CARIBBEAN EXAMINATIONS COUNCIL

REPORT ON CANDIDATES' WORK IN THE CARIBBEAN ADVANCED PROFICIENCY EXAMINATION MAY/JUNE 2008

GEOGRAPHY
(REGION EXCLUDING TRINIDAD AND TOBAGO)

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CARIBBEAN ADVANCED PROFICIENCY EXAMINATIONS

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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 content of each Module. Each Module contributes 27 marks to the total 81 marks for the Paper. Paper 01 contributes 30 percent 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 135 marks for the Paper. Paper 02 contributes 50 percent to the Unit.

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

DETAILED COMMENTS

UNIT 1

PAPER 01

Module 1: Population and Settlement

Question 1

The stimulus for Question 1(a) was a diagram of the demographic transition model and in Part (a)(i), candidates were asked to describe the characteristics of Stage 4 and in (a)(ii) to name a country that had reached that Stage.

The focus of the responses was on the low birth rate and death rate and not on the total population or on the fact that, as in Stage 1, the birth and death rates fluctuated. Most were able to name a country at that stage. They were also able to define natural increase in Part (b) but relatively few could adequately explain how war influenced the shape of the population pyramid in Part (c). They ignored ‘the shape’ and described the general impact of war on population.

Question 2

In Part (a)(i), candidates were asked to name the theory illustrated in the diagram which showed the relationship between population and food supply. A surprisingly large number of candidates thought that the diagram represented the Lorenz curve rather than the Malthusian theory. However, in Part (a)(ii), the majority recognized the point at which population balanced food supply.

Part (b) called for a description of three types of migration - involuntary, circulation and step. Most candidates were familiar with involuntary migration and gave several examples of the occurrence. They were less successful in their attempts to describe circulation and step migration. The missing element in step migration was movement up the settlement hierarchy.

Question 3

In Part (a), candidates were asked to identify sectors in Hoyt's sector model and most were able to do so. Few, however, could state the assumptions of the model in Part (b), confusing these with the general details of the model. Part (c) was also not well done. In trying to distinguish between the site and situation of a settlement, candidates tended to use the same words and failed to portray site as the actual spot while situations reflected relation to surroundings.

Module 2: Hydrological, Fluvial, Coastal and Limestone Environments

Question 4

In Part (a), candidates were asked to distinguish between 'watershed' and 'catchment area'. There was more success in describing 'watershed' than catchment area, although in most cases, candidates were credited for an idea that was very poorly expressed. In Part (b)(i), candidates were asked to use a diagram to estimate the infiltration rate after 15 minutes of rainfall. Some were not sufficiently careful to be close enough to the correct response to receive credit, but it was generally well done and they proceeded to give reasonable responses to Part (b)(ii), the difference between rates of 15 minutes and 1 hour of rainfall, and Part (b)(iii), a possible explanation of high infiltration rates throughout the rainfall event.

Question 5

In Part (a), candidates were expected to draw a diagram showing the main features of either a braided stream or a meandering stream. The diagrams were very poorly executed. Candidates showed no knowledge of what was expected in a diagram. Meanders were represented as bends and braided channels were without direction of flow. Labeling was poor or omitted. Diagrams were not enclosed. Rudimentary steps in drawing diagrams were not appreciated. The responses to Part (b), a description of a condition under which a braided stream developed were fairly good. Candidates were not acquainted with the manner in which coastlines changed as deltas developed which was required in Part (c). This part had a very high percentage of candidates who gave no response.

Question 6

In Part (a)(i), most candidates were able to make an association between karsts and limestone. Few associated solution process with the formation of karst topography. They were generally unable to say why this topography was not well developed in Arctic regions as required in Part (a)(ii). They confused cross-profile and long-profile in Part (b) and focused more on the river channel than on the river valley.

Module 3: Natural Events and Hazards

Question 7

In Part (a), candidates were presented with a description of three events and were required to identify each type of hazard. The response was fair, but many did not see the failure of flood walls after Hurricane Katrina as a technological hazard. They represented it as a climatic hazard or as a flood.

In Part (b), the features resulting from sea-floor flood spreading was not well done. Candidates were credited for identifying the topographic features but in general, they could not describe their formation or could not describe them in the context of sea-floor spreading.

Question 8

Part (a) called for an explanation of why some tectonic plates subducted while others did not. The responses were extremely superficial. Some knew that it was related to the density of the plates but failed to say which of oceanic and continental was more or less dense and the relation to subduction. The responses to Part (b) were similarly unsatisfactory. The flooding that follows volcanic eruption was attributed to tsunamis rather than the expected melting of snow, ice or the bursting of dams created by lava flows.

Question 9

It appears as if candidates did not read Part (a) carefully. No consideration, in many cases, was given to the fact that the warning to the people of Yunnan was given a few minutes before the earthquakes. So, candidates wrote about the recurrence intervals. Some related the unusual activity of animals but not the tremors or movement of groundwater.

Part (b), requested information regarding post-disaster activities immediately following earthquakes. There were very good responses. Again, candidates must be encouraged to read questions carefully. Too many wrote of the long-term rather than the immediate responses.

UNIT 1

PAPER 2

Question 1

The map work question was based on a map extract of Dominica on a scale of 1:25,000.

In Part (a), candidates were required to account for the distribution of population on the map extract. They were therefore requested to give reasons for the way in which the population was distributed. A response that earned full marks, would have described the distribution and given reasons why the population was distributed in the way described. It would have drawn attention to the sparse population of the interior and the concentration on the coasts. Relief distinguished interior from coastal areas and the concentration along the coastal region could have been explained in terms of roads and economic activity. In the elaboration, there could be a discussion of nucleated and linear patterns but the focus should not have been on patterns. Services tend to follow populations rather than vice versa. Students should be discouraged from using churches and schools as reasons for population distribution. They are not usually established in empty areas.

A grid was provided for Part (b) and on it candidates were asked to draw the course of a river, insert the stream order of the tributaries and the watershed of the basin. There were good responses to this section. However, many candidates did not appear to understand the concept of a watershed.

Part (d) called for the interpretation of a photograph which showed a conservation measure on a slope. The question asked for evidence of instability, the type of hazard posed and an explanation of how the conservation measure afforded protection. Few candidates had problems in identifying the evidence of instability but the hazard and protective measure posed difficulty for many.

Module 1: Population and Settlement

Question 2

The stimulus for Part (a) was a map of the world showing population distribution. Candidates were asked to describe two features of the distribution; to identify four factors affecting population on a global scale and to explain how the factors affected the distribution shown on the map.

While candidates correctly listed four factors affecting population distribution, they were unable to relate those to the pattern on the world map. The factors seemed to be studied in a vacuum and without reference to actual population distributions.

In Part (b), candidates were sent on an imaginary walk along a transect of a city in a more developed country (MDC) and were asked to describe the zones. They all identified the CBD but this became the opportunity for them to enlarge upon the functions of the central business district (CBD) and they ignored the fact that a description was required – the buildings, retail centres, areas in decline. Some candidates failed to identify the second zone requested.

Question 3

The diagram in Question 3 showed real and projected population growth in developed and developing regions and in Part (a)(i), candidates were asked to describe the growth shown on the diagram. Candidates should be advised that when they provide more than what is requested they do not earn more marks. Too many candidates combined a description with very poor attempts at explanations. It is more rewarding for them to concentrate their energies on the provision of full descriptions of the phenomenon presented. In Part (ii), they were asked to describe projections for growth in developing regions. Again, many gave projections for both developed and developing regions. Nevertheless, those who applied themselves to the given task performed creditably.

In Part (b), the performance on the essays on the economic, social and environmental consequences of migration on the sending country was fair. There was some confusion between sending and receiving countries and among social, economic and environmental consequences. The responses for the environmental problems caused were particularly weak. When essays are requested, an introduction and conclusion are required.

Module 2: Hydrological, Fluvial, Coastal and Limestone Environments

Question 4

Part (a) called for a description of three transfers within the hydrological cycle. This was a popular question. Candidates correctly identified the transfers but could not describe the transfer process, that is, the movements from one store to another. There was some confusion in distinguishing ‘through flow’ from ‘ground water flow’ and ‘infiltration’ from ‘percolation’. However, in general, there was a fair response to this section.

In Part (b), dealing with the influence of physical and geological factors on drainage patterns, candidates identified the patterns but many were unable to explain the influence of geology and relief. Some could not distinguish between 'geology' and 'relief'.

Question 5

Few candidates attempted Question 5. Several candidates were able to give a fair outline only of the contributions of Darwin and Daly to the development of theories on coral reef formation in Part (a). There was more familiarity with Darwin's contribution than with Daly's but a few candidates had a thorough appreciation of both.

In Part (b), candidates had a fair knowledge of the types of landforms that develop in coastal regions. They had difficulty explaining the processes. Explanation for the development of bayhead beaches were fair, but barrier islands and shingle beaches presented greater difficulties. The diagrams were very poor.

Module 3: Natural Events and Hazards

Question 6

In Part (a), candidates were asked for two ways in which human activity contributed to imbalances in the hydrological system. The most common responses were urbanization, deforestation and blocked drains but they did not make the link with imbalances.

Part (b) requested the reason(s) for earthquakes only occurring in well-defined areas. The response expected is that earthquakes are associated with plate margins. Maps were provided for candidates to show the location of the margins. The maps submitted by candidates, lacked titles, keys and it wasn't clear what they were trying to show. Candidates were unclear about the types of plate margins and often, the link with earthquakes was not clearly specified. The essays lacked introductions and conclusions.

Question 7

The stimulus for Part (a) was a modified diagram – one that appears in the most widely used text on hazards. Many were not acquainted with it and the type of hazard it represented. Candidates stressed the hazard associated with the eruption of a volcano and not with the escape of gas.

In Part (b), many were able to list indicators that could assist in prediction of short-term volcanic eruptions, but could not explain their use. Some mentioned the instruments used.

UNIT 2

PAPER 1

Module 1: Climate, Vegetation and Soils

Question 1

Figure 1 in Part (a) depicted the Earth's radiation balance and candidates were asked to define the term 'heat balance'. There were long attempts to explain what is meant by the term but few were able to give a concise answer. Many could not move the explanation beyond vertical uplift to encompass heat gain in higher latitudes due to the transfer from lower latitudes.

Part (b) called for a description of the processes by which the earth maintained its energy balance. The information was presented in the diagram and the candidate who interpreted the diagram correctly could have earned full marks. Many did. Others described the greenhouse effect, losses from absorption and conduction, all unnecessary.

Question 2

In Part (a), candidates were asked to draw a diagram to show wind direction in a hurricane. Most could not draw a diagram. Those who had an idea of what was needed were confused about directions – clockwise and anti-clockwise. In Part (b), candidates showed little knowledge about the weather conditions caused by anticyclones and instead, wrote about hurricanes.

Question 3

For Part (a), most candidates drew diagrams of the typical soil profile rather than that of chernozem soils as requested. Similarly in Part (b), rather than describing the processes by which latosols are formed, candidates wrote general descriptions of soil formation.

There were better responses for Part (c) which focused on the modification of soils by ploughing and manuring. Most obtained full marks.

Question 4

There were quite good responses to this question. Candidates were asked to assign activities to the appropriate economic sector (a), to indicate on a map, the area best suited for the growth of sugar cane in Part (b) (i) and to give reasons for the choice of the area in Part (b) (ii).

Question 5

In this question, candidates were asked to describe three factors hindering industrial development in a named Caribbean country.

Size imposes limitations. It restricts the range of resources and the size of the market. It is along these lines that candidates were expected to develop an argument. By far, the majority saw size in terms of physical space. Islands did not have room for industrial enterprises. This is not acceptable at this level. There were, however, some excellent responses and a few candidates earned full marks.

Question 6

For Part (a), a table with tourist arrivals in three regions was presented and candidates were asked to identify a pattern in Part (i) and suggest a reason for the pattern in Part (ii). The responses to these two sections were fair. However, the same cannot be said for Part (iii). Here, candidates were asked to name the region which made the shortest recovery and, it appears that the candidates were influenced by numbers rather than the percentage increase. The two techniques designed by Weber to measure and map differences were isotims and isodapanes. The majority failed to identify these.

Module 3: Development and Disparity in the Caribbean

Question 7

Candidates exhibited very little success at defining terms and most failed to give an adequate definition of 'economic development'. Answers were very vague. The diagram, showing two stages by Friedman's model could have assisted those who were familiar with the theory to describe the changes that had occurred between the two. The fact that most candidates could not describe the changes, showed that there was a knowledge gap. Some attempted to interpret the diagrams, but in an obvious vacuum and so could not earn full marks. Part (c) based on Myrdal was also poorly done.

Question 8

Parts (a) (i) and (ii) were based on a diagram showing the relationships between the Human Development Index and Technology Achievement Index. Most candidates were able to interpret the relationship in Part (a)(i) as well as the position of three countries on the graph in Part (a)(ii). Part (b) required reasons why indicators of development were useful tools. It was also fairly well done.
Part (c) focused on disadvantages of using the death rate as an indicator of development. Both parts were well done with some of the responses to Part (c) being quite inventive.

Question 9

It appears that when this Module is covered in class, candidates perform exceptionally well. Some of the best responses in both Papers 01 and 02 came from this Module. However, "when the responses were bad, they were horrid". One way to address this problem is to devote more attention (time and planning) to this Module. The effects of colonialism on economic development had many good and many extremely poor responses in Part (b). The attempts to explain why spatial equality was desirable were less successful. In general, candidates did not come to grips with the spatial aspects which is important in Geography.

UNIT 2

PAPER 2

Question 1

This question was based on the map extract of Edgecliff, Barbados, on a scale of 1:10,000. In general, responses were poor, more so than in Unit 1, Paper 02. There is the persistent inability to distinguish between natural and cultivated vegetation in Part (a) (i). For many years the Reports on candidates' work have stressed that candidates ought not to present sugar cane, bananas and other crops as natural vegetation. Shrub should not be confused with scrub. Yet, the majority continues to do so. The reason for the change in land use ought to have been a clearly recognizable change in slope in Part (a) (ii). The interpretation of contours is one of the earliest lessons in map reading. Those candidates, who recognized this could provide no elaboration to earn the full three marks.

Part (b) required candidates to use their knowledge. An area with a sparse population and good transportation system would not need more than a few basic services. Residents could easily obtain higher order services from nearby towns. Few candidates were able to use what they learned in settlement geography to answer this question.

In Part (c), candidates were asked to comment on the suitability of an area for the growth of sugarcane. The "growth of sugarcane" is quite different from the production of sugar. Many candidates correctly referred to the rolling relief. Although they recognized the underlying geology, they did not see the implications that thin soils are best suited to grasses and fertile soils are associated with the depressions.

Few candidates saw credible opportunities for and constraints to development of the area in Parts (d) (i) and (ii). They wrote in general terms ignoring map evidence. They could have been credited for discussing the lack of surface water, the many depressions, the extent of surfaced roads; all apparent on the map extract.

Module 1: Climate, Vegetation and Soils

Question 2

There were many good responses to Parts (i) and (ii) which required the interpretation of a graph showing the relationship between air temperature and water vapour content.

In Part (b), discussion of atmospheric stability and instability does not make sense if there is no indication of vertical movement of small parcels (thermals) of air. A large number of candidates gave no indication of movement. It was not clear that they knew that there was no uplift of large masses of air. There must also be a better appreciation of the relationship between the movements of the thermals and the environmental lapse rate (ELR).

Part (c) was misinterpreted. Almost all the candidates wrote (and not very coherently) about the stages in the development of a depression, sometimes a tropical depression. Yet, the question clearly requested changes in weather conditions **during** the passage of a mid-latitude depression. The two are different and well covered in the texts that are commonly used. The focus should have been on weather conditions at the approach of the depression, the warm front, the warm sector, the cold front and with the passage of the depression. Greater attention needs to be given to this area of the syllabus.

Question 3

This was the most popular question in Module 1 but it was clear that candidates felt that they could address questions about specific soils by giving answers that could apply to any soil. They were not credited for this. Soils develop under different climate regimes which leave their imprint on the characteristics of the soil. Leaching, for example, does not have important effects on soils under all types of climate. Plants are living organisms and the constant dying off of grasses and the action of their roots have a major effect on grasses and the soils which develop under temperate grasslands. It was rare to find scripts in which these issues were discussed. Instead, candidates wrote of the action of earthworms which was more appropriate for a question on the role of earthworms in the development of soil structure.

Agro-forestry and dry farming as soil conservation techniques seemed unfamiliar to the majority of candidates. At this level, candidates are expected to move beyond crop rotation which was the only technique familiar to them. They appeared to have drawn upon work done for CSEC.

Module 2: Economic Activity

Question 4

The syllabus makes it clear that students should be made aware of the changes that are occurring in farming as in industry, or else, the subject would be static. Factory farming is not new, but is becoming more important in more developed countries (MDCs). It is also highly controversial partly because of its presumed environmental and health effects. Almost all the meat entering the market is produced under these conditions. All indications were that candidates were not familiar with these types of farming as demonstrated in their responses to Parts (a), (i) and (ii).

Part (b) tested candidates' knowledge of changes in Caribbean agriculture. Only a few candidates were able to identify a specific change in the market for sugar-cane and bananas in spite of their far-reaching effects and the discussions that have been taking place over the past four years. Those few who could identify a change in market conditions could not go beyond 'a cut in preferential treatment' and were unable to discuss the effects on agriculture such as divestment, closures, contractions, transformation of rural landscapes, and fair trading in the Windward Islands.

Question 5

This was the more popular question in Module 2. Part (a) was based on a graph which showed employment in different sectors in industry in the United Kingdom. Candidates were asked to discuss the changing relationship in employment among the sectors. This was fairly well done. The main problem was that many candidates described the changes in each sector and not the relationship among the sectors. They also attempted to give reasons for the changes and this was not required.

In Part (b), candidates were required to discuss the changes in a named major industrial region. This was very badly done. Candidates are not performing well on questions where specificity is required. Jamaica, Trinidad and Barbados are NOT major industrial regions. The United Kingdom and the USA are not industrial regions. Students are required to study regions such as South Wales, Northeastern USA. Very few candidates wrote specifically about these regions.

Module 3: Development and Disparity in the Caribbean

Question 6

The responses to this question were fair. Most were able to identify the types of regions but had less success in explaining why they were demarcated in Part (a). Part (b) which dealt with the spatial impact of export production in the colonial period was fairly well done – plantation, towns, and mining centres versus the rest.

Question 7

The confusion over the impact of size on development once more emerged in Part (a)(i). The problems posed by size must be properly addressed in classes. There were better responses to the constraints posed by natural hazards and proximity to the USA.

Part (b) asked for three problems that hinder the development of trade among Caribbean countries. Candidates were more inclined to discuss the problems that hinder general development in the Caribbean.

UNIT 1 AND 2

PAPER 03: INTERNAL ASSESSMENT

1. Format or Structure

The format or structure of the project report has deteriorated; there is some misinterpretation especially in using the:

- mark scheme as an outline
- CAPE Caribbean Studies format
- CSEC Geography SBA format

Presentation of data

There were too many instances of (a) a chapter titled 'Presentation' which is simply a collection of illustrations, with little or no text OR (b) 'a collection of illustrations, each followed by a description or analysis of that specific figure, a format used in Caribbean Studies.

Location

Many candidates followed the CSEC SBA format and inserted location maps in the report before the Presentation chapter.

Presentation of data should be a thorough description of data collected, whether quantitative or qualitative, with illustrations integrated into the text.
Location maps should be incorporated into background or description of findings, as part of Presentation of Data.

2. Use of Inappropriate Techniques

Questionnaires

As stated in last year's report, too many studies, especially in Unit 2, are employing questionnaires inappropriately. For example, a questionnaire was used to (a) establish the causes of flooding in a village in Trinidad, (b) to determine the causes and consequences of coral reef degradation in a tourist zone, (c) to determine factors influencing location of a bauxite processing plant, and (d) to analyse the causes of soil erosion. A questionnaire can, in these inquiries, only be used to establish 'perception' of causes.

Secondly, techniques not listed in the syllabus are being employed to gather data. It is essential that the syllabus be studied carefully and students guided accordingly.

Appropriate methodologies should be chosen to ensure that the research questions can be adequately addressed.
The syllabus should be carefully consulted when projects are being planned.

3. Inappropriate Use of Techniques

Use of Questionnaires

In many cases, a questionnaire was described in the methodology chapter as the instrument being employed. However, there is often no evidence that the questionnaire was used to acquire the data eventually presented. In these cases, there is simply reporting of secondary data (from literature,

interviews) with the questionnaires providing only some background of age/sex/occupation, and sometimes not even that.

Methodologies should include not only a description of specific techniques, but also how the data collected will be used.
The data collected as described in the methodology should form the basis of the projects: analyses should be based on the data collected by the student.

4. Poor Use of Maps

There is poor spatial analysis of data collected. There appears to be a trend away from using maps in geographical analysis.

Examples of poor map use:

(a) In studying 'Incidence and impact of tropical storms and hurricanes on an Eastern Caribbean island', changes in storms statistics (speed, pressure, etc) with time and tracking maps were shown, but no synoptic maps employed. What better way to display and analyse map data but with synoptic charts?

(b) In 'Testing on von Thunen agricultural land use model in an agricultural region in Jamaica', a questionnaire was employed to collect data (crops grown, practices, etc) from farmers, but the useful data were then simply described. There was no attempt to map the data. Land-use models are about variation in space. It is expected that they will be tested using maps.

Much of geographic inquiry is still about spatial variation of phenomena, and as such, map interpretation and analysis is still integral to much research.

5. Analysis and Discussion

Again, many of the projects were purely descriptive.

A careful formulated research question will help to guide students in conducting analyses and discussion.

6. Poor Planning and Limited Teacher Involvement

Some project reports raised doubts about the extent to which candidates had adequate guidance in planning and executing the study.

Tip for the Teacher:

A good project is carefully planned and analysed, before broaching the topic to the students. If field based, a reconnaissance field trip is conducted; if based on secondary data, this should be examined beforehand to ensure that the data are adequate and appropriate analyses can be made. A draft outline should be written, or at least conceptualized, to ensure that students can be adequately guided.

7. Marking

Most of the project reports were awarded marks in excess of worth.

Very few projects reached the standard expected at this level. Most of the problems were design issues and this is indicative of the need for better guidance.