, cost of changing practices or solutions, or social factors such as tradition, or political factors such as corruption.

### ***Global interdependence***

#### **Question 7**

- (a) Most candidates described the decline in CO<sub>2</sub> emissions for all four transport types, with the highest decline in car transport. Fewer noted that air transport replaced car transport as the highest emitter. Some commented on the range of emissions becoming smaller.
- (b) Most candidates were able to explain two ways in which tourism benefits the environment: revenue and ecotourism were the most common. Stronger responses were able to develop their explanations as to how the environment benefits and give clear, located examples. Some responses were less clear on the number of ways, either offering more than two or having overlap making it difficult to differentiate the 'way' being used.

#### **Question 8**

This was the most popular essay question on the paper and answered at all levels. Stronger responses had a clear knowledge and understanding of free trade. These responses displayed knowledge beyond the basic description of free trade as international trade without restrictions such as tariffs, and quotas, considering the role of subsidies, and product standard regulations between countries. They considered the benefits and problems for a range of stakeholders. The benefits commonly discussed included: for producers, increased competition leading to specialisation through comparative advantage, efficiency of production, economies of scale; and, for consumers increased choice at lower cost. The problems commonly referred to included: the lack of protection for domestic producers and consequent unemployment and difficulties for LICs and MICs to compete and diversify, without protection from measures such as tariffs from which HICs historically benefited. Some candidates integrated a discussion about how and why free trade areas encourage TNC investment and how this dominance may have both benefits and issues. Evaluative comments commonly considered the benefits or not from membership of a free trade area (NAFTA/USMCA or EU most used) and the difficulties for non-member countries. Some candidates developed their discussion with consideration of the WTO and/or the dominance of certain countries within the global trade system. Weaker responses focused on the pros and cons of trade with little understanding of free trade and/or confused free trade with Fairtrade. Fairtrade might have been used effectively in the discussion as a method of overcoming the issues arising from unfair trade practices for some countries, or as an illustration of the disadvantages of the free trade system.

#### **Question 9**

Some candidates were well informed of why the international debt crisis (IDC) is difficult to solve. They were able to move way from describing the causes and problems of international debt. The problems were developed as difficulties for debtor countries in solving the IDC, with some considering the issues for lenders. These difficulties included: the scale of the debt itself such as the amount owed, the impact of interest rates and rises, the proportion of the debt to the nature of economy and/or to the implications of debt including the impacts on other sectors of the economy and society. These stronger responses also displayed knowledge of the attempts to solve the international debt crisis, such as debt relief through agreements including HIPC and MDRI and the impact of structural adjustment programmes, and austerity measures. Some candidates commendably displayed knowledge about the debt crisis in HICs such as Greece and attempts to resolve issues, such as the debt service suspension initiative or attempts to facilitate trade. Comment on ways to solve the IDC such as through trade, aid or tourism were valid but needed to be within the context and setting of the IDC.

### ***Economic transition***

#### **Question 10**

- (a) Distribution in geography is how spread out or arranged a variable is over a geographical area. Distributions can be described as random, clustered, or uniform in arrangement. A distribution may

or may not have a pattern. Credit was given for general comments about the distribution of FDI with levels at or over 2 per cent and further comment on the category of 10 per cent or more. As a result, candidates could score all four marks with comment such as: high levels above 2 per cent found in every continent/widespread (throughout the globe)/scattered around the globe, covering a large proportion of South America (and Central America) or Africa, with only a few countries over 10 per cent (7), mostly found in Africa (4 countries). Other ways using the language of distribution included: occur in groups/clusters/blocks, e.g. S.E. Asia, sometimes scattered, e.g. Europe.

- (b) Some candidates performed well with some confident responses. These responses were clearly focused on disadvantages to countries of high levels of FDI and explained two disadvantages. Some responses lacked clarity on the number of disadvantages offered.

### Question 11

There was generally sound identification and description of relevant indices. A common approach was to consider individual indices one at a time, whether single or multiple, and to describe the pros and cons of each index. Very few candidates took an analytical approach where economic measures were considered as a group compared to other groups, for example, social, political, environmental. Stronger responses were able to comment on two factors: first, comments on how useful the chosen measures are for measuring variations in national development and second, comments upon 'best measured'. Few candidates were able to consider how easy or not it is to measure variations in national development. Candidates might have considered a range of ideas such as: the ease or difficulties of measurement, the complexity of calculations involved, comparability issues, currency parity, westernised viewpoints, the difficulties with informal sector or unpaid/unseen contributions to economy or society, subjectivity versus objectivity, the sampling frequency and representation and scope.

### Question 12

Economic activities most seen were related to activities of TNCs and their role in FDI, the changing location of economic activities and the new international division of labour and the growth of newly industrialised countries. Less common but still valid were references to groupings of countries such as BRICS, MINTS or emerging countries (markets or economies). Stronger responses focused upon the globalisation of economic activity and global inequalities, evaluating the extent to which the latter has been reduced by the former. Some developed their argument by considering how far there has been a reduction or not of economic, social, and/or environmental inequalities, and the extent to which this varies over time or from place to place. Weaker responses did not refer to the issue of global inequalities but concentrated more on giving the advantages and disadvantages of globalisation and/or overfocused on internal inequalities of a country.

# GEOGRAPHY

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<p>Paper 9696/42 Advanced Human Geography Options</p>
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## Key messages

Candidates were well prepared for the paper and demonstrated knowledge of current events. Case studies and examples, as well as theories and models, were consistently used to illustrate explanations. Essays which began with evaluative statements tended to stay focused on the question set.

## General comments

In **Questions 4(a)** and **7(a)**, some candidates did not address the command word 'compare'. 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.

Once again, there was evidence that when candidates planned out essays, they generally performed better. The main message about essays is that candidates need to be cautious about using narrative and make sure that it is used to answer the question set. Some candidates had learned their case studies thoroughly but did not apply their knowledge to answer the question, particularly in **Questions 6** and **12**.

## Comments on specific questions

### ***Production, location and change***

This option was less popular than others in this series. **Question 2** was more popular than **Question 3**.

### **Question 1**

- (a) Most candidates gained one or two marks for the general overall distribution of more towards the coastlines but tended to struggle with finer detail. Candidates should be encouraged to use all the information they are given, such as locations marked (e.g. 'eastern coastline with the North Atlantic Ocean'), to help with their descriptions. This can also be said of the Key and Scale which were used to show the size and concentration of areas.
- (b) Generally, those candidates who understood the word 'agglomeration' were able to achieve a Level 2 mark. Many explanations were often quite simplistic (to reduce costs, etc.). Some candidates used Fig 1.1 to illustrate locations of agglomeration in the USA. Those candidates that based their answers on a particular type of manufacturing were often more able to make specific and appropriate points. The benefits needed to be 'for manufacturing industry' and there were a wide range that could be applied in this case.

### **Question 2**

There were some sound answers to this question, with several candidates using examples of water management very effectively. Many identified a range of examples of technology, some of which were not truly linked to 'physical limitations', while others were. There were several references to The Green Revolution and, where this was specifically linked to 'physical limitations', the responses were sound. The idea of 'extent' was not generally well considered, and answers were often based on describing how technology had made improvements. Some candidates incorrectly interpreted 'physical limitations' as the limitations of the farmer's human body – tiredness, age, ability, etc. The syllabus in 11.1 states '*Factors (physical, social, economic, political) affecting agricultural land use and activity on farms.*' The capabilities of the farmer would be a social factor. Candidates should be aware of the physical factors that affect

agricultural production: soils, climate, weather, pests, etc. Some candidates interpreted the demands of the question accurately but included too much description of how the technology works, rather than focusing on the extent to which it overcomes the physical limitations.

### Question 3

Candidates approached this question with a sound level of understanding of the influence of government policies. Many based their essay on the role of governments in attracting foreign manufacturing industry to their country which ties in well with Global interdependence. Fewer then applied this to the location within the country, although those which used China's SEZ policy demonstrated both aspects. Some of the better responses were based around specific examples (Indian industrial policy was used quite effectively). Many candidates focused their response in central and SE Asia and newly emerging countries in their region. This is acceptable and it would have been good to see a contrast between different world regions, contexts and scales. Candidates who included other factors brought in the assessment element effectively; some sophisticated responses explained how subsequent changes to government policies continue to influence the location of manufacturing industry. A few candidates ignored the word 'manufacturing' and talked about primary activities or tourism.

### *Environmental management*

This option remains a popular choice for centres. **Question 5** was more popular than **Question 6**.

### Question 4

- (a) The use of 'range' confused many candidates here and limited their marks. Many interpreted the bars as showing total emissions and compared in this way. The figures were not showing total production or emission amounts but showed the range – highest to lowest/worst to best – of the different energy sources. Stronger responses made clear comparisons of geothermal and other sources. Weaker responses only included descriptions which gained no credit.
- (b) There were many strong responses to this question with many candidates demonstrating their understanding of the problems or limits of renewables. Most candidates were able to identify several problems, often making observations about cost or environmental issues. Their responses showed clear understanding of the issues relating to renewable technologies. They included many examples of locations and explained the issues specific to those locations. Some candidates made very general points, suggesting that wind turbines had to be near the sea or that countries outside the tropics could not develop solar energy. A few candidates made observations about climate-related reliability and the cost- and skill-based challenges in poorer parts of the world.

### Question 5

Several weaker responses ignored the word 'demand' and wrote almost exclusively about supply or entered a discussion about the relative merits of renewable and non-renewable energy: these approaches were significantly self-limiting. Other answers tended to focus more on 'other factors' rather than climate. The other factors which were considered most frequently included the level of the economy and population size as it affects variations across a nation. Some stronger responses considered the role of seasonality on variations in demand, and climate change on our increasing demand for cooling and heating due to extreme weather events becoming more frequent.

### Question 6

Most candidates were able to identify degraded environments, and some had quite sound knowledge about why they had become degraded and what had been done to improve them. Many candidates missed part of the statement in the question, usually 'removing the constraints'. Most candidates were able to assess the success of attempts to improve degraded environments but ignored the idea of whether removing the constraints was or was not important. The idea of 'constraints' appeared to cause considerable confusion and, in many cases, it appeared that candidates were unsure about whether a constraint was something which was creating degradation or actually restricting the management of degraded areas. Those that did pick up the idea of 'constraints' often produced thoughtful, well documented responses.

### ***Global interdependence***

This was the most popular option on the paper. Most candidates chose to answer **Question 9**.

#### **Question 7**

- (a) 'Compare' was the command word here, so candidates had to do more than just describe any patterns they see, these need to be in relation/comparison to the other data set. Many candidates tended to repeat the data. Comparison can include similarities and differences and could be within or between data sets.
- (b) Nearly all candidates were able to identify the disadvantages of tourism and gave a wide range of ideas. Most responses focused on environmental issues such as litter, trampling of vegetation and destruction of habitats for the development of new buildings. A few identified water use/misuse as an issue, often quite effectively. Some drifted into human issues, and at times this was self-limiting. Weaker responses gave very vague reference points (just saying 'pollution' with no context) or ignored the question command that stated 'two disadvantages' and wrote about a wide range of factors very superficially. The focus of the question was on the natural or built environment. Weaker responses discussed the disadvantages for local societies, such as cultural erosion.

#### **Question 8**

There were many strong responses that showed awareness of the principles of Fairtrade and were able to consider the advantages to less developed areas. Rather than discussing Fairtrade, some weaker responses wrote about generic fair trade/fair rules in trade, for example a lack of restrictions such as tariffs. Many candidates were able to show how the principles of Fairtrade have brought many benefits for producers in LICs but could see that there were limitations to the scale at which Fairtrade principles can operate without major disruption to global trade.

#### **Question 9**

This question was generally approached well with candidates considering the importance of economic sustainability and keeping this as a focus. Some candidates discussed social and environmental sustainability, which was acceptable if it did not form the bulk of the essay. There were many strong essays which considered a range of destinations and assessed economic sustainability's importance in these different contexts. The use of the Butler, Doxey and VICE (visitors, income, community, environment) models could be used to illustrate the various stages of the development of a destination. Stronger essays were written in an evaluative style. Many weaker essays were descriptions and narratives of tourism management in different locations; the knowledge shown was excellent but was not used to answer the actual question. Stronger essays were thoughtful and evaluative making links between factors (especially economic and environmental) and offering a more holistic and evaluative discussion.

### ***Economic transition***

This was a popular option with a balance between the choice of essay questions.

#### **Question 10**

- (a) Most candidates were able to identify that the data suggests greater equality as the years progress. Several considered the rate of change in relation to the three time periods, and some developed their answer further by identifying that there had been limited change in the 0–40 and 90 plus areas, or they picked out the 40–90 area as the area of most change. A few candidates did not understand the graph. Some candidates described change along the lines instead of between them.
- (b) Most candidates were able to identify social indices, although they were sometimes mixed in with economic indices. Many struggled to have any real discussion about why they might have advantages in terms of measuring equality. In many responses, social indices were identified and then simply considered more useful, often with very little reasoning. A few candidates were able to consider the limitations of economic indices then make an appropriate case for social indices being more appropriate for identifying inequality. Candidates need to understand the variety of social indices available and how they are useful in representing places.

### Question 11

Many answers were very generic, often simply expressing the virtue of TNCs and FDI as a driver for economic development in NICs: this approach generally allowed candidates to express a basic understanding of the question. Where this theme was developed by using specific examples and a broader understanding of TNCs and FDI, the responses were generally sound. Some candidates took a different approach by considering economic factors then introducing other influences and offering an assessment of the relative influence of each. The success of this approach was usually dictated by the strength of the chosen example(s) and the level of detail. Emergence and growth are two separate aspects and were covered by most candidates. Some candidates incorrectly interpreted 'importance' here as positives versus negatives, which usually does not meet the requirements of the question.

### Question 12

There were few strong answers to this question. Many candidates missed out the 'difficulties faced'. Most were able to assess the extent to which attempts had solved regional disparities but ignored the idea of whether the difficulties faced had been overcome: these could have been those already existing or those which arose either predictably or unexpectedly as the attempts progressed. Candidates need to recognise that there are difficulties faced in every attempt.



# GEOGRAPHY

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Paper 9696/43  
Advanced Human Geography Options

## Key messages

Candidates were well prepared for the paper and demonstrated knowledge of current events. Case studies and examples, as well as theories and models, were consistently used to illustrate explanations. Essays which began with evaluative statements tended to stay focused on the question set.

## General comments

In **Questions 4(a)** and **7(a)**, some candidates did not address the command word 'compare'. The use of examples in **Questions 1(b)**, **4(b)** and **7(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.

Once again, there was evidence that when candidates planned out essays, they generally performed better. The main message about essays is that candidates need to be cautious about using narrative and make sure that it is used to answer the question set. Some candidates had learned their case studies thoroughly but did not apply their knowledge to answer the question, particularly in **Question 6**.

## Comments on specific questions

### ***Production, location and change***

This option was less popular than others in this series. **Question 2** was more popular than **Question 3**.

### **Question 1**

- (a) Most candidates gained one or two marks for the general overall distribution of more towards the coastlines but tended to struggle with finer detail. Candidates should be encouraged to use all the information they are given, such as locations marked (e.g. 'eastern coastline with the North Atlantic Ocean'), to help with their descriptions. This can also be said of the Key and Scale which were used to show the size and concentration of areas.
- (b) Generally, those candidates who understood the word 'agglomeration' were able to achieve a Level 2 mark. Many explanations were often quite simplistic (to reduce costs, etc.). Some candidates used Fig 1.1 to illustrate locations of agglomeration in the USA. Those candidates that based their answers on a particular type of manufacturing were often more able to make specific and appropriate points. The benefits needed to be 'for manufacturing industry' and there were a wide range that could be applied in this case.

### **Question 2**

There were some sound answers to this question, with several candidates using examples of water management very effectively. Many identified a range of examples of technology, some of which were not truly linked to 'physical limitations', while others were. There were several references to The Green Revolution and, where this was specifically linked to 'physical limitations', the responses were sound. The idea of 'extent' was not generally well considered, and answers were often based on describing how technology had made improvements. Some candidates incorrectly interpreted 'physical limitations' as the limitations of the farmer's human body – tiredness, age, ability, etc. The syllabus in 11.1 states '*Factors (physical, social, economic, political) affecting agricultural land use and activity on farms.*' The capabilities of the farmer would be a social factor. Candidates should be aware of the physical factors that affect



agricultural production: soils, climate, weather, pests, etc. Some candidates interpreted the demands of the question accurately but included too much description of how the technology works, rather than focusing on the extent to which it overcomes the physical limitations.

### Question 3

Candidates approached this question with a sound level of understanding of the influence of government policies. Many based their essay on the role of governments in attracting foreign manufacturing industry to their country which ties in well with Global interdependence. Fewer then applied this to the location within the country, although those which used China's SEZ policy demonstrated both aspects. Some of the better responses were based around specific examples (Indian industrial policy was used quite effectively). Many candidates focused their response in central and SE Asia and newly emerging countries in their region. This is acceptable and it would have been good to see a contrast between different world regions, contexts and scales. Candidates who included other factors brought in the assessment element effectively; some sophisticated responses explained how subsequent changes to government policies continue to influence the location of manufacturing industry. A few candidates ignored the word 'manufacturing' and talked about primary activities or tourism.

### *Environmental management*

This option remains a popular choice for centres. **Question 5** was more popular than **Question 6**.

### Question 4

- (a) The use of 'range' confused many candidates here and limited their marks. Many interpreted the bars as showing total emissions and compared in this way. The figures were not showing total production or emission amounts but showed the range – highest to lowest/worst to best – of the different energy sources. Stronger responses made clear comparisons of geothermal and other sources. Weaker responses only included descriptions which gained no credit.
- (b) There were many strong responses to this question with many candidates demonstrating their understanding of the problems or limits of renewables. Most candidates were able to identify several problems, often making observations about cost or environmental issues. Their responses showed clear understanding of the issues relating to renewable technologies. They included many examples of locations and explained the issues specific to those locations. Some candidates made very general points, suggesting that wind turbines had to be near the sea or that countries outside the tropics could not develop solar energy. A few candidates made observations about climate-related reliability and the cost- and skill-based challenges in poorer parts of the world.

### Question 5

Several weaker responses ignored the word 'demand' and wrote almost exclusively about supply or entered a discussion about the relative merits of renewable and non-renewable energy: these approaches were significantly self-limiting. Other answers tended to focus more on 'other factors' rather than climate. The other factors which were considered most frequently included the level of the economy and population size as it affects variations across a nation. Some stronger responses considered the role of seasonality on variations in demand, and climate change on our increasing demand for cooling and heating due to extreme weather events becoming more frequent.

### Question 6

Most candidates were able to identify degraded environments, and some had quite sound knowledge about why they had become degraded and what had been done to improve them. Many candidates missed part of the statement in the question, usually 'removing the constraints'. Most candidates were able to assess the success of attempts to improve degraded environments but ignored the idea of whether removing the constraints was or was not important. The idea of 'constraints' appeared to cause considerable confusion and, in many cases, it appeared that candidates were unsure about whether a constraint was something which was creating degradation or actually restricting the management of degraded areas. Those that did pick up the idea of 'constraints' often produced thoughtful, well documented responses.

### ***Global interdependence***

This was another popular option on the paper. Most candidates chose to answer **Question 9**.

#### **Question 7**

- (a) 'Compare' was the command word here, so candidates had to do more than just describe any patterns they see, these need to be in relation/comparison to the other data set. Many candidates tended to repeat the data. Comparison can include similarities and differences and could be within or between data sets.
- (b) Nearly all candidates were able to identify the disadvantages of tourism and gave a wide range of ideas. Most responses focused on environmental issues such as litter, trampling of vegetation and destruction of habitats for the development of new buildings. A few identified water use/misuse as an issue, often quite effectively. Some drifted into human issues, and at times this was self-limiting. Weaker responses gave very vague reference points (just saying 'pollution' with no context) or ignored the question command that stated 'two disadvantages' and wrote about a wide range of factors very superficially. The focus of the question was on the natural or built environment. Weaker responses discussed the disadvantages for local societies, such as cultural erosion.

#### **Question 8**

There were many strong responses that showed awareness of the principles of Fairtrade and were able to consider the advantages to less developed areas. Rather than discussing Fairtrade, some weaker responses wrote about generic fair trade/fair rules in trade, for example a lack of restrictions such as tariffs. Many candidates were able to show how the principles of Fairtrade have brought many benefits for producers in LICs but could see that there were limitations to the scale at which Fairtrade principles can operate without major disruption to global trade.

#### **Question 9**

This question was generally approached well with candidates considering the importance of economic sustainability and keeping this as a focus. Some candidates discussed social and environmental sustainability, which was acceptable if it did not form the bulk of the essay. There were many strong essays which considered a range of destinations and assessed economic sustainability's importance in these different contexts. The use of the Butler, Doxey and VICE (visitors, income, community, environment) models could be used to illustrate the various stages of the development of a destination. Stronger essays were written in an evaluative style. Many weaker essays were descriptions and narratives of tourism management in different locations; the knowledge shown was excellent but was not used to answer the actual question. Stronger essays were thoughtful and evaluative making links between factors (especially economic and environmental) and offering a more holistic and evaluative discussion.

### ***Economic transition***

No candidates answered this option.