GEOGRAPHY

Paper 9696/01

Core Geography

GENERAL COMMENTS

The examination was discriminating in that it produced a wide range of performances from candidates. There were examples spanning virtually the full range of marks available. The best candidates stood out in terms of content, factual recall, presentation, use of case studies and fluent writing. The weakest candidates tended to omit sections of questions in ***sections B*** and ***C*** and, on occasion, fail to attempt entire questions on ***Section A***.

Overall timing was not an issue for most candidates as they seem to have been well prepared for this type of examination. There were relatively few examples of a hurried or notational type of response to the final question attempted. Those omitting whole questions were usually candidates who wrote least. There were few examples of rubric errors and the general use of English and the clarity of the handwriting were admirable.

The interpretation of the data and figures provided on the examination paper was often weak and there were still a sizeable minority who failed to refer to the figures and tables provided.. This was particularly apparent in **Questions 4** and **6** where there was an expectation that data would be cited in the answer. In some cases the figure provided was consulted in the first parts of the questions but thereafter ignored as in **Question 1**. Only in the case of **Question 4** was there any significant level of the misinterpretation of the data.

In ***Sections B*** and ***C*** some candidates took the opportunity to use examples and case studies. This was most evident and best developed in the human geography questions and there were examples of the informed and intelligent use of case studies of squatter settlements in **Question 11**. Overall, however, the case studies were not well done and often very limited in their understanding. This was particularly evident bin answers to **Question 9 (c)** concerning attempts to reduce birth rates in a country. It should be remembered that Examiners will always reward the accurate and apposite use of exemplification, even where it is not specifically demanded.

It would greatly aid the performance of candidates if they could be encouraged to produce simple but accurate and well annotated diagrams, so that the time spent on their production in the examination was worthwhile. As it is, diagrams are often poorly integrated into the answer and do not aid the understanding of the text. Too often they are merely presented and the Examiner is expected to work out why they have been drawn. In ***Section B***, the use of appropriate diagrams is sought and well rewarded by Examiners but were often indifferently produced or absent in this examination.

In ***section C***, the Human Core, the questions required assessments to be made. This is still an instruction ignored by many candidates such that the answers frequently do not match the question. Similarly there remains some confusion between the instruction to describe data or a figure and the instruction to explain the material. It is still common for many candidates to expend a lot of time and ink on postulated explanations of data when all that was required was a simple description.

It is always the nature of these reports to dwell on shortcomings of candidates responses rather than the strengths. There were a number of excellent scripts that demonstrated a grasp of spatial awareness and the ability to make full use of their geographical knowledge and appreciation of the world around them.

COMMENTS ON INDIVIDUAL QUESTIONS

Section A

Question 1

(a) Most correctly identified the transportation processes. Some erroneously included solution. In **(b)** most selected traction which was often described as the movement of very large boulders. The limiting factor in many responses was the failure to appreciate, or in some cases mention, the size of load.

(c) Some candidates failed to use the diagram but the majority gained some marks for identifying the manner by which material was derived from outside the channel. Many answers were very simplistic and failed to relate the processes to the production of channel sediment.

Question 2

Usually the weakest answers of all questions in ***section A***.

(a) Most extracted the data correctly although a minority of candidates misread the equatorial temperature and some failed to record any units.

(b) Very few candidates correctly cited equatorial cloud cover or sub tropical high pressure. Many provided erroneous accounts of the earth's tilt or even of relative closeness of the sun.

(c) Generally a disappointing response. Even those candidates who mentioned either wind or ocean currents were unable to give much explanation as to how they transferred heat. Those employing the tri-cellular model to explain the action of wind generally fared best although the ability to relate the model to heat transfer was limited. Those selecting ocean currents often produced very simplistic accounts with no exemplification or indeed indication of the direction of warm and cold currents.

Question 3

The demographic transition model is clearly familiar to virtually all candidates, but there remain some gaps in their knowledge and understanding

(a) **Parts (i)** and **(iii)** were answered correctly but many failed to identify the line showing the highest natural increase rate in (iii).

(b) Most candidates scored well. Most identified improvements in health care, sanitation and nutrition. The most significant limiting factor was the inability to link such improvements to the fall in death rate through such things as the limitation of the impact of cholera, infectious diseases leading to the reduction in child mortality and increase in life expectancy.

Question 4

Most candidates achieved reasonable marks on this question. There was a significant minority who confused the shading on the two pie charts by assuming that both referred to the same nationalities.

(a) Most candidates were able to extract the data relating to the various national groups and thus achieved some marks. Far fewer were able to synthesis or generalize the data in any meaningful way to provide a fuller response. For example few spotted that Africa (36%) provided as many British citizens as the six smallest sectors combined.

(b) Most answers identified the different age groups involved but only the better responses were able to develop reasons beyond the search for employment or education. The age specific nature of voluntary international migration was highlighted by the better answers and reasons given were the greater enterprise and vigour apparent in young adult groups. These accounts showed a far greater appreciation of the conceptual aspects of international migration and were able to relate that to the data shown in Fig. 4.

Question 5

Most answers displayed some ability to describe features from the map but were limited by an inability to interpret the urban context or appreciate the scale of the map.

(a) Many answers listed different land uses but were hampered by a lack of terminology (e.g. east and west, compact and extensive). The comparative element escaped some , who merely described one side of the river and then the other.

(b) The weaker responses identified accessibility as the greatest advantage and pollution as the disadvantage. These were often described with little attention to scale (i.e. how near or distant land uses are). Better responses put the location of the new development and its nature into the overall urban context. Thus the accessibility to employment, retail areas and entertainment was set against, cost, garden space, urban pollution and possible inner city problems and lack of community.

Section B: The Physical Core

Question 6

Easily the most popular of questions in this section, but having a disappointing response due to surprisingly weak answers to **parts (b)** and **(c)**.

(a) Most were able to effectively describe throughfall, although some did confuse it with stem flow. Throughflow was generally understood, although weaker answers were unclear as to the direction of flow or to its location in the soil. Overland flow was widely understood and in most cases correctly described.

(b) Not well answered. Most identified flood plains and levees but produced poor diagrams that vastly over exaggerated the size of levees, failed to indicate the accumulation of sediment upon the flood plains and provided little in the way of either explanation or description.

(c) Many answers started with a diagram of a storm hydrograph, which was often correctly annotated as to its component parts. Unfortunately, the hydrograph was then ignored in the rest of the answer which provided lengthy descriptions of different catchment area conditions that could result in quickflow. Even those more successful accounts that concentrated on the hydrograph failed to develop the links to flows. Annual hydrographs were generally ignored, although it was possible to obtain all the marks by reference only to storm hydrographs.

Question 7

The second most popular of the ***section B*** questions It produced some very good answers demonstrating a far better understanding of weather and climate than was shown in **Question 2**.

(a) (i) The vast majority showed an understanding of evaporation and condensation, although some failed to recognise the importance of heating and cooling.

(ii) Again many achieved full marks although some were only able to provide heat as necessary condition.

(b) Whilst there was a general understanding of the uplift and cooling of air leading to condensation, many answers focused on the nature of the uplift (i.e. orographic, convectional, frontal). This often led to a failure to discuss cloud and rainfall formation. Those that started with condensation around hygroscopic nuclei to form clouds, often failed to develop the formation of rainfall. Better answers employed excellent diagrams showing lapse rates, condensation levels and the development of clouds and rainfall.

(c) An understanding of the reasons for higher temperatures in urban areas was generally better understood than that of wetter conditions or fog. Anthropogenic heat and the nature of urban surfaces was explained by many although the former tended to be better explained than the latter. Better answers were those that showed an understanding of why urban areas could produce more rainfall than rural areas due to the increased amount of hygroscopic nuclei (pollution) and the

greater possibility of convectional uplift. These responses also displayed knowledge of the contrast with rural areas which was ignored by many.

Question 8

Answered by very few candidates, although those that had an understanding of weathering scored well.

(a) Hydration and solution were usually reasonably defined and those that attempted chelation displayed good understanding

(b) The nature of flows and slides were often well explained but most answers were far weaker on their impact upon slopes.

(c) Many answers failed to display any knowledge of what a Peltier diagram comprised. These accounts merely described various forms of weathering and made some comment concerning their relationship to climate. Better answers often gave a sketch of a Peltier diagram showing how different types of weathering were related to temperature and rainfall. The diagram could thus be used to show the relative strength of chemical or physical weathering but, of course, gives no indication of the actual weathering processes.

Section C: The Human Core

Question 9

Easily the most popular question on this section. It was answered by a very high percentage of all candidates.

(a) (i) A surprisingly large number of candidates failed to get all of the marks for a definition of fertility rate. Both as an individual rate per woman or as a general rate of number of births per year, many lacked some element of the definition.

(ii) Answers were poor as many appeared to misinterpret the diagram by not understanding that the projections were alternatives based upon assumed fertility rates. Even those showing some understanding tended to repeat the figures with little reference to replacement levels or population increase or decline.

(b) This was answered more successfully often showing good understanding of the economic factors behind low fertility rates in MEDCs. Better answers recognized the significance of female employment and the economic burden in terms of cost of children. The main weakness lay in the failing to relate these factors to low fertility rates. Some answers drifted into a discussion of the cultural position of women in many LEDCs losing sight of the economic factors characterizing MEDCs.

(c) The vast majority of candidates chose China as their example. Many answers gave considerable detail concerning the nature and conduct of the Chinese governments anti – natalist policy. Unfortunately the question asked for an assessment of the success in reducing the birth rate which only the better answers attempted. There it was a pleasure to note that candidates were able to quote changes to birth rates and fertility. Weaker answers made broad claims for the success of the policy without citing any evidence. Assessment was often conducted along lines of social impact and the rise of female infanticide. A minority of candidates selected Singapore or India with some success.

Question 10

Not popular outside of some Zimbabwe centres.

(a) The most successfully answered part of the question as there was some good understanding as to why urban to rural migration occurs. This was often backed by some good exemplification.

(b) Very poorly answered as many candidates did not understand what was meant by social and economic links between rural and urban migrants. Some better answers were able to demonstrate the importance of remittances but few were able to develop family or other economic links.

(c) There were a handful of high quality answers that were able to set the role of information within the general context of the decision to migrate. This was often seen within the context of push - pull effects where the push effects were so powerful as to make the pull effects far less significant. This question cried out for the effective use of exemplification, but so often candidates failed to deliver any at all

Question 11

Not popular and producing two distinctive types of response. A minority of good answers where the candidates used a well developed case study and those that made only vague references to shanty towns and general only derived marks from generic descriptions.

(a) Those with a well learnt case study produced competent responses although some described mainly environmental conditions. Weaker responses described unspecific conditions of poor housing and high crime rates.

(b) Relatively few candidates dealt with attempts to improve quality of life. Most concentrated on schemes to improve housing, water supply and sanitation. Weaker answers gave only vague references to such schemes lacking either detail or objectives.

(c) Weaker answers saw the outcomes of the schemes they had described only in terms of success or failure. They thus did not address the question. Few advanced the argument that the solution of one problem could lead to the creation of others. Better answers were able to explain how improvements to the quality of life could make squatter settlements attractive to even more migrants. There were some outstanding answers that demonstrated considerable understanding of some selected squatter settlements in Kenya and India.

GEOGRAPHY

Paper 9696/02
Physical Geography

GENERAL COMMENTS

The response to this examination was somewhat disappointing in that so many candidates failed to seize the opportunities afforded by the examination paper. Many candidates had some basic knowledge of the principles of physical geography but were unable to demonstrate their knowledge in the context of the questions. This was evident throughout the paper but particularly apparent in **Question 2(a)** where there was some basic appreciation of nutrient cycling, but an inability to apply it to the diagram. A similar situation pertained in **Question 4(a)** where the general knowledge concerning wave generation was not integrated with the information in the diagram. Indeed the use of the material supplied in all of the diagrams was poorly exploited by many candidates. Some merely ignored the diagrams and wrote in general terms about the topic whilst others seemed only to afford the material a cursory glance.

Part of the problem may lie in the narrow selection of study areas, in that the vast majority of candidates select questions from Coastal environments and Hazardous environments. It is noticeable that many of the better scripts come from Centres offering less popular areas such as Arid and semi-arid environments. Within the two most popular study areas many candidates, in their enthusiasm to answer the human interface/management parts of questions, skate fleetingly over all of the aspects of physical processes. Both the syllabus and the examination are firmly rooted in the acquisition of a robust understanding of the principle and processes of physical geography, without which it is unlikely that success in the examination can be achieved.

Candidates are always encouraged and rewarded for the use of diagrams within their answers. Many indeed do attempt to use diagrams, but few achieve it effectively. Clearly diagrams need to be relevant and they also need to be fully annotated. Ideally they should be integrated with the text so that they form part of the overall explanation. Too often diagrams appear without labeling or reference in the text leaving the Examiner to work out why they have been included.

Few candidates appear to have any major problem with timing in that there was no evidence to suggest time was incorrectly allocated between the two answers. There are occasions, however, when candidates spend more time on Part (a) of questions worth 10 marks, than the part (b) worth 15. Sometimes this may reflect the respective levels of knowledge possessed by the candidate. Generally the use of English was good as was the clarity of handwriting. It should be emphasized that, although the overall response was a little disappointing, there were many individual examples of excellence.

COMMENTS ON INDIVIDUAL QUESTIONS

Tropical Environments

This was not a popular study area. Candidates appear to have concentrated their studies upon vegetation to the exclusion of other aspects of the environment, notably soils and climate.

Question 1

Not popular and generally poorly answered.

(a) The knowledge and understanding of tropical climates appears to be very limited. Many candidates were unable to offer any convincing statistics relating to either humid or seasonally humid climates. Explanations were either lacking or limited to the role of convectional rainfall. Better answers were those that showed a clear understanding of the movement and influence of the ITCZ, backed by climatic data with an understanding of the nature and causes of precipitation.

(b) A surprisingly disappointing response. The knowledge of weathering processes that operate in the tropics was very limited and often was limited to freeze thaw and exfoliation. Some better answers linked landforms such as inselbergs to a succession of deep chemical weathering and erosion to reveal basal weathering surfaces. This could be seen as a result of climatic variation in the past allowing the erosion of regoliths. Although landforms, such as inselbergs and tors, were frequently cited, there seemed to be little comprehension of the weathering processes or how they could be linked to climate.

Question 2

Slightly more popular than **Question 1**, but poorly answered.

(a) Many merely described the movements shown in the diagram with little additional explanation or comment. By and large, the flows were better covered than the stores and the inputs and outputs of the system were only partially developed. Better answers were those that treated the diagram in a similar manner as a Gersmehl diagram explaining the role of stores and flows in the progress of nutrients into and through the system.

(b) Soils are an integral and vital part of the tropical rainforest ecosystem, yet appear to be widely ignored by candidates in their preparation for this study area. Clearly it is impossible to assess any development within the ecosystem without understanding and due consideration being given to soils.. The nature of tropical soils (i.e. that they provide a relatively small nutrient store) provides a limiting factor in any sustainable development. This was recognized by some candidates, but often only in terms of soil erosion. Many accounts virtually ignored soil and merely wrote about the destruction of woodland and its global effects.

Coastal environments

As always a popular study area but one that elicits very variable responses.

Question 3

(a) Whilst many candidates were able to outline the conditions required for coral growth, relatively few were able to associate these conditions with the impact of changing sea levels. In some cases, changing sea levels were directly associated with global warming and the impact upon coral reefs overlooked. Better answers saw changing sea levels in the context of theories upon the formation of fringing, barrier reefs and atolls. These responses explained Darwin's theories and even some developed those of Daly or Murray emphasizing the role of sea level change.

(b) Many candidates seem not to have read much beyond hard engineering in the question and concentrated their answers upon descriptions of the various methods employed. Any contrast was usually with soft engineering, as relatively few candidates had much concept of managed retreat. Similarly, few seemed to understand sustainability in the context of coastal management. Better answers made some assessment of the cost and effects of various coastal protection schemes and made the very reasonable point that managed retreat was not seen as particularly sustainable in areas where valuable resources or property were deemed to be at threat.

Question 4

(a) Many candidates experienced difficulty in applying their knowledge of wave generation to the question and to the diagram. They seem to have difficulty in correlating the three variables shown in the diagram and could not disentangle dependent and independent variables. Duration of wind was often ignored and there was confusion with wave height and fetch. Better answers used the data well to illustrate generalizations of the relationships and added other relevant factors such as the effect of depth as shorelines were approached.

(b) A good deal is known by candidates about the processes of erosion and deposition on coasts, but the role of wave action was frequently ignored or considerably underplayed. Constructive and destructive waves were often described, but their actions in affecting beach profiles was far less understood. High and low energy waves were dealt with in better accounts which did correctly identify their actions in affecting beach gradients. Many accounts concentrated on coastal landforms such as stacks and stumps or spits and bars with little attempt to associate their formation to wave action.

Hazardous environments

By far the most popular study area and one that was attempted by nearly all candidates. Although often very knowledgeable about the human impact and consequences of hazards, many accounts ignore the physical geography that underpins all natural hazards. This restricts the credit that can be obtained in these answers.

Question 5

(a) Better answers displayed a good level of knowledge and understanding of plate tectonics often illuminated by well constructed and labelled diagrams. Unfortunately some failed to make any direct association with hazards other than mentioning earthquakes and volcanoes. Weaker answers were those that put the whole emphasis on the nature of the earthquake and volcanic hazards with little or no reference to the tectonics of plate margins.

(b) Too often the accounts of management activities were vague enough to apply to any hazard be it tectonic in origin or not. There was a lack of exemplification or of assessment. Better accounts realized that much of the problems of managing these hazardous environments lay in prediction and warning at risk populations. Such accounts distinguished between earthquakes, volcanoes and tsunamis and were able to make some assessment of the various prediction and management strategies that had been devised. Many accounts correctly drew attention to the different responses that were possible in MEDCs as compared to LEDCs.

Question 6

(a) Candidates found difficulty in describing such things as the hurricane course as shown on the map. Many poorly described direction, time and distance. The predictions of landfall were ignored by many and few commented on the generally low percentages given. Reasons for the erratic course of hurricanes and the difficulties of predicting their course was generally not well developed. The nature of the system with its high wind speeds and shear as well as the difficulties of monitoring their progress was found only in the better answers although there was some realization that hurricanes were rarely sustained without high sea temperatures and moisture supply.

(b) There was a good level of knowledge of areas which most frequently experienced hurricanes, but less understanding of why they occurred there. The effects on the population were often itemised in some detail with many references to recent hurricane experience such as that of New Orleans. This tended to concentrate on drownings, property destruction and subsequent health and sanitation issues. What was overlooked was how these were linked to the hurricane in terms of storm surges, high winds , torrential rainfall and the like. Many accounts were well informed, but often poorly focused.

Arid and semi-arid environments

A study area that seems to be taught at relatively few Centres judging by the number of responses. It is an area, however, that yields a relatively large proportion of good quality answers.

Question 7

(a) Most answers were able to deal with the main methods of wind erosion and transportation and scored effectively. Thus deflation, abrasion, suspension, saltation and surface creep were described with varying degrees of detail and accuracy. The best answers explained the importance of grain size and gave convincing descriptions of saltation and deflation.

(b) The significance of ‘both’ escaped many and led to separate accounts of the landforms associated with either wind or water action. Even in such responses, there were good levels of knowledge and exemplification, although some did merely provide lists of landforms with varying degrees of accuracy as to their genesis. Better accounts argued for past pluvial activity that shaped many landforms which could have been subsequently affected by wind activity.

Question 8

(a) The distribution of arid areas was described by most candidates but the explanation was far more variable and often weak. Although the principle causes of aridity in terms of ocean currents, sub tropical high pressure, rain shadow effects and continentality were recorded by many , relatively few accounts were able to state with any accuracy how these produced aridity. The best explanations were invariably accompanied by well documented examples.

(b) As always, vegetation adaptions to aridity were far better understood and exemplified than is the case with soils. Often competent accounts of a variety of vegetational adaptions were accompanied by a limited account of the sandy nature of arid soils. Weak answers progressed little beyond cacti and sand dunes. Better answers were able to point to a lack of humus in arid soils, the existence of grey solonchaks with salinization and a general lack of soil horizons.

GEOGRAPHY

Paper 9696/03

Human Options

General comments

The full range of response quality was seen, from scripts achieving over 40 marks out of 50, to incomplete or fragmentary scripts falling far short of pass quality and achieving fewer than 10 marks in total. As has been the case for some years, responses to **Question 6** in ***Global interdependence***, on tourism, dominated the entry, with **Question 3** in ***Environmental management***, on energy, a strong second choice. Whilst most Schools appear to teach two Options, some clearly teach three, thus increasing candidates' choice of questions in the examination, but maybe not allowing topics to be considered in appropriate depth for A Level.

Teachers in Schools entering candidates for the first time are advised to read the **General comments** in the report on the June examination in 2008, where three key areas for improving responses to **parts (b)** of questions were considered in detail. Although the weaknesses and opportunities this examination session were similar, those comments are not repeated here.

Quality of handwriting, use of language and expression were, in the main, firm to high. Examiners were instructed to reward geographical knowledge and understanding, even where expression was unclear and to adopt a positive general approach to marking, giving candidates the benefit of the doubt. A small proportion of candidates lacked the necessary language skills for this examination and struggled, first to understand the questions and to interpret them correctly, and, then, to write clear developed answers.

The single term which caused the most difficulty this session was *world regions* which appeared in the two most popular questions, **Questions 3** and **6**. A world region is a macro-scale region of the world, usually of continental or sub-continental proportions, such as North America or the Middle East. It is to be distinguished from regions within a country, as in **Question 7(b)** and from the national scale, i.e. a country, as needed for **Question 5**. Another term which a significant proportion of candidates interpreted inadequately was *fossil fuels* in **Question 3(a)**. Some assumed, wrongly, that all the fuels shown in Fig. 2 were fossil fuels. Otherwise, the main mistake was to see oil and coal as fossil fuels, and to omit natural gas. This issue of definition impacted the description of Fig. 2, because of the need for percentage data to be used and, thus, any totals given were, without gas, incomplete. Lastly, although it affected a smaller proportion of the entry, many candidates attempting **Question 1**, had difficulty in identifying an agricultural system appropriately.

There was some good contemporary geography seen across the Options. In many cases this was where candidates used home country, or home region, examples or case studies to good effect, or drew on the news. So, for example, the recent cholera epidemic in Zimbabwe was a feature of many responses to **Question 4(a)** and the impact of the global economic crisis on tourist arrivals of those to **Question 6(a)(ii)**.

Many candidates supported their work with diagrams, although there were very few sketch maps drawn. The life cycle model of tourism was often reproduced as the basis for a response to **Question 6(b)**. Some candidates drew proportionate input and output diagrams to assist their narrative in relation to **Question 1(a)**. Clearly in both these cases, time can be saved by drawing what it is time-consuming to describe or explain in words. One type of diagram or picture which is often seen, and which is not considered appropriate at this level, is the simple depictions of ways of energy production such as a wind turbine. Examiners know what a wind turbine looks like and, in a question on environmental impact, as in **Question 3(b)**, a simple outline of a structure adds nothing to the evaluation. By contrast, some diagrams of the course of a river, upstream and downstream from a dam generating hydro-electric power (HEP), were high quality and annotated to make environmental impacts clear. Again, this represents a good use of valuable time.

There were a few rubric errors (<1%), usually where a candidate answered three, or perhaps four questions, briefly. In these rare cases Examiners award the highest mark achievable within the rubric.

Lastly, it is worth reiterating three things in relation to examination discipline. Firstly, in order to stand the best chance of success, candidates should match the time they spend on any part of a question to the marks available. It was reasonably common to find answers to **(b)**, with an allocation of 15 marks, the same length as, or shorter than those to **(a)**, worth 10 marks. Secondly candidates need to answer all the parts of the questions they choose. Marks allocated to any part of a question which is not attempted are not otherwise available. Thirdly, candidates should only attempt questions from Options which they have studied during the course, no matter how interesting or tempting a question may seem. Examiners observed that, usually in relation to identifying a second question to attempt, a number of candidates attempted to respond from their general knowledge. This led, for example, to answers on a person's life cycle to **Question 6**, rather than the life cycle model of tourism, and to personalised accounts in relation to other topics, such as development, in **Question 8**.

Comments on specific questions

Production, location and change

The two questions were of approximately equal popularity, although this varied by Centre.

Question 1

The key to success here was the identification of a suitable agricultural system. A named system, such as pastoral nomadism, or plantation agriculture, which could be located, performed the best. Where categories were taken such as "intensive" or "arable", the scope was so broad in both parts of the question as to make the response difficult to handle.

(a) Inputs were identified effectively, although some candidates omitted physical inputs. Outputs were less well covered and some were described very broadly, for example as "food". Higher-scoring responses made intensity the clear focus, perhaps, differentiating capital-intensity and labour-intensity. Few candidates comprehended well that a small labour input can still mean labour-intensive production. Other indicators of quality in responses were the recognition of the role of quality of as well as quantity in relation to both inputs and outputs; and an appreciation of the intervention of other factors in production.

(b) Most candidates took a descriptive or explanatory approach, although the command was "Assess the importance of …". A better appreciation of scale would have helped many to realise that the short-term and small-scale observations they were making about changes did not amount to a change in the system. For example, a good – or a bad – harvest is not a change as such. Better responses considered changes to the system and the agents of change, maybe the farmer, the government, or influences such as the profit motive, education, modernisation or changing weather patterns. The assessment varied depending on the system under review and, in some case, the location, but it was the quality of the evaluation offered, as much as the detail of the example and the development of the argument, which differentiated performance within the three Levels.

Question 2

This was a crossover question which drew on land as a factor of production in both topics in the Option; in agriculture and in manufacturing industry. Whilst many candidates responded well to this, it seemed to confuse others and Examiners suspected that some candidates had only been prepared for questions on manufacturing industry, which made the responses to **(a)(i)** very poor.

(a) (i) Land tenure is the ownership of land or the organisation of landholding. The most common misconceptions were that it is the use of land, i.e. land-use, or simply means renting. Most candidates could identify two, or more than the required two, types of tenure, but the ways this affects agricultural production was less firm. The more competent responses liked tenure to motivation, incentives and decision-making. One nice point that some made is that owner occupiers are free to choose what they do and how they farm: they can invest heavily and maximise production, or pursue other priorities.

(ii) Some candidates seemed to seize on the word "location" and set off in a slightly different direction as a consequence. Most recognised one or more ways that land influences the location of manufacturing, such as cost, nature, or room for expansion, but few developed this sufficiently to achieve more than two or three marks.

(b) The **either / or** option within this part of the question, allowed candidates to choose the topic in which they were stronger. Overall, the manufacturing option was slightly more popular. Better responses assessed the different factors, rather than simply explaining them. Many responses were simply a more, or less, developed list of factors, often consisting of short paragraphs, each beginning "Another factor …". Better responses also comprised material which had been selected for and directed to the question set, for example focussing on areal "extension" on the one hand or "expansion" on the other, rather than in general improvement in agriculture, or growth in manufacturing. Although some candidates had suitable examples to use, few could use them in any detail or in the developed manner needed for higher reward. Some examples were examples in name only "e.g. Africa" or "e.g. the Green Revolution".

Environmental management

Question 3 was by far the more popular question in the Option. Examiners observed that some candidates may have avoided **Question 4** because of the unusual demand in **part (a)**, which required thinking through, despite the straightforward and more familiar demand which followed in **part (b)**.

Question 3

(a) As explained in the **General comments**, an effective response depended on the correct definition of *fossil fuels*; in this case, coal, natural gas and oil. Many responses started by stating them. Natural gas was left out completely by some, and confused with biogas in **(b)** by others. Some candidates assumed wrongly that all 5 fuels shown in Fig. 2 were fossil fuels. The dual command, "Describe and briefly explain" indicated how marks would be awarded. Some candidates only described the data; rather fewer tried only to explain it. Whilst weaker responses tended to see resource endowment and, so, resource availability, as the sole explanatory factor; better ones combined explanatory factors from different dimensions. These could include the key economic factors of relative cost and level of development; political factors, such as global agreements and security; and environmental factors, such as concerns about greenhouse gas emissions. Responses which described the data and then explained it often performed better, as region by region accounts tended to become repetititious, without moving into a higher level.

(b) Many sound and some good responses were seen. The permissive "two or more" in the question allowed candidates to focus on two if they chose to, or to deal with more sources in less depth. Almost all candidates interpreted the term *renewable* correctly. In the few responses about non-renewables, generic credit was awarded within Level 1. Of the possible sources, HEP yielded fuller and better accounts, partly because of its definite negative environmental impacts both during construction and during production, and partly because many candidates had some case study material to use, such as of the 3 Gorges Dam in China, or a local HEP installation. Detailed knowledge, such as data, named locations or threatened species, and the ability to contrast impacts above and below the dam, distinguished better quality responses. In relation to this and other sources, some candidates made perceptive observations about the generation of pollution during dam construction or the manufacture and installation of wind turbines and solar panels, because of the materials used and machines involved. As such their "clean" nature was questioned. In the assessment offered, one major element which was often omitted was the recognition that, in substituting for the use of fossil fuels in electricity generation, non-renewables have the advantage of potentially reducing, or at least not contributing to, greenhouse gas emissions and global warming.

Question 4

(a) The stark data in the question's stem was present as a stimulus to candidates and as an indication that these levels of mortality could not be explained simply by catastrophic and accidental events.

The question required some thinking through but allowed candidates to integrate their knowledge of mortality from the Human Core, with their work on pollution. A number of sound areas can be identified, exploring deaths associated with:

- contaminated water, e.g. through cholera and dysentery, especially in LEDCs
- high levels of air pollution, respiratory conditions and breathing problems in many locations
- increased rates of skin cancers, through CFC damage to the ozone layer
- local pollution incidents known to the candidate.

Beyond this, much that was written was unrobust both environmentally and biologically. Better accounts often had creditable content on risk factors, such as young or old ages, and the presence or absence of mitigating factors, notably healthcare systems.

(b) This classic question invited candidates to develop a multi-factor, multi-dimensional response at more than one scale (local, national, global). Weaker accounts tended to be concerned in tone, but allusive and generalised and did not use geographical terms accurately. Some became sidetracked on what can be or is being done, rather than remaining focused on the difficulties. Middle quality accounts were often unbalanced, but conveyed a sense of the complexity of the situation, with some use of examples to support the arguments. The highest-scoring accounts offered an overall perspective on a dynamic issue and its management, were realistic about some of the conflicts of interest involved, and offered contemporary detail. This could be, for example in relation to achieving the provisions of the Kyoto Protocol, or to specific difficulties within the candidate's own country, such as transborder issues

Global interdependence

Question 6 was overwhelmingly popular, and the full range of qualities was seen. The straightforward **Question 5**, based on a case study of one country's international trade, produced many solid, and some very good, responses.

Question 5

Many candidates chose, and made good use of, their home country, but a number of other countries were used effectively, such as China, which, as an emergent NIC was highly suitable, or South Korea, one of the "Asian tigers". Responses at the wrong scale, such as the European Union or Africa, could only achieve a small number of marks for generic content. Both visible and invisible trade could be covered.

(a) The phrase "some of the major issues" in the question was permissive, allowing candidates to decide on which issues to cover in relation to the chosen country. Most were LEDC contexts, so issues such as competition, protectionism, vulnerability, currency fluctuations, WTO conditions and dumping were common. The level of technical understanding of the operation of trading was satisfactory to very good indeed, but many responses lacked much supporting detail, such as statistics, dates, events or named products.

(b) There were two keys to success in this part of the question: one was to know and understand the trading strategy of the chosen country, and the other was to evaluate it rather than simply describe what happens. Some candidates were unable to present a trading strategy (a syllabus term) and wrote broadly. Others could outline one, but not evaluate it (its successes, failures, potential, impacts, etc.) There were some good responses which identified different elements of a strategy, such as import substitution, export maximisation by adding value, tourism development, joining a trade bloc, focusing on comparative advantage (e.g. plentiful labour at low unit cost) and evaluated each one. Skills such as identifying "the winners" and "the losers", or immediate and longer-term outcomes, were highly creditable. Examiners accepted that, in some up-to-the-minute accounts, it was indeed too soon to say if a strategy was working or not.

Question 6

The tourism question has been popular for many years. This session it required data skills in **(a)(i)**, understanding of what is a volatile sector in **(a)(ii)** and, in **(b)** the application of a familiar model at, what was to most, an unfamiliar scale. Some candidates did not attempt **(b)**, which led Examiners to suspect that tourism might have been taught in isolation, rather than with trade to complete ***Global interdependence*** as an Option. This is not the intention of the syllabus and, in this case, meant that, faced with an unexpected demand, the candidate could not take **Question 5** instead.

(a) (i) Most candidates achieved two or three of the four marks straightforwardly. Some interpreted it simply as "high and low", so only mentioned Europe and South Asia. Some interpreted "main" as only relating to the total statistics. Most recognised that all regions recorded an increase and have predicted increases, but that this varies, and offered data in support. The rise of East Asia/Pacific by 2020 is noticeable. A surprising number of candidates, described Table 1's structure (i.e. what the columns and rows were), rather than its contents, and so scored zero.

(ii) In the dynamic and unstable world of international tourism, few candidates had difficulty in finding reasons why the forecasts in Table 1 might be inaccurate. Popular reasons included natural disasters such as the Asian tsunami of 2006; the current global financial crisis; war, such as in the Middle East; terrorism, such as in the aftermath of 9/11; and disease outbreaks such as the current swine flu pandemic. The main shortcoming was a lack of examples, despite this being made plain in the question. Some astute candidates observed that at the scale of world regions, an incident in one country, depressing arrivals may be offset by circumstances in others increasing arrivals. Credit was also given to the few who wrote about forecasting, data collection and the assumptions on which such predictions are based.

(b) To achieve an award in Level 2 or Level 3, it was important to address the question set. Many candidates simply reproduced the material they had learned, for example applying the model to a resort or an island destination, whilst the scale required was that of "world regions". This might have been an issue of interpretation, or of confidence, or both. Some recall was faulty in terms of the number of stages and their names, and some weak candidates confused the S-curve of Butler's model with Fig. 3, and so wrote of take-off, etc. As far as scale was concerned, the world regions identified in Table 1 were intended to assist candidates, but few recognised this. Some tried to take one or more countries as world regions, a few took a region within a country, classically the Costa del Sol in Spain. It was possible to achieve a good outcome by recognising, first, that the life cycle model was based on, and developed for, small-scale destinations such as resorts and that at this scale it is effective in many cases. Second, all world regions (except Antarctica, a special case) comprise many countries at different stages of tourism development, each comprising locations at some or all of the different stages and, as such, the model is of little use. This observation, if developed using one or more world regions as an example, could score highly. Many who did this also offered creditable material on the role and application of models.

Economic transition

A small number of responses were seen to these questions, with **Question 7** being the more popular.

Question 7

(a) Candidates were asked to integrate their knowledge and understanding of the four sectors of the economy, with a given model, that of Rostow. The sectors posed little difficulty although few managed an effective treatment of the quaternary sector. The application to the model allowed candidates to show how, over time, the primary sector decreases in importance with the rise of first the secondary and, then, the tertiary sectors. This could be linked to production, the multiplier effect, diversification and the progression of industrialisation, deindustrialisation and tertiarisation. Rostow's model was interpreted soundly, although a few candidates assumed wrongly that the encircled number 1 on Fig. 3, meant the primary sector, 2 the secondary sector, and so on. Better accounts focused on the word "roles" in the question creditably, and were dynamic in tone.

(b) Although the subject matter here is classic in terms of regional development, few candidates who attempted it had sufficient grounding in the theory of cumulative causation and/or of a real region to do so successfully. Examiners were looking for three key theoretical elements: initial advantage(s), spread effects and backwash effects, as well as a sense of cumulation itself, the observed process sometimes called a 'snowball' effect. It was probably easiest to apply this to the core region within a country. Most accounts were descriptive and explanatory in approach, which limited the overall outcome, as an assessment of the usefulness of the theory was required. This might mean, for example, identifying in what ways cumulative causation helped to understand the development of the chosen region, and in what ways it was less useful or not useful at all. A few candidates were able to observe the role of other factors in regional development, notably that of government intervention, but such recognition was rare. The detail of most examples used was limited, and some remained examples in name only, such as "e.g. Brazil", which restricted rewards to a low level.

Question 8

(a) Of the small number of candidates who attempted this, hardly any interpreted the question correctly as being about how inequalities are measured by different indices, and about which of these indices perform better. Examiners were looking for a critical appreciation of some of the many indices of economic inequality, such as GDP per capita adjusted for purchasing power parity (PP), or employment by sector; and of social inequality, such as literacy rate or life expectancy. Additionally, the appreciation of the superiority of multiple criteria indices, such as HDI, PQLI or HFI, was anticipated and seen in the few good responses. The main misinterpretation of the question involved candidates in explaining why life in one location was better than life somewhere else, that is why social and economic inequalities were supposedly better, or worse, the word "indices" being overlooked. In such accounts it was hard to find creditable material unless actual measures were mentioned.

(b) Examiners noted that, even where **(a)** had been misinterpreted many candidates wrote satisfactorily in response to this part. For many it appeared to be the lived, observed or felt experience of the country from which they came and accounts were sometimes supported with actual instances, events or examples of the outworking of such inequalities in development. There were some astute explanations of how elites and majorities operate in terms of power, precedence and preferential treatment. Other factors which some explained were tribalism, the intervention of instability and the outworking of institutional corruption. Examiners noted an appreciation of the spatial outcomes of these influences, for example in favouring the core not the periphery, or urban areas rather than rural areas. Weaker candidates tended not to address "the majority" but to write generally of conditions in LEDCs and reasons for the countries' poverty and lack of development.