CARIBBEAN EXAMINATIONS COUNCIL

REPORT ON CANDIDATES' WORK IN THE CARIBBEAN ADVANCED PROFICIENCY EXAMINATION MAY/JUNE 2007

GEOGRAPHY

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INTRODUCTION

Geography is a two-Unit subject with each Unit consisting of three Modules: Unit 1 – Population and Settlement; Hydrological, Fluvial, Coastal and Limestone Environments; and Natural Events and Hazards; Unit 2 – Climate, Vegetation and soils; Economic Activity; and Development and Disparity. Both Units are examined by three papers. Papers 01 and 02 are external examinations while Paper 03 is the Internal Assessment examined internally by the teacher and moderated by CXC.

Paper 01 consists of nine compulsory short-response questions with three questions based on the contents of each Module. Each Module contributes 27 marks. The Paper contributes 30 per cent to the Unit.

Paper 02 has a compulsory mapwork question (Section A) based on the contents of the three Modules and six questions in Section B with two questions based on the contents of each Module. Candidates are required to answer one question from each Module in Section B. Each Module contributes 45 marks to the total 81 marks for the Paper. Paper 02 contributes 50 per cent to the Unit.

Paper 03, the Internal Assessment, contributes 54 marks or 20 per cent to the Unit. Each Unit is examined by a single project.

DETAILED COMMENTS

UNIT 1

PAPER 01

Module 1: Population and Settlement

Question 1

The stimulus in Part (a) was a diagram showing the relationship between per capita GDP and total population. The question was well done with most candidates scoring full marks.

The vast majority of candidates understood the concept of optimum population but many had difficulties in relating it to the quality of life in Part (b).

In Part (c), candidates were asked for the characteristics of a country that is overpopulated. Some students did not understand the term ‘characteristic’. For example, poverty is a characteristic of an overpopulated country. But, all overpopulated countries are not affected by high levels of crime and violence, nor do they all face problems of traffic congestion.

Question 2

In Part (a) candidates were asked to define the term 'dependency ratio'.

There was a good response to this although errors were made in respect to the age cohorts that comprised the economically active group. In Part (b) (i), there were careless arithmetical errors in the calculation of the dependency ratio and many candidates did not express it as a percentage and so could not be awarded full marks. In addition, the rounding up of decimal places presented difficulties to some candidates. In Part (b) (ii), candidates were asked for the 'implications of the dependency ratio' and the term seemed to present a problem. This was one of several questions that showed candidates' unfamiliarity with instructional terms.

Question 3

Part (a) comprised a model of urban structure which candidates were asked to name. The model was frequently confused with others; the name Burgess was omitted. Concentric model is not enough since the diagram takes the form of concentric circles. One of the most common mistakes encountered in Parts (a) (ii) and (iii) was the failure to identify zone by number so that there was no way of knowing which zone was being described.

On the whole, this question was quite well done.

Module 2: Hydrological, Fluvial, Coastal and Limestone Environments

Question 4

In Part (a), candidates were asked to name three ways in which water was stored within a drainage basin. Although the response to this part was fair candidates confused 'stores' with 'flows'. Many listed infiltration and base flow as storage components.

Candidates offered the same explanation for trellis and rectangular drainage. Rectangular and trellis drainage are two distinct patterns resulting from two different processes. This is an error made in a text used by students, and teachers should make the correction if this particular text is used.

Question 5

In Part (a), candidates were asked to explain one condition under which braided channels may develop.

A critical aspect of the correct response is the need for a **change** in velocity of the river rather than generally low velocity. Some candidates confused braiding with delta meander formation.

In Part (b), candidates were asked to explain how bird's foot deltas were formed. The diagrams which accompanied the responses were poor. The majority of candidates described the formation of deltas and ignored the specified 'bird's foot'. In general, this question which covered material that form a part of the CSEC syllabus, produced the lowest scores.

Question 6

Part (a) dealt with uvalas which are features found in some limestone areas and common in Jamaica. A significant percentage of the candidates omitted the question or presented them as features of river valleys or coasts. Many candidates where unfamiliar with this term. Few candidates correctly described the sequence of sinkhole formation, collapse and lateral expansion.

Part (b) tested the candidates' knowledge of the factors affecting the development of coral reefs. There were many good responses. One of the main problems encountered was the failure to specify temperature conditions and the reliance on general terms such as 'ideal', 'optimum' or 'right'. The use of the terms 'tropical' and 'equatorial' in the question should have indicated that climate conditions were expected.

Module 3: Natural Events and Hazards

Question 7

In Part (a), candidates were asked to give the characteristics of a flash flood that created hazardous conditions. In general, this section was fairly well done. However, many candidates gave descriptions of the consequences of flash floods, focusing on the damage caused rather than on the nature of the event.

Part (b) requested the effects of events associated with volcanic hazards. Candidates were able to describe the events – gas emissions, lahars and pyroclastic flows – and to give specific examples of areas where these created hazardous conditions. Many produced extremely good responses to the effects. In some cases, however, they confused pyroclastic flows and lahars as well as their effects.

Question 8

For Part (a), the stimulus in this question was a map of Iceland bisected by a plate boundary and candidates were asked to name the plates, the bisecting ridge and the ocean. Many candidates were able to identify these features.

In Part (b), candidates were tested on seismic waves and their movements. Responses were extremely weak. Some candidates may have guessed the correct response since they were unable to give a reason for their choice.

Question 9

Part (a) of this question was based on the tendency of victims of disasters to return to high risk areas. Candidates performed extremely well on this section, giving good accounts of the reasons for this tendency. However, many lost marks because they used different words to describe the same underlying motive – "attached to the area" and "family ties" or "familiar environment".

Part (b) tested the candidates on community mitigation measures and this, too, was well done. Not surprisingly, the focus was on preparation for hurricanes.

PAPER 02

SECTION A

Question 1

This was the compulsory question on the application of practical and map-reading skills and tested the candidates' knowledge of specific aspects of settlement, limestone characteristics and hazards. A common problem encountered in both Units was an increasing reluctance to identify locations by the use of grid references. This should be corrected.

Part (a) (i) required candidates to describe settlement patterns in relation to the map extract. Too many gave definitions of settlements. When the map extract was referred to, sufficient care was not exercised in describing the occurrence. For example, a linear settlement was often described as being along a main road when it was along a Class C road. The term 'main' was given to any category of road. There was confusion with regards to the terms used for the types of settlement – nuclear instead of nucleated. Isolated and dispersed are two different types. A description of the 'distribution of settlements' is not the same as a description of the 'types of settlement'.

Part (b) was poorly done by most candidates. Most candidates gave an account of limestone topography but did not provide the requested map evidence for the presence of limestone.

In Part (c), a grid unfortunately was not included and allowances were made for this omission. Those who drew grids performed extremely well on this section.

In Part (d) (i), responses to this section - the attraction of a particular site to a manufacturer – were satisfactory. Unfortunately, in Part (d) (ii), candidates wrote in general terms about hazards without relating the information to the site in question.

SECTION B

Module 1: Population and Settlement

Question 2

This question, which tested the candidates' knowledge of population structure, was the most popular on this paper. However, the overall performance was not very good. While most candidates were able to identify the features of the population pyramids presented in Part (a), they were less successful in accounting for the shape.

In Part (b), many candidates restricted their accounts to the base or apex of the pyramid rather than address its overall shape. Some gave general information on age-sex pyramids.

In Part (c), candidates were asked for the implications for a country showing the age structure depicted. Again, the candidates appeared to have been defeated by the meaning of the word 'implications', interpreting it as recommendation or solutions. They were unable to distinguish between 'social' and 'economic'.

Question 3

In Part (a), candidates did not fully understand the concept of counter urbanization; a process associated with developed countries and tended to confuse it with suburbanization. Few gave credit to technological developments, the shift from manufacturing to services and improvements in technology. Instead there were very simplistic descriptions of crime and overcrowding in city centres and efforts by governments to reduce the urban sprawl.

In Part (b), most candidates were able to identify housing problems common to developed and developing countries in Part (i) and to compare problems in Part (ii). However, too many candidates committed the all too familiar error of writing separate descriptions as a means of comparison. Candidates were not given full credit for this approach. Teachers should discourage the tabulation of answers when comparisons are requested.

Part (c) focused on weathering under different climate zones and produced quite good results with many candidates displaying a good grasp of weathering processes. Some candidates, however, produced general descriptions of weathering without naming the type. In addition, there were far too many instances in which weathering was confused with erosion or the weather.

Question 5

Part (a) (i) focused on the karst landscape. This appears to be a neglected area. Far too many candidates could not give a simple definition of this type of landscape. Others represented it as one of the features found in limestone regions. The important element in the description is the solution of limestone.

In Part (a) (ii), candidates were required to explain why karst features develop on only a small proportion of limestone that covers the earth. One question demanded an application of knowledge of the factors necessary for the formation of karst landscapes – the quality of the limestone and the climate vegetation. Responses were extremely weak.

In Part (b), candidates were asked to explain how two factors cause flood plains to be most well developed in the lower courses of rivers. Here, too, the responses were poor. Some candidates described features of the lower course. They could not explain the interplay of erosional and depositional forces. There were several misconceptions, for example, that velocity automatically decreases at the plain stage.

Responses to this question revealed that candidates lacked analytic and interpretive skills and that few of them can perform above the purely descriptive level.

Module 3: Natural Events and Hazards

Question 6

Part (a) of this question tested the candidates' knowledge of the benefits of folded and faulted landscapes. In general, candidates performed poorly. Some described ways in which folded and faulted landscapes were formed. Others were able to state benefits but could not elaborate or give specific examples.

In Part (b), candidates were tested on their knowledge of risk avoidance and risk reduction strategies. They did not distinguish between reduction – building standards, retro-fitting; and avoidance – land use regulations, education. Moreover, the question asked for strategies that could be adopted by governments. Candidates wrote extensively on hazard management rather than focus on those strategies that could be implemented by governments.

Question 7

This question tested knowledge of the consequences of sea level rise and features at convergent and divergent plate margins. The majority of candidates attempted this question and while most responses were weak there were a few excellent responses.

In general, candidates were aware of the consequences of sea level rise in Part (a), but far too many focused on causes rather than the consequences.

The responses to Part (b) suggested that most candidates have a fairly good grasp of plate tectonics and features of plate boundaries. However, they struggled in making clear comparisons between the features and the movement. Many comparisons were not touched on at all, for example, type of lava and resulting land forms, type of eruption.

UNIT 2

PAPER 01

Module 1: Climate, Vegetation and Soils

Question 1

This question tested the candidates' understanding of adiabatic processes. The very few who understood the concept and mechanism were able to gain full marks. The majority, however, floundered. In particular the crucial concept of temperature change **without** heat exchange between the atmosphere and the rising parcel of air was invariably omitted in Part (a) (i). The changes associated with rising and sinking needs to be fully explained.

In Part (a) (ii), many candidates could not explain the term 'lifting condensation level'.
Parts (b) (i) and (ii) tested the application of DALR to conditions of temperature and height. Some applied the ELR which was inappropriate given that the parcel of air was moving. Others did not use any lapse rate but treated the issue as a straight mathematical ratio, that is, if the temperature at 4000 m is –

10 C then at 2000 m it would be $\frac{-10}{4000}$ 2000. This, of course, is not what is expected from geography candidates.

Question 2

This question tested the understanding of soil development on hill slope. Most of the candidates understood the role of the changes in gradient on processes in Part (a) but were unable to elaborate on the results – thin/ thick soils, dry/waterlogged soils – to earn full marks. In Part (b), method of vegetation sampling was generally done well.

Question 3

Part (a) of this question required candidates to describe the properties of soil horizons. Most candidates gave satisfactory responses. The weaker candidates focused on descriptions of soil horizons and of the processes resulting in the formation of horizons such as various type of translocation. Part (b) focused on the role of crop rotation in soil conservation and was also well done.

Module 2: Economic Activity

Question 4

The informal sector in Part (a) and difficulties experienced by manufacturing industries in the Caribbean in Part (b), were the areas tested in this question.

Part (a) posed some difficulty. Candidates wrote a great deal about the benefits and characteristics of the informal sector rather than the reasons for the growth of the sector, that is, the ease of entry, the lack of job opportunities in the formal sector. In Part (b), candidates did not identify the difficulties being experienced as requested and even when they identified a difficulty their responses took the form of very brief statements.

Question 5

Part (a), the assumption of Von Thunen's model was well done as was Parts (b) (i) and (ii), the calculation of locational rent and the construction of the bid-rent curve.

Question 6

In Part (a), candidates showed a good understanding of the reasons for the growth of world tourism and the majority earned maximum marks. The performance on Part (b) which was based on a table showing tourist arrivals in Barbados was fair. The major weakness here was that candidates gave reasons for the pattern of arrival rather than a description of the pattern as requested. Many of the descriptions were simplistic consisting of a statement as to whether the figures moved up or down, month by month. The majority of candidates were unable to give a broad picture.

Module 3

Question 7

The focus of this question was on the concept of a region. In Part (a), there was confusion between types of region and the application of the concept at different levels, for example, local and international. The candidates were unable to justify the need for regional planning as a result and gave very general reasons in Part (b).

Question 8

This question posed grave difficulties. Candidates seemed not to understand the term 'spread effects' and, therefore were unable to relate it to regional integration in Part (a). In Part (b), there was some confusion of the models of Rostow and Friedmann but most were able to list Friedmann's four stages of growth. Candidates did not understand the term 'demographic'! They described social, economic and geographic constraints to development rather than characteristics of the population.

Question 9

The stimulus in this question was a table in which candidates were asked to insert the measurements used in the Human Poverty Index in Part (a). Many were unable to do this due to lack of basic knowledge. Similarly, few candidates were familiar with other measures proposed to overcome the deficiencies of the HDI. They were not acquainted with gender empowerment and development measures, for example.

PAPER 2

Question 1

Parts (a), (b) and (c) of this compulsory map work question was based on a map extract of Spanish Town, May Pen, Jamaica, on a scale of 1:50,000. The performance on this section was better than that obtained in recent years. Candidates were able to identify the different types of vegetation in Part (a) (i) and fewer than in previous years listed cultivated crops. There were also fairly good attempts to describe the distribution of the vegetation types but, here too, grid references are required. Part (iii) was not as successful since candidates, while able to explain the influence of a physical factor on the nature of the vegetation, experienced problems in explaining human interference. They could have explained alterations in the vicinity of human settlements and degradation as the road network extended into woodlands.

Part (b) focused on reasons for the dominance of sugar cane cultivation as did Part (c) which asked for an account for the economic activity in a section of the map extract.

Part (d) was based on a table showing selected indices of development and the question tested knowledge of Spearman's rank. By and large, candidates performed well on all parts except Parts (d) (iii) and (iv) where they stated the relationship in general terms and did not appear to be acquainted with the need for tests of significance. Few candidates also knew that Purchasing Power Party PPP, was per capita GNP adjusted for the cost of living.

Question 2

This question tested the candidates understanding of the pattern of wind circulation in the upper troposphere and the factors affecting the formation of tropical grasslands. The performance on both parts was poor. Candidates wrote about the tricellular model which is not applicable to the upper troposphere. Few mentioned Rossby waves and Jet streams and those who did clearly had a poor understanding of the circulation. Almost no one appreciated the fact that jet streams are bands within Rossby waves. More effort must go into the teaching of physical geography.

In Part (b), candidates were asked to explain the role of climate and human factors in the formation of grasslands. Within tropical grasslands there are areas where edaphic conditions favour the growth of trees. But candidates could not be given full credit for focusing entirely on trees. Grasses are affected by drought and the fires that frequently sweep over the land, but there was an even more fundamental problem in the approach to this question. Candidates interpreted the question as the factors leading to the degradation of grasslands and desertification rather than the formation.

Question 3

In Part (a), candidates were required to write an essay describing the challenges and opportunities for the development of the tropical rain forest. The terms "challenges", "opportunities" and "development" were all misinterpreted by a significant proportion of the candidates. They could not see the need to maintain biodiversity, for example, as a challenge or the discomfort of environmental conditions, or the need to balance development and the needs of indigenous peoples and diversity. They could not identify opportunities for the development of drugs or of ecotourism. Candidates should ensure that essays include an introduction and a conclusion.

Part (b) called for the identification of different types of soil structure and most candidates omitted this section. There appears to be a fairly good understanding of the role of climate and vegetation; and the development of the soils of the tropical rain forest. They must, however, be clearer on the role of different aspects of climate – temperature, rainfall – on soil development.

Question 4

The diagram in Part (a) was an illustration of the changing patterns of employment typical of most developed countries, that is, the decline in manufacturing and the increasing importance of services. Candidates were asked to account for the pattern and their responses should have addressed the decline in heavy traditional industries; the shift to knowledge-based industries, employing fewer, highly skilled personnel, tertiarisation, rising incomes, the demand for services and the growth of tourism. The responses were very poor and not developed around specific examples.

Part (b) tested knowledge of recent trends in the export of primary products and candidates were invited to present opposing arguments for preferential treatment. Responses lacked depth. Candidates did not have a significant grasp of the status of the market for Caribbean products.

Question 5

The processes stimulating diversification of the industrial base in developed countries was the focus of Part (a). Many candidates addressed the factors affecting the location of industries. They did not address changes in technology, transportation, and demand for luxury goods.

Candidates were required to assess two advantages and two disadvantages of the development of all inclusive resorts. The responses to this section were fairly good. A few discussed tourism in general and not 'all inclusives'.

Module 3

Question 6

In Part (a), candidates were asked to describe types of transportation in the Caribbean and the problems associated with each type. Some listed the different means of moving by road, for example, bus and truck, but, in general, the listing of types – road, rail, air – was satisfactory. Many did not relate the problems to the territory which they were supposed to name and gave a general description of the problems associated with different types of transportation.

Part (b) was based on a quotation pertaining to the development of cores and peripheries under colonialism. Material for the question is clearly outlined in the Manual on Development. The plantations, mining towns and capitals were cores and the rest of the country, the peripheries. This was not well addressed. Many simply described the effects of slavery. Others interpreted Britain as core and the Caribbean countries as periphery which was, irrelevant in this context.

Question 7

The response to this question was very high. In Part (a), candidates were required to describe disparities existing between two Caribbean countries refering to physical economic and social disparities. Many did not identify specific countries. Discussions lacked organisation and there was a failure to isolate physical, economic and social factors. There was an imbalance in favour of economic disparities and some confusion in definitions. For example, there are disparities in relief, size, climate; in GDP, and employment; in education and health.

Part (b) tested the candidates' knowledge and understanding of post-colonial industrial strategies and the continuing importance of cities. Most candidates ignored 'industrial'. Most had little to say besides import substitution and even here their knowledge was sketchy and it was not discussed in the context of the importance of cities. Few candidates mentioned export processing zones (EPZs)/free zones, and data processing.

INTERNAL ASSESSMENT

A few areas showed improvements over 2006. Generally, candidates observed the word limit and there was an improvement in the cover page. A few of the studies were extraordinarily good and generally, these were in physical geography. The majority, however, continue to be weak and teachers continue to be lenient in the opinion of the Examiners.

Many of the hypotheses were weak: In many cases, the methodology was not appropriate given the purpose of the study. Terms such as 'random sample', 'stratified random sample' were used loosely and incorrectly.

There was a failure to distinguish between the perception of a group and the reality. A sample of persons could give information on their views of a problem and they may be right, but this cannot be presented as the causes of the problem. Much of the problems stemmed from the misuse of questionnaires.

It is clear that some centres are soliciting help from extra-department, extra-school sources. Some of the candidates clearly state the nature of that assistance. However, in many instances it was difficult to assess the actual work for which the candidates were responsible. Candidates wrote “laboratory tests were done” but not who did them. Moreover, when help comes from experts outside the discipline there is the danger that the resulting study may not be a geographical one. An expert can teach a technique but that has to be applied to the solution of a geographical problem. A study based on an experiment to determine whether a stand of trees was mature or immature is not geographical but the technique could be used to determine the status of two stands subject to different types of pressure. There must be no doubt in the Examiners’ minds that the work is that of the candidates. In a few cases, questions about this were raised.

For the most part there was no depth to the analysis. The type of texts appearing in the bibliography is ample evidence that candidates are not reading widely. In many cases, the references are to texts in use at the CSEC level. There is little reading outside of school texts.

It is expected that Maps must support the texts and should not be merely decorative. In a few instances there were more maps and tables than texts. This is surely a waste of the students’ time. The skills used must be appropriate to the Unit. There are a few schools that are still using the old syllabus and not the Amendment to the Syllabus. A single project is required for each Unit. Most of the problems could be avoided by vigilance on the part of teachers. It is not fair for candidates to be penalized for what can be considered ‘teacher errors’.