

CARIBBEAN EXAMINATIONS COUNCIL

**REPORT ON CANDIDATES' WORK IN THE
ADVANCED PROFICIENCY EXAMINATION
MAY/JUNE 2010**

GEOGRAPHY

GENERAL COMMENTS

This year, 2 110 candidates wrote the CAPE examination in Geography. The number writing Unit 1 was 977 while 433 wrote Unit 2.

There were some improvements in map-reading skills. It would appear that there was greater success in completing the syllabus since most candidates attempted the questions in Module 3 and there was an improvement in the performance on this module over previous years. Improvement was also noted in the physical section of Unit 1, Module 2.

DETAILED COMMENTS

Paper 01 – Multiple Choice

Paper 01 comprised 45 multiple-choice items with 15 items assessing each module across the three cognitive levels, Knowledge and Comprehension, Application of Knowledge and Practical Skills.

For Unit 1, the mean percentage score was 57.7 with a standard deviation of 9.9. For Unit 2, the mean percentage score was 53.0 and the standard deviation was 10.3.

UNIT 1

Paper 02 – Free Response

Section A

Question 1

This was the compulsory question and was based on a map extract of Trinidad as well as two photographs.

In Part (a), candidates were asked to explain the distribution of population shown on the map extract. Candidates were expected to comment on the influence of relief, the road network and the vegetation. Most were able to identify the influences but could not sustain the discussion for 15 marks. They could have drawn attention to the sparsely populated rugged interior and the nucleated settlement in areas of gentle relief and along the coast. The influence of the main east-west road was noticeable and the more discerning student should have been struck by the difference between the settlement pattern on the east-west road and the total absence of a similar class road leading to the northern coast.

In Part (b), candidates were asked to draw a sketch map of the northern coastline and to state six characteristics of the coastline. Some did not draw the entire coastline. Many neglected to include a key and title. Many listed features on the coastline for example, a bay, a headland. To present a list of features is not to state the characteristics. Candidates did not appear to make a distinction between *list* and *state*. Moreover, the statement ‘there is a bay’ is not acceptable, ‘the coastline is embayed’ is better. They could also have given the trend and mentioned the fact that it was rugged.

In Part (c), there were two photographs which showed the effects of flooding. The photographs, one in particular, could have been clearer. However, it was obvious that some dwellings were standing in water and that there were objects partly buried in debris. Most candidates had no difficulty identifying flooding as the hazard in (c) (i). However, many candidates did not appear to understand the concept of vulnerability in (e) (ii). In addition, the fact that houses are built on stilts, a strategy used in flood-

prone areas, does not mean that residents are not vulnerable. Poorly constructed houses could be washed away by rising flood waters; in the second photograph, water, obstructed by debris could be diverted into homes; also, there is the problem of water-borne diseases.

In the final section, (c) (iii), candidates were asked to state the negative and positive impacts of the hazard on the physical and human environment. Candidates need to have a clearer understanding of what constitutes the human and physical environment. Severe soil erosion is an effect on the physical, while the destruction of property and the dislocation of families are effects on the human environment. Floods also fertilize the soil and, in the initial stages, may flush out the breeding places of mosquitoes.

Many candidates did not use the cardinal points in describing direction. Instead, they used the word *up* when they meant north and *down* instead of south.

Module 1: Population and Settlement

Question 2

The stimulus in this question was a table showing the estimated population of Barbados by parish and in Part (i), they were asked to calculate the population density of two parishes. This was well done.

In Part (b), candidates were required to define circulation and forced migration. There was more success with the definition of forced migration than with circulation, the latter being the *short term, repetitive, cyclical movement which does not involve a permanent change of address*.

In Part (c), candidates were asked to explain why the distribution of the world's population was uneven. This was just another way of asking for an explanation of the world population distribution. This was fairly well done. Those who produced good responses explained the presence of major clusters such as those in north-western Europe and South Asia as well as sparsely populated regions. The good responses were based on distribution at a global rather than a local scale. One of the texts in use is misleading and candidates must be able to distinguish between factors that may account for the siting of a settlement from those which account for major concentrations.

The response rate for this question was 64 per cent.

Question 3

Thirty-six per cent of the candidates attempted this question. Candidates had very vague notions of the terms *natural* and *human* resources required in (a) (i) and (ii) and most responses were unsatisfactory. *Natural resources are those that are not created by people but exist in the earth and are used for production and consumption. Human resources, on the other hand, consist of the labour, skills, talents, knowledge and abilities that enable human beings to be productive economically.*

Part (b), based on a table showing the world's largest cities in 1950 and 2000, was well done, in that most of the candidates were able to identify the changes in the status of cities in the 50-year period.

In Part (c), candidates were asked to explain how the process of urbanization differed in less economically developed countries (LDCs) and more economically developed countries (MDCs). They could have outlined *the stronger link with industrialization initially, and mechanization in agriculture in MDCs; the neglect of rural areas in LDCs; the colonial impact and the development of primacy in LDCs contrasting with a greater network of cities in most MDCs; the association with squatter settlements in LDCs and the recent de-urbanization in MDCs*. Candidates were inclined to focus on rural-urban migration and differences in standard of living. In general, this section proved to be challenging.

Module 2: Hydrological, Fluvial, Coastal and Limestone Environments

Performance on this module was extremely weak, far below the standard which obtained in 2009.

Question 4

The questions in Part (a) were based on a diagram of a meandering channel and a cross section of it. While most candidates were able to identify areas of high, medium and low flow required in (a) (i), many could not identify the thalweg, the line of fastest flow in the river.

Part (b) required a description of a barrier beach and a berm. Candidates failed to distinguish between *describe*, that is, to present a word picture and *explain*, or give the cause, the reason, to say why. *A barrier beach is an offshore bar separated from the coast by a lagoon, running parallel to the coast. Berms are low embankments of sand or gravel found on sandy beaches*. These are descriptions. In addition to this weakness, the majority of the candidates did not demonstrate familiarity with these features.

In Part (c), candidates confused depositional and erosional features of rivers. There are many depositional features from which to choose — alluvial fans, deltas, levees, flood plains. Many of the features mentioned were not fluvial. There must be a concerted effort to expose students to the language of the subject and to encourage regular use. The quality of the responses, here, as in far too many of the questions, was not what is expected at this level. This was the more popular of the two questions in Module 2 with a 57 per cent response rate.

Question 5

Candidates performed very poorly in Part (a) which focused on the beach profile. It appears that the features of a beach are not recognizable outside a familiar diagram. Candidates need to be encouraged to read widely and consult other creditable sources outside of a prescribed textbook.

Candidates were unable to define the terms *beach* and especially *beach profile* in Part (b). They knew that there was a link between the beach and the coast but few described it as *a depositional feature, an accumulation of sediments deposited by waves*. The profile was a cross section taken perpendicular to the beach contour. It described the slope of the material deposited on the shoreline.

Performance was equally poor on Part (c). Candidates were asked to discuss physical and human factors accounting for changes in the extent and composition of beaches. They were better able to discuss human factors such as various types of coastal barriers and sand removal. But the discussions were weak and they ignored the terms *extent* and *composition*. Physical factors such as changes *in sea level*, *wave strength*, and *cliff slumping* were mentioned by very few.

Module 3: Natural Events and Hazards

There was an improvement in the performance on this module this year.

Question 6

In Part (a), candidates are expected to know the order in which earthquake waves arrived and the diagram of the waves recorded by the seismograph ought to have been a familiar one. However, very few gave the correct responses to these questions.

Part (b) required candidates to describe the biological and geological evidence to support the theory of continental drift. It would be advantageous to candidates for teachers to clarify the difference between the theory of continental drift, a theory that continents were adrift attributed to Wegener, and plate tectonics, the movement of lithospheric plates on the asthenosphere. Although presented in the texts under one general heading, the concepts are different. Biological, climatological and geological evidence was advanced in support of continental drift. Many candidates performed well on this section. However, some confused biological and geological evidence. *Reptilian fossils on both sides of the Atlantic Ocean and plants which must have been grown under different climatic conditions* were some of the expected responses. *Rocks of similar age and structure* could have been offered as geological evidence.

In Part (c), candidates were asked to describe the formation of landforms at constructive and destructive plate boundaries. Apart from the few who confused the processes and who were more familiar with the terms *convergent* and *divergent*, and could not translate the processes in terms of *constructive* and *destructive*, this section was well done. Candidates described the ridges, volcanoes and basaltic plateaux at constructive margins and the trenches, island arcs, folds and volcanoes at destructive margins.

The response rate for this question was 64 per cent.

Question 7

In Part (a), candidates were given a table showing precipitation for the period 1970 — 1993 and the formula for calculating the recurrence interval. They were then asked to use the formula to calculate the recurrence interval for events of two magnitudes. Very few candidates were able to perform the task.

The majority of candidates were unable to define *recurrence interval* or *seismic gap*. *The recurrence interval is the interval between occurrences of a given magnitude while a seismic gap, is a segment in*

an active fault where no movement has taken place for a long time when compared with other sections, and is considered a site for future activity.

In Part (c), candidates were asked for advantages and disadvantages of strategies to mitigate the effect of river flooding. *Mitigate* is a term with which all candidates who studied hazards should be familiar. It was clear that many were unfamiliar with the term. Examiners expect candidates to be able to discuss broad strategies such as land use regulation, levees, channelization, emergency action, dams and reservoirs. Instead, there was an obsession with the clearing of drains blocked by garbage. Some mentioned draining without a strategy for draining. These are not the responses expected of students who have studied geography and are being tested on subject matter for which the materials are accessible. While the performance on this section was better than on Parts (a) and (b), it was nevertheless unacceptable.

UNIT 2

Paper 02 – Free Response

Question 1

This was the compulsory question and was based on the map extract of Savanna-la-Mar, Jamaica. There was a marked improvement in performance over 2009.

In Parts (a) (i) and (ii), candidates were required to identify, describe and account for the distribution of three types of natural vegetation. The majority of candidates were able to identify three of the types from *woodland, mangrove, shrub and trees, marsh and swamp*, and to account for their distribution by indicating the *high water table* and *impeded drainage*, and the *influence of nearby settlements*. Somewhat fewer described the distribution adequately.

A grid was provided for Part (b) and candidates were asked to draw a sketch map, insert different types of land use in (b) (ii) and account for the pattern of the main type of agricultural land use in the area in (b) (iii). The sketch maps were very poorly drawn and here too, candidates ignored basic map reading skills such as the provision of a key and a title. There was better success in the identification of the different types of land use and in accounting for the distribution of sugar cane — relief, water and accessibility.

Part (c) tested candidates' ability to recognize differences between two areas on the map. The major problem in this section was the failure to correctly identify the areas delimited by the grid references. In many cases, this was the result of carelessness.

Module 1: Climate, Vegetation and Soils

Question 2

The stimulus for Part (a) was a photograph of the coniferous forest. The photograph could have been clearer, but given that candidates were required to study two types of forests only, and the fact that it was clearly not the tropical rain forest, the responses should have been better. Some candidates named grasslands which is definitely incorrect.

In Part (b), candidates were asked to describe two conditions necessary for the formation of a tropical cyclone. Too many candidates described the characteristics of a hurricane. Most of those who understood the intent of the question were only able to mention one, and in most cases that was the *heating of the ocean*. Few mentioned the *Coriolis force* and the absence of *wind shear*.

Part (c) required candidates to write an essay on the human influence on the characteristics of the soil in a number of specified areas. Many wrote competently on the effect of *waterproofing of urban surfaces, the removal of vegetation, the effect of land pollution resulting from industrial development, intensification, irrigation and poor agricultural practices*. However, their treatment of domestic practices was less convincing. Few discussed the effect of *improper waste disposal* and the *problem of non-biodegradable waste*.

The response rate for this question was 54 per cent.

Question 3

In Part (a) (i), the majority of candidates were familiar with the atmospheric condition displayed in the diagram (instability). The point A in the diagram in (a) (ii) represented dew point and this was all that was needed in response to the question. A few tried to explain what was happening at A. The change in slope at A was caused by the release of latent heat and responses to this question were poor.

Very few candidates encountered difficulties in defining the term *microclimate*, the climate of small areas required in Part (b) (i). However, they had less success in their attempts to define the *heat budget in (b) (ii)*, the balance between the incoming heat absorbed by the earth and outgoing radiation.

In Part (c), candidates were asked to explain how the tropical rain forest vegetation was adapted to the climate. Responses to this were fair. Candidates described the main climatic characteristics of the region and the adaptations in terms of structure (layering), species composition, habit and productivity. A minority described the characteristics of the tropical savanna and coniferous forests.

Forty-six per cent of the candidates attempted this question.

Module 2: Economic Activity

Question 4

Table 1 compared the profitability of organic and conventional wheat growing. In Parts (i) and (ii), candidates were asked to name the type of farming which had the greatest cost and showed the greatest profit. They performed well on these parts. However, they performed satisfactorily on Part (ii) which dealt with the percentage difference of yields and market price between the two types of farming. Candidates appear not to have moved beyond the original provisions of the common agricultural policy (CAP). In Part (b), candidates were unaware of the changes made since 1992 regarding the reduction in subsidies, quotas, set aside, and the encouragement of diversification.

Part (c) required an essay to discuss the manner in which land use in the Caribbean is affected by government policy, markets and size of holdings. Performance was extremely poor. Candidates demonstrated very little knowledge of Caribbean issues. Some mentioned policy decisions and problems in the market but very few discussed the manner in which these affected land use, for example, *the reclassification of agricultural land for residential use; the removal of tariffs has effects on local agricultural production; the rulings of the World Trade Organization (WTO) have had a severe impact on government policy in the region and on the fate of sugar and banana cultivation.* Some of these issues have dominated the news in the Caribbean over the past few years and teachers and students need to keep abreast of such developments.

The response rate was quite low — just over 29 per cent.

Question 5

Forty-three per cent of the candidates responded to this question. In Part (a), candidates were asked to outline three characteristics of the informal sector. Candidates are reminded that to outline is not to present a list but to provide the main points briefly. *The informal sector is labour intensive employing family members, mainly women and children. Little start-up capital is needed and many of the jobs are done in the home.*

Parts (b) (i) and (ii) were based on a graph showing the relationship between income and air travel and candidates were asked to state the relationship between the number of trips per person and per capita GNP and to make observations about China and India. Candidates appeared to be unfamiliar with the scatter graph and therefore could not read it.

The factors affecting the growth of the tourist industry in the Caribbean should have been known to the majority of candidates but responses were surprisingly poor. They ignored *growth*, that is, the increase in numbers, and discussed the attractions and its contribution to the development of the region. Those who gave satisfactory responses described the *increase in income in developed countries, paid holidays and package tours.*

Module 3: Development and Disparities in Development

Question 6

The stimulus in Part (a) was a graph showing access to safe water. Candidates were asked to compare the trends for urban and rural households. The question called for a trend and therefore stating the percentage increase year by year was not satisfactory. The following is more acceptable:

In 1970, all urban households had access to safe water supplies but the percentage declined in subsequent years reaching a low in 1990 before increasing to its highest level in the period 2000 to 2006.

In Part (b), candidates were required to describe two ways in which aid to developing countries can stimulate economic growth. This was a contentious issue and many candidates said that aid hinders development while others said that aid assisted development. This is a new area in the syllabus and

there was absolutely no indication that candidates were exposed to the debate. Yet, this is the type of issue that could grab the imagination of students. The responses were the type of simplistic statements that one would expect of candidates who were guessing. Aid, they said, was used to build houses. Candidates could have cited specific investment projects in developing countries supported by aid or the expansion of infrastructure on which development depends. New areas in the syllabus must be tackled.

‘Citing specific examples, explain how two types of natural disasters and debt burden are constraints to development in the Caribbean.’ Here, too, there was no evidence of information on specific case studies of negative impacts as required by the syllabus. The question called for a description of the disaster, the damage caused, the effort at and cost of reconstruction and the implications for development. There is a wealth of data on the effect of the debt burden on countries such as Jamaica. This is another new area of the syllabus which, judging from the simplistic responses of the overwhelming majority of candidates, appears to have been neglected.

Question 7

Part (a) required a summary of the differences in indicators between male and female in developed and developing countries. Responses were poor, the focus should have been on the *gender differences*.

In Part (b), the mortality rate was not necessarily an indicator of health disparities between more economically developed countries (MDCs) and less economically developed countries (LDCs). Many developed countries have higher mortality rates because of an elderly population, but infant mortality, life expectancy and morbidity rates are indicators.

Part (c) (i) focused on a limitation of the human development index. This produced fair responses, such as the concealment of inequalities.

Part (c) required an essay to explain why measures of development were misleading. Most candidates were familiar with this issue. However, the essays were disorganized. There are social indicators such as the human development index (HDI) and gender development index (GDI) which use averages and do not show class and rural-urban differences. The economic indicators such as gross development product (GDP) and gross national product (GNP) are more reliable for MDCs than LDCs, hide extremes, rely on national statistics, among others.

Thirty-five per cent of the candidates attempted this question.

Candidates are unfamiliar with basic geographical concepts and the accepted language of geography. The majority seemed to have no knowledge of new areas in the syllabus and resorted to guesswork. Responses were not at the level expected of CAPE candidates. In addition, candidates need more practice in essay writing. Organizing the required information and structuring the essay are skills that are best acquired by practice.

Paper 03 - Internal Assessment (IA)

Overall, there were improvements in the performance in certain areas this year – tables and figures were integrated much better, although some candidates still placed all their diagrams at the beginning. There were improvements in the analysis of findings. Conclusions were better and so were bibliographies. But maps and photographs were poorly used, if at all.

The projects presented in Unit 2 were better than those in Unit 1 and those in Physical Geography more competently undertaken than those in Human.

Teachers at a centre or school must bear in mind that the IAs of the school and not the teachers are examined. It is very important that teachers coordinate approaches and especially the marking of projects, and that there is one standard for the marking of the topics. When there is a marked difference in the standards adopted by two teachers, the moderation affects all the candidates and good projects may be unfairly penalized.

Statement of Purpose

Many of the statements were too brief, too vague and too generalized. The style and the topics adopted for Caribbean Studies are not recommended for geographical research. Often, the context of the study was not stated. This was a problem particularly in comparative studies. If the soils or vegetation in two different areas are being compared, there must be a basis for the comparison. Have the soils or vegetation developed under different conditions – different parent material, relief, or climate?

Teachers and candidates must ensure that the topics are in keeping with the specific objectives of the syllabus and are taken from the appropriate unit. Central place theory and sphere of influence, for example, are not specified in the syllabus.

Methodology

Questionnaires are not suitable for all types of research and there were many instances in which they were misused. They were used to analyse population distribution and in dubious situations. Questionnaires were administered in communities in an effort to find out why persons left the communities. Often, they were self administered and the response rate was low. The sampling procedure was vague and; there was no explanation as to the manner in which the data collected would be manipulated to achieve the stated objectives.

Appropriate skills were too often ignored. For example, maps were not used in spatial analysis; flowlines were not used in migration studies. Some methods were used inappropriately, for example, soil catena analysis can only be applied under very specific conditions.

Presentation

About one-half of the projects revealed the type of problems that mar the responses to the questions on Paper 2. Diagrams and sketch maps were not properly or neatly drawn and labelled. There was an increasing tendency to use Excel and other software but the construction of diagrams was sloppy and

the output sometimes meaningless. Sometimes the software was used in situations for which it was not designed or which required expert application — the production of river channel cross profiles. Although the placement and integration of maps and diagrams have improved, there were still instances in which they were wrongly placed and not fully integrated into the analysis.

The practice of presenting the data collected as a series of pie charts and bar graphs followed by a description of what appears in the diagram is not appropriate for geographical studies, especially at this level. It must be clearly understood that maps and diagrams are means of presenting data and may be seen as alternatives to words. They highlight or illustrate a point made.

Where appropriate, site maps must be presented and utilized for specific purposes in addition to an indication of the locality of the study. A very high percentage of the projects have no maps at all. Where Google imagery was presented, it was not annotated or used.

Analysis and Discussion

The improvements in this area have been noted. However, many projects were weak and comprehensive analysis was lacking. Where questionnaires were the main instruments used, analysis often took the form of the bar graph or pie chart breakdown of percentages referred to in the section above. When methodologies are poor, the analysis suffers. Weak, shallow discussions reflect the tendency to rely on a single textbook such as that by Waugh or by Nagle. Reading outside of these sources would add depth to the discussion, would strengthen the context of the studies and allow candidates to avoid the incorrect explanations given for geographical processes.

Conclusion

Some improvements were seen here also, but overall, a greater effort must be made to link conclusions with the purpose of the project.

Bibliography

Fewer CSEC level texts appeared in the bibliography but there was still a very heavy dependence on Waugh and Nagle. Internet sources were not well referenced.