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FOREWORD

This booklet contains reports written by Examiners on the work of candidates in certain papers. **Its contents are primarily for the information of the subject teachers concerned.**

GEOGRAPHY

GCE Advanced Level and GCE Advanced Subsidiary Level

<p>Paper 9696/01 Core Geography</p>

General comments

The response to this Paper was felt by Examiners to have been an encouraging one. Some candidates were able to achieve very high marks and thus to fully demonstrate their geographical abilities. Centres and candidates appeared to be better prepared for this type of Paper which mixes together data response and discursive answers in both physical and human geography. In such an examination, where candidates are required to answer seven questions, strict time allocation is important. There is still a propensity amongst some candidates to write at excessive length on relatively low scoring parts of **Section A** questions at the expense of the higher scoring questions in **Sections B and C**. Given the order in which most candidates attempt the Paper, it is usually the final part of the answers to the questions on human geography that suffer. Candidates are often reduced to a few hurried notes to these questions which are worth 25 marks. Candidates at some Centres chose to answer the questions from **Sections B and C** before those for **Section A** and seemed to manage their time well.

Few candidates failed to attempt all of the compulsory questions. Even where the candidate had limited knowledge of the subject, there was a realisation that some marks could be achieved by interpreting the material given in the diagrams. This was evident in the atmosphere and weather question (**Question 1**), which in the past has often not been attempted.

Examiners continue to comment on the lack of attention on behalf of some candidates to the requirements of the question command words. Hence the command terms 'name', 'identify', 'describe', 'explain', 'compare', 'suggest reasons' are often treated in the same manner leading to the inclusion of much irrelevant material or a failure to address the question.

Attention to the data provided was generally better than in the past. Even so, such attention tends to fade as the answer progresses. Even in the more explanatory parts of **Section A** questions, reference can be productively made to the data provided.

In **Sections B and C** many candidates failed to take the opportunity that is provided for local exemplification. Examiners are always prepared to reward local knowledge when it is deployed in an apposite manner, and such examples were used to good effect by candidates from quite a few Centres.

Comments on specific questions

Section A

Question 1

This produced the weakest answers of all the questions in **Section A**. There seemed a lack of knowledge of the atmospheric processes that lead to condensation close to the earth's surface. Similarly there was an inability to identify the type of fog or to comprehend the cooling of air from below. Most candidates realised that air cooled with height but were unable to identify the temperature inversion shown in the temperature height diagram. The significance of the anticyclonic subsidence in trapping the advection fog layer was missed by most candidates. Some realised, however, that the warming of the air as it moved onshore would lead to a dispersal of the fog.

Question 2

Candidates were able to interpret the diagram and most correctly identified the types of mass movement as mud flow and soil creep. Similarly the differences between flow and slide were correctly described in terms of water content and relative speed. The latter point produced some confusion as some candidates failed to refer back to the diagram. In (c), the descriptions and explanations of a mass movement were more varied in response. The weaker answers merely repeated the material of (a) and (b) in the context of mud flows or soil creep. Others were able to produce good annotated diagrammatic representations of mass movements such as soil creep or landslides. There was a general lack of mention of slip planes or structural aspects of slide movements.

Question 3

Although the interpretation of age/sex pyramids is fundamental to the study of populations many candidates did not answer this question well. This was mainly due to a failure to pay attention to the demands of the question. In (a)(i), for instance, many failed to describe the shape of the pyramid and instead gave interpretations of vital rates and life expectancy, which were not required. Simple descriptions of the narrow base and wide middle or economically active group were sufficient. In (ii) most answers successfully interpreted what was happening in the 50-year timescale, although fewer supported this by evidence from the figures provided which was required for full marks. In part (b) most answers addressed the problem of an ageing population competently. Outlines were given of increased demands for government expenditure and family care as impacting via increased taxation and demands upon a diminishing work force. Positive consequences, such as the preservation of culture and knowledge and a healthier existence later in life were less commonly explored.

Question 4

The data set in table 1 was well interpreted by most candidates, although some failed to name the countries as required but instead merely used the general titles of more or less developed regions. The reference in (a)(ii) was only to the data for 2025, but many answers attempted explanations of change over the whole period from 1994 which could not be credited. Many of the responses to part (b) were disappointing in that they made reference solely to rural-urban migration. This is, of course, only one component of the high rates of urbanisation in LEDCs. A full answer should have recognised the role of high rates of natural increase and the disproportionate numbers in reproductive age groups within urban areas. In the explanations offered for migration, many failed to distinguish clearly between push and pull factors.

Question 5

The key words in part (a) of the question were 'main features' and 'layout'. Many responses ignored these and attempted to force their description into a model structure such as that of Burgess. This led to candidates fruitlessly speculating on the location of the CBD and high and low-income housing. Better answers used terms such as linear or ribbon to describe the high rise commercial and residential areas. They noted the clear zonation of functions, the importance of transport and accessibility, as well as the amenity value of lakeside residence. In (b) many candidates seemed not to understand the term 'residential segregation'. Others expressed such segregation only in economic terms involving bid rent and the ability to pay. Social and ethnic considerations were overlooked as well as the relative attractiveness of different locations within the city to different groups of people. Whilst examples were not required, many good candidates supported their case with local area studies or textbook cases such as New York.

Section B**Question 6**

The most popular of the physical geography questions. In (a) most answers gave reasonable definitions of through flow and groundwater flow, although there was some confusion between infiltrated and percolated water. Interception was well described and its significance widely appreciated.

In (b) candidates often wrote large amounts, expending an inordinate amount of time to produce often indifferent or irrelevant answers. Very often lengthy descriptions were given of the catchment characteristics and their effect on flows without a single reference to a hydrograph. In such cases there was often no mention of lag times or rising and falling limbs. Many confused basin shape with size, geology with vegetation and rainfall intensity with rainfall amount. Many lengthy answers failed to address the question resulting in a return of few marks for the devotion of too much time.

In part **(c)**, there was only a limited appreciation of the methods of flood prediction. Few candidates describe recurrence intervals and some chose to ignore this part of the question in favour of accounts of attempted flood prevention. Many of these accounts were limited to the channel and no mention of catchment based control. There were, however, some examples of well worked case studies.

Question 7

The least popular of the physical questions, but a question that was sometimes very well answered. Evaporation and condensation were widely understood, as were the conditions necessary for evaporation to take place. Diagrams showing the greenhouse effect usually correctly displayed incoming shortwave radiation and the entrapment of outgoing long wave radiation by the gases of the earth's atmosphere.

In **(b)(ii)** there was often some confusion with ozone layer depletion rather than the nature of greenhouse gases and their influence. Better answers realised that the greenhouse effect is a natural and vital element in the global atmospheric system as well as a force for change due to pollution.

In **(c)** candidates who could explain adiabatic cooling and condensation and the formation of raindrops did well in this part of the question. Many, however, produced very garbled accounts supported by inaccurate temperature/height diagrams that failed to show any cloud development. Good answers were able to contrast clouds associated with stability as against those produced by instability.

Question 8

This question was generally well answered with many candidates demonstrating good understanding of weathering processes and rock composition. Most accurately defined physical and chemical weathering and were able to describe one process of chemical weathering.

In **(b)** sea floor spreading was generally well illustrated by annotated diagrams although there was more frequent confusion concerning an associated landform. Some candidates became confused with convergent plate margins and described such features as ocean trenches rather than landforms associated with mid-oceanic ridges. The chemical composition of granite was usually understood but the nature of jointing was often ignored. This, of course, had implications for the second part of the question which required, in part at least, the manner in which weathering and erosive agents exploit the jointing pattern found in granite landforms.

Section C

Question 9

This question was by far the most popular. Most candidates named a country as required, but then proceeded to list generic factors that could be applicable to any country within this stage of the demographic transition model. General explanations of persistently high birth rates often failed to indicate any factor that could be seen as specific to the named country. Similarly, falling death rates (ignored by some candidates) were vaguely ascribed to improvements in health care provision. Only a little specific information was required to convince Examiners that the account reflected a country that had been studied.

Candidates generally fared better in **(b)** where such specific information was not required. Even so, a lot of the explanations for lower birth rates were very vague such as 'no need for child labour'. Lower death rates generally received less attention and were often vaguely ascribed to 'better medicine'.

In **(c)** there were many excellent answers that were able to provide a critique of the demographic transition model. They emphasised the foundation of the model within the socio-economic and political history of MEDCs which may have little relevance to today's LEDCs. They were able to appreciate the model in terms of an understanding of the changing balance of vital rates. Weak accounts offered no appreciation of the model and merely reiterated its component stages, often redrawing Fig. 5.

Question 10

Candidates who understood the term population ceiling produced very good answers. Those who did not struggled throughout parts **(a)** and **(b)** of the question. There was an opportunity taken by some candidates to produce an effective answer to **(a)(ii)** by use of annotated diagrams of the J curve, S curve and the 'instantaneous' adjustment to population ceilings.

In **(b)** the best material seen was in a discussion of the work of Malthus and Boserup, and candidates developed the significance of new resource supplies (e.g. oil in Nigeria) or the population migration.

Part **(c)** produced a wide range in terms of quality. Better responses picked up on the 'limited success' and demonstrated knowledge of specific attempts to reduce birth rates in named countries. Weaker candidates often limited their accounts to the effects of China's one child policy or fixed upon a single aspect, such as lack of contraception.

Question 11

There were some effective answers to **(a)**. These recognised in **(i)** accessibility, potential customer base and hence profitability of central space. In **(ii)** they noted the presence of high rise development, high threshold/high turnover commercial functions and the absence of vacant lots and green space.

Many candidates found **(b)** more challenging but there were some good answers on green belts, new towns and the exploitation of brownfield sites. Some were able to point to the role of gentrification in the redeployment of urban housing stock.

Part **(c)** caused some candidates problems in terms of the definition of what constitutes a rural settlement. A rural settlement needs to be that of a village, hamlet or collection of dispersed dwellings. The definition of a rural area should be that of a countryside environment containing one or more villages, hamlets or collections of isolated dwellings. Urban settlements should be avoided. Thus accounts of urban shanty towns, London's docklands or named urban districts could be given only very limited credit. There were, however, some excellent evaluative answers that detailed changes occurring in named villages or rural areas. These assessed both the positive and negative environmental impacts of social, economic and even political changes. These answers demonstrated the value of local knowledge and observation.

Paper 9696/02

Physical Geography

General comments

Candidates appear to have approached this Paper in a confident and well prepared manner. There were a number of excellent answers demonstrating good geographical skills and knowledge. The Paper format of offering both discursive and data response questions gives candidates more choice and an opportunity to play to their strengths. This opportunity was not always seized by candidates, as many continue to ignore the diagrammatic material provided in framing their answers. This was particularly apparent in **Question 6** where few answers made any use of the diagram of a landslide or of any of the features shown. Even in the case of the photograph for **Question 8**, several candidates produced cross section diagrams of the 'model' desert piedmont rather than anything based upon the photograph.

Allocation of time is less of a problem on the Physical options as most candidates appear to attempt this Paper before the Human options. There remains amongst many answers a mis-match between the marks allocated to parts of the question and the amount of time devoted to it. Thus many candidates expend more time on part **(a)** of the questions, worth 10 marks than they do upon part **(b)** worth 15 marks.

Many candidates employed clear and well annotated diagrams, which always receive good credit from Examiners. Similarly it is pleasing to note the use of well constructed local examples and case studies. These were particularly notable in the case of coastal and hazardous environments with many fine studies from locations in the Caribbean.

Comments on specific questions***Tropical environments*****Question 1**

A popular question and one that was generally well answered.

- (a) Most candidates were able to give some description of the basal surface of weathering (bsw). Often, however, candidates found it difficult to relate this surface to the formation of tropical landforms. Many accounts launched into the production of landforms such as inselbergs, kopjes or tors with little or no reference to the role of the bsw or of jointing. Better answers utilised well annotated diagrams to show the bsw in relation to jointing and its subsequent emergence through the stripping of regolith.
- (b) Most candidates selected the Tropical Rainforest as their chosen ecosystem. Often very detailed accounts were given of human activities within selected examples of rainforest areas. These accounts included activities such as slash and burn agriculture, logging, clearance for ranching, mining, etc. Whilst some reference was occasionally made to the impact upon the ecosystem itself, these were generally rarer and far less well developed than the descriptions of human activities. Good answers were able to use their case studies to illustrate ecosystem impact and to discuss the difficulties of managing such systems. Distinction was made, for instance between selective silviculture and clear felling or the problems of soil deterioration and secondary forest growth.

Question 2

Quite a popular question that produced very variable answers.

- (a) Most answers divided the weather stations into two groups based upon the occurrence of wet and dry periods. Some further developed this, pointing to variation within the groups in terms of amounts of rainfall received. Most realised that the broad division reflected the position of the two groups of stations with regard to the equator, that is which hemisphere they were located within. Thus the explanation could be found in the movement of the ITCZ. Many accounts were not able to develop beyond that although those sub-dividing on rainfall amounts were able to contrast coastal with more continental locations. A significant minority of candidates assumed a tripartite model of climate distribution of equatorial, humid tropic and seasonally humid tropic and tried unsuccessfully to force the data into those categories.
- (b) Most candidates were able to describe the types of vegetation that characterises the humid and seasonally humid tropics. This gave rise to acceptable descriptions and often diagrams of vegetation structures of the Tropical rainforest and the savannah grasslands. Better answers were able to relate this vegetation to rainfall variation in terms of plant adaptations. Generally soils were mentioned only in passing or ignored altogether. There were some answers, however, that produced excellent diagrams of soil profiles that illustrated the processes consequent upon all year rainfall and seasonal rainfall.

Coastal environments**Question 3**

A popular question that produced many good answers.

- (a) Most candidates were able to produce diagrams of fringing reefs, barrier reefs and atolls. Many, however, gave no indication of scale or provided any descriptive annotation. The instruction to describe was often ignored in favour of attempts to provide explanations of formation. The nature of coral and the conditions and location of its growth was also ignored. There were some excellent descriptions that made full use of local examples.

- (b) Most accounts spent most of the answer on marine processes of erosion. These were described with some accuracy, if not concision. Some accounts extended into other processes and the impact of human activities which were not required. Landforms were described separately with little connection between them and the processes that had helped about their formation. Many of the landforms that featured in answers were relatively minor forms of cliffed coastlines (caves, stumps, etc) rather than the more prominent features of cliff retreat, abrasion platforms, headlands and bays. Some accounts became involved with human activities and coastal protection schemes that were not appropriate to this question.

Question 4

- (a) Many candidates ignored the diagram (Fig. 2) in favour of a crude depiction of a spit. Similarly the terms employed on the diagram were either not understood or ignored. Rarely did they feature as part of the description or explanation of the landform. Some candidates did produce annotated diagrams to indicate the processes such as drift or wind direction that aided their explanation. Salt marshes were generally less well understood than spits. Most candidates had difficulty in relating together process (drift, refraction, tidal change), sediment (littoral sand, estuarine mud), form (laterals, recurves, marshes) and vegetation (xerophytes, halophytes).
- (b) Many accounts did not develop beyond the impact of changes in wind direction. Only a minority of answers were able to explain the effects of storm events, sea level change or changes in sediment supply consequent upon up-coast management. Pollution was mentioned as impacting upon salt marshes, but not marsh drainage. Protection schemes usually concentrated upon hard engineering (e.g. reefs, groynes) whilst nourishment or sediment cell management made very infrequent appearances.

Hazardous environments

The most popular optional area with **Question 6** being the most frequently answered question.

Question 5

- (a) Weaker answers put the emphasis on naming some of the places affected by hurricanes with often lengthy accounts of particular hurricane events (e.g. hurricane Mitch). Better answers explained the formation conditions in source areas, the hurricane tracks and then located the most vulnerable coastlines. Some of these were well illustrated by maps showing tracks and landfalls. Those candidates who concentrated on individual events tended to repeat most of the material in the second part of the answer.
- (b) Poor candidates saw this as an opportunity to rehearse examples of the impact of particular hazards. They then developed at length the protective measures that had been taken. Better answers were those that discussed hazards within the context of relative wealth, technology and hazard perception amongst different peoples. Case studies were thus introduced that allowed the contrast of differing responses. Few candidates produced any evaluative material concerning hazard response.

Question 6

- (a) Few candidates made use of the diagram that was provided (Fig. 3). Even the terminology and certainly the features shown on the diagram were hardly ever mentioned. Many answers defined landslides in a very generalised manner, including within their description virtually all forms of mass movement. Most dealt adequately with trigger factors and could state the general circumstances in which landslides were likely to be hazardous. The impact of such things as slip planes or structural aspects of slide movements were only rarely recorded.
- (b) Many candidates chose to concentrate their answer on an account of a single eruption. Mount St Helens or Pinatabu were most commonly used. Whilst these were often described in some detail, it often led to a limited coverage of the full range of volcanic hazards. The weaker answers tended to produce lists of events and hazards, whilst the better were able to describe the various hazards and to evaluate their relative hazard level (e.g. lava flows as against pyroclastic flows). This allowed the opportunity to illustrate the hazards associated with different kinds of volcanic eruption.

Hot arid and semi-arid environments

The least popular of the optional topics. There were some answers to **Question 7** but very few to **Question 8**.

Question 7

- (a) Those candidates who were aware of the climatological conditions that bring about aridity were able to answer this question well. They explained the impact of sub-tropical high pressure areas, rain shadow and cold ocean currents. These conditions were illustrated by examples of hot arid areas. Other candidates merely described aridity in terms of lack of rainfall and high temperatures without any attempt at a climatological explanation of causes.
- (b) Most candidates concentrated their answers on this section of the question. The majority were able to point to a number of vegetative adaptations to aridity, encompassing xerophytes, halophytes and phreatophytes. Weaker answers were more limited to cacti as exemplars. Many, however, were able to provide considerable amounts of detail of different plant adaptations and to locate them in different types of arid environment. Soil processes and characteristics were less well described or explained. Even soil salinity was often absent. Human activities contributing to desertification were widely understood in terms of overgrazing, vegetation removal and the like. The impact of groundwater abstraction and salinisation through irrigation were less frequently mentioned.

Question 8

- (a) Little was made of the photograph. The features shown were not identified, including the butte that formed the central feature. Many reproduced a cross sectional sketch of a mountain front and desert piedmont displaying the classic sequence of landforms without any indication as to their relevance to the photograph. Vegetation if mentioned at all was referred to as 'scrub'. It is recommended that Teachers use photographs in class in such a way as to allow candidates the experience of describing and interpreting them.
- (b) Candidates fared only a little better in this section. Soil salinity was poorly understood although there was an occasional reference to capillarity. Certainly few could suggest any means by which soil salinity might be overcome (e.g. the employment of drip irrigation methods). Flash flooding was described in a more competent manner, but the impact of rapid run off and stream flow were frequently omitted. Methods of water management in arid areas appeared little known and few case studies (e.g. the Negev) were seen.

Paper 9696/03

Human Options

General comments

In the second June examination of Paper 3 on the 9696 syllabus, Examiners commented on the good spread of Options and questions attempted by candidates and on the interesting diversity of examples used. Whilst the syllabus was, in part, developed to allow the use of home country material for many topics, it is good to see evidence of a wider geographical understanding at this level, for instance in relation to global issues such as food shortages in **Question 9 (b)** and tourism in **Question 14 (b)**.

Centres need to teach two of the four Options to enable candidates to attempt one question from two different Options. It is evident that some Centres have the time and the resources to teach three, which, while not necessary, may further enhance candidate choice. It is worth saying that however tempting a question on a topic not studied in class may seem to candidates under the pressure of examination conditions, they should not try to answer any question from their general knowledge as, at best, only a few marks will be gained.

In the entry there were a few rubric errors where both questions from one Option were answered. In such cases, to satisfy the rubric, only the better of the two marks can be taken.

For many candidates a lack of time rather than a lack of knowledge or understanding remains the main factor affecting their performance on this Paper. A large number of candidates across the ability range were disadvantaged in this manner and it appears that too much time is being spent on Paper 2, the Options. In a script, the evidence an Examiner sees of this is most often the production of one full and incomplete response, although some candidates did submit just one response, denying them 25/50 marks. Teachers are advised to encourage candidates to be disciplined in the division of the three hours between the two Papers as leaving any part of a question unanswered clearly restricts the potential outcome. Some candidates used note form or bullet points for **(b)** rather than leaving a blank but this is likely in most cases to achieve only a Level 1 award, that is, a mark in the range 0-6 marks out of a total of 15.

Candidates responded quite well to the variety of resource materials within the Insert and demonstrated data response skills in interpretation and analysis. That said many candidates are more confident and their performance firmer in response to the longer and more familiar demands of parts **(b)**. The Insert this season contained two systems diagrams, a distribution graph, a bar graph, two tables of data, a world distribution map and a life cycle model. The intention remains to set a diversity of resource materials for these Human Options and Teachers are encouraged to give candidates practice throughout their course on a variety of types of material from textbooks, journals and newspapers, as suggested in the Syllabus.

At A Level part **(b)** of most questions requires a piece of sustained writing in which an argument is framed and supported with evidence. Whilst questions vary in their particular demands, higher marks are generally awarded for responses that have the following sorts of attributes,

- detailed support from knowledge of more than one example
- sound conceptual content
- evidence of good geographical understanding
- a breadth of perspective
- recognition that different groups of people may be impacted in different ways
- effective counter-argument
- balanced and perceptive evaluation or assessment.

In preparing candidates for the examination, Teachers may do well to develop these areas in candidates' writing. Clear opening and concluding paragraphs and a discernible thread to the answer that echoes the key words of the question always gain appropriate reward.

Comments on specific questions

Production, location and change

Question 9

One of the most popular questions on the Paper, although to many candidates both the systems diagram and the issue of food shortages were clearly novel and challenging.

- (a)(i)** Elements needed both to be identified correctly and to be expressed clearly. Of these **A** was the easiest and was achieved by nearly all candidates, noting artificial fertiliser or maize bran; for **B**, throughput flows, there are many possibilities. To be a flow, what needed to be identified was more than a single label, so, for example, pigs' manure put on the vegetable garden rather than just manure. In **C** the term subsystem implies some visible circularity, the most obvious being the maize field with its residues buried to refertilise the field in both cases.
- (ii)** Inputs are lower, less frequent and have less nutrient value as distance increases, if inputs into the nearer plot (potato/bean field or vegetable garden) are compared with those into the maize fields. Too many candidates made this into a comparison of income levels or available finance rather than of distance, although the general point that distance takes time and maybe money was creditable.
- (iii)** This was the most effectively answered element in **(a)** showing candidates' familiarity with the terms *intensive* and *subsistent*. The key observation was that no harvest from the lower income farm **A** is sold (or that part of **B**'s is). Two further marks were given for elaboration from Fig. 4, in terms of the regularity, variety and volume of inputs and outputs of the systems. Some better candidates used the dwellings themselves as evidence, for instance their size and the corrugated iron roof of **B**) or recognised that pigs are more costly and more demanding livestock to rear than poultry.

- (b) Surprisingly few candidates recognised that apart from the term 'food shortages' the key to answering the question most effectively in terms of the failure of the Green agricultural programmes and even of food aid itself to eradicate shortages. Instead, the most candidates explained why agricultural output either in total or in terms of productivity remains below potential as a result of a combination of factors.

These included physical/environmental factors, such as soil infertility, unreliable rainfall or hazards such as flooding; social factors, such as low educational levels, traditionalism and suspicion of modern practices; economic factors, such as low capitalisation at the scale of the individual producer or the country, which may be indebted; and political factors, especially in relation to instability through war.

Whilst such a discussion provided a firm basis for a response, to gain good reward attention to food shortage itself was needed in relation to local demand. Thus, better answers might recognise the demands of an increasing population; the influence of storage or of distribution problems; the role of corruption in favouring some peoples or areas; the contribution of the growth and export of food crops, when local people are going hungry, or other such issues.

Question 10

It was good to see that the informal sector is now known well in many Centres. Whilst the demand in (a) was straightforward, few candidates dealt well with the challenge in (b).

- (a) The term *informal sector* was best explained in terms of its unofficial, unregistered or illegal status and its operation outside the system in terms of tax or employment law. Its character could then be developed effectively either from published material, such as on Kenya's Jua Kali industry, or from local knowledge, for instance within the Caribbean islands' large informal sector. A full answer recognised that the sector includes both manufacturing (e.g. crafts; everyday items such as pots and pans) and services (e.g. taxi driving, shoe shining and tray sales).

One misconception was that the informal sector is the same as the primary (extractive) sector. Some candidates limited the accumulation of marks for the sector's character by developing an unnecessary comparison with the formal sector, for which no credit was available.

- (b) Most candidates had something sensible to say about the 'source of growth for the economy' aspect of the question. Often this was about the multiplier effect from income and spending; about the acquisition of skills being a way towards formal employment or about government recognition of the importance of the sector and assistance given, for instance in Kenya. In most cases, however, this seemed to be overstated and left a rather unrealistic impression of the sector's potential for growth. More perceptive candidates recognised the limitations of product quality, service reliability or low scale of production and the problematic nature of pollutive or dangerous enterprise or of child labour.

Few candidates were able to address the aspect of 'a means of survival for the individual' effectively beyond the issue of offering employment, and, therefore, a small income, to a large percentage of the population in many LEDCs. For a Level 3 reward, that is 12-15 marks out of 15, this was needed, as was good exemplification, most answers remaining very general in outlook.

Environmental management

In what is a popular Option, the two questions were of approximately equal popularity in the entry.

Question 11

- (a)(i) Most candidates recognised a direct relationship in the data, that energy consumption increases with development. Some then supported this from Fig. 5 for a second mark but few did both this and identified an anomaly such as Kuwait or Japan in order to achieve all three marks. An error in reading the figure, found in the work of a few candidates, was of mistaking the position of a country's name, such as that of India, for the country's position on the graph, which is plotted with an x. It led to some strange and invalid comments for instance about the GNP of the Philippines.

- (ii) A full answer consisted of demand and supply factors, for either of which a maximum of 2 marks were available. Many candidates saw the answer in terms of either demand or supply but a balance was needed for better marks. So too was reference to the countries on Fig. 5, which was a considerable choice. Weaker candidates simply attempted to use GNP or economic development again as the explanation, which was unfortunately circular. Having said that, explaining what economic development comprises went a long way to explaining demand by sector (the energy demands of agriculture; manufacturing; domestic; transport) and better candidates recognised such issues as climate, whether for fires and heating appliances or for refrigeration and air conditioning. Supply factors included resource endowment, resource development, energy policy and levels of technology and finance. This gave some candidates a strong lead in to (b).
- (b) It was good to see many candidates beginning their answer by demonstrating their understanding of the term *renewable energy resources* in an introductory paragraph. A basic answer usually made appeal to a lack of one or more of the following three factors; finance, technology and expertise or skills. This was adequate for a Level 1 or low Level 2 reward depending on the detail and development offered. To achieve higher marks some wider perspective was needed, for instance on the implications of low demand in LEDCs, the inefficiency of alternative sources of energy or the significance of other priorities whether they were industrialisation or fighting wars. Top quality responses used contrasting examples from LEDCs of concerns and difficulties and examined the relative contribution of non-renewable energy sources such as the cheaper, trusted but more pollutive coal. A few candidates pointed out simply but memorably that in some respects the factors restricting the development of renewable energy resources in LEDCs were the same as those in MEDCs and went on to identify several of them.

Question 12

- (a)(i) The interpretation of this data set was poor, with few candidates understanding the demand. Rather than describing the main features, some simply rewrote the table in words or explained that these were big cities. The feature most commonly identified was the highest and the lowest values (Bangkok and Caracas). Others noted the diversity of levels or the significance of the Asian continent's pollution levels over those of Africa and South America.
- (ii) Some candidates did not appreciate that the question widened to cities in general, whilst others used illustrative material from cities as diverse as Los Angeles and New Delhi effectively. Two broad areas of reasons were needed for a good answer; firstly, the nature of the polluters; a combination of manufacturing, power generation, domestic, transport, refuse disposal; and secondly, contributory factors; whether the scale and concentration of urban areas and their activities, traffic congestion, microclimatic features, profit motives or the lack of pollution monitoring and control. Many candidates answered this very well but weaker candidates tended to focus on one aspect, such as cars, in great detail or on minor influences such as cigarette smoke.
- (b) This was probably the least well interpreted part of any question on the whole Paper. Whilst the subject of environmental degradation is popular, Examiners felt that here candidates were often wanting and responding to a rather different question from the one set this time. This was especially noticeable in the inclusion of long sections on the reasons why specific environments had become degraded. This question had three elements to be addressed.

The first was why some countries protect environments at risk. This is for a variety of reasons but comes from a greater environmental awareness on the part of governments and people groups whether the general public or lobbyists such as Greenpeace. Environments whether rural or urban, cultivated or wilderness, terrestrial or marine are protected because of their distinct qualities (wildlife, global significance, beauty, fragility, scientific importance, heritage) and the threats to their existence which have led to or may lead to damage, degradation and loss. This may lead to reduced quality of life for people and reduced income, for instance from agriculture or from tourism. Weaker candidates often described degradation rather than considering the issue of environmental protection itself.

The second element needed in the response was some introduction of protective measures used in one or more environments. In general candidates who contrasted two named environments and covered a few measures in some detail did better than those who tried to produce wide global answers using such broad terms as 'afforestation' and 'laws' only. There were some very good case studies of particular reserves or projects, often in home country but just as often far away, maybe in Brazil's tropical rain forest, savanna Africa or some industrial landscape of Europe. Many of these impressed Examiners both in terms of understanding shown and in terms of detailed recall.

The third and final element needed was the assessment of the effectiveness of the measures. Whilst in recent years the development of skills in and the language of assessment has improved for the entry, many candidates had little time left to do this effectively. Limited assessment time was needed to achieve Level 2 awards but positive and negative comments on the measures' effectiveness were needed for Level 3.

Global interdependence

Question 13

- (a)(i) A full answer required the identification of a trade surplus in Japan and East and SE Asia, a trade deficit in the United States and Western Europe and some recognition of the varying scale using statistics from Fig. 6. This was reasonably done but some candidates would have been helped to know or to remember the terms *trade surplus* and *trade deficit*.
- (ii) No specific knowledge of any of these world regions is expected by the syllabus so answers were expected to be broad. A full response needed to touch on both imports and exports, although it was more likely in each case that exports would be better understood if the manufacturing basis was known. Most candidates focused on the trade surplus locations of Japan or East and SE Asia and developed answers on their dominance and specialisation suitably. Weaker candidates failed to register that a definition of *consumer electronics* was given in the question and wrote more generally of wrong items such as machinery or cars.
- (b) The apparently loose phrase 'issues in its involvement in international trade' is a syllabus term reproduced to allow candidates to use whatever country they have studied to effect. Better answers paid clear attention both to the trading strategy and to the issues, whilst weaker ones tended to be more generally descriptive of a country and its trade. Whilst some credit was given for factual material on products and expenditure, generally descriptive answers remained within Level 1. Stronger candidates considered both imports and exports and raised more than one issue from a varied list which included colonial ties, trade agreements, trading blocs, currency fluctuations, catastrophe and global location. Whilst prepared candidates used an interesting variety of countries, both home and away, the weakest candidates often attempted to "borrow" Japan or sometimes the United States from Fig. 6 and wrote something of little substance as a result.

Question 14

One of the most popular questions on the Paper, because of the presence of the life cycle model and of the importance of tourism in the world today.

Note: Centres using the text by Carr *New Patterns, Process and Change in Human Geography*, which attributes the model to Briggs, are asked by him to please note that this is incorrect and that the model is the work of Butler (1980).

- (a)(i) The Exploration stage was straightforward for most candidates to describe. Three characteristics were needed for the three marks. Exploration involves few tourists, most commonly the adventurous backpacker sort or representatives of travel companies, unknown or little known destinations, attractions of unspoilt environments and cultures and few, if any, tourist facilities.
- (ii) Credit was only given for the explanation of why Stagnation is being reached in some tourist areas. Many candidates wasted time explaining how Stagnation may be overcome. Full answers needed to develop issues of negative externality such as overuse; congestion; deterioration of facilities or pollution, along with contributory external factors such as competition from newer, fresher and more exotic destinations. Some recognised the role of specific events such as the recent terrorist attacks in Kenya or Bali bomb, of the fickle fashionability aspect of tourism or of mismanagement of a location. Whilst examples were not needed here, reference to such places as the Costa del Sol often assisted the explanation given.

- (b) For many candidates this appeared to be a question for which they were prepared and in these cases what distinguished the better answers from the satisfactory was the quality of application of the model to the place(s) chosen and the quality of the assessment offered. For instance, a wholly positive assessment, not recognising any limitations to the model's usefulness, could achieve only a maximum of ten marks, some awareness of the model's limitations being needed for the highest reward.

Candidates who described the model stage by stage in general, or worse, who drew it, given the availability of Fig. 7, wasted valuable time. So too did those who described first one and then another location going through all the stages, rather than proceeding to the consideration of the model.

The model's usefulness may be seen in what it offers as a means of classification, as a comparison between different places and as a predictive generalisation. Its main limitations are that it is descriptive not explanatory and thus cannot suggest how or why, that the rate at which places pass through the model is highly variable and that some forms of tourism, notably the sustainable ones, are unlikely ever to proceed beyond the initial stages. Of further note are that circumstances such as the current global terror threat can bring an abnormal and early decline to resorts in, say, the Development stage, long before Stagnation might be reached.

Examiners noted that better answers showed good appreciation of the role of models more generally and may have gained from the critical study of the other well known life cycle model in human geography, the demographic transition model studied in the Human Core.

Economic transition

Whilst **Question 16** remains the more popular of the two questions, it is good to see Centres and candidates tackling the issue of globalisation which is affecting all our lives.

Question 15

- (a) The challenge here was to develop an answer given that the map for (i) and the table for (ii) show the same material in different ways, or, more precisely that the table shows an extract of the data for the top fifteen named countries. Unwary candidates could find themselves saying the same or similar things twice. Better candidates recognised spatial inequalities, maybe North/South, MEDC/LEDC and NIC or by continent, notably between Europe and Africa; had the language to express the dominance of the United States and Japan and remarked on the astonishing 85.8% share of the fifteen countries or the small 14.2% share of the rest of the world.
- (b) It was good to see many candidates introducing their response here with one of the many possible definitions of the term *globalisation*. The examples asked for in the question could be countries or products and services of which McDonalds, Coca-Cola, computers, cars and fashion such as Nike appeared the most often. Whilst this is not a question about international tourism, an awareness of tourism could form part of a suitable answer given the rise in affluence and available time in many source areas and the desire for income from tourism in many destinations.

Many candidates majored legitimately on the role of TNCs and their desire for profit maximisation via the international spatial division of labour and greater market penetration in new and emerging markets such as within NICs. Others took an equally legitimate broader view and considered information flows, transport developments, new international alliances and the role of global groupings and businesses. Whilst good candidates produced confident and case-based work of vigour and detail it did seem to be the sort of question which some weaker candidates chose in order to produce an answer of some length but little firm content.

Question 16

- (a)(i) The term *core-periphery* whilst accurately explained by many is still causing difficulty. The core is the region of a country which is the most developed economically and socially and which is the most prosperous. It usually includes the capital city and the major port. The periphery is relatively distanced, disadvantaged and deprived socio-economically. The two are linked by flows of people, materials and wealth and are separated by a gradient of decreasing prosperity and economic activity.

A misconception encountered by Examiners in the work of some candidates is that the urban core is seen as the urban core and the urban periphery, thus as the CBD and the suburbs of a city or similar. Not only is this wrong but for this Option the relevant scale of development is *regional*.

- (ii) A full description of the periphery included naming and locating the periphery in the chosen country and covering both environmental and socio-economic characteristics. Thus an answer on the Mezzogiorno and Sicily did better than one giving Italy. It seemed that it was environmental factors, such as remoteness, extreme terrain, lack of mineral resources or severe climate which were most often overlooked. A few candidates spent half or more than half of the answer describing the core, for which there was no available credit, but Examiners noted that this may relate to the misunderstanding of the term in **(a)(i)**.
- (b) This is a classic question in the study of development and requires both detail and good assessment in order to be answered well. Whilst material on Brazil and Italy is always to be seen there was a good variety of material being used from other parts of the world which is welcome. The main weakness noted was in the direction of the material by candidates. Some responses seemed to be more about decongesting the core than developing the periphery. Many candidates offered only limited assessment with remarks such as 'this worked well' or 'it is too soon to know'. Generally speaking assessments which dealt with each measure separately scored more highly because of the measures individual and different strengths and weaknesses, successes and failures.