C A R I B B E A N E X A M I N A T I O N S C O U N C I L

REPORT ON CANDIDATES' WORK IN THE CARIBBEAN SECONDARY EDUCATION CERTIFICATE® EXAMINATION

MAY/JUNE 2012

GEOGRAPHY
GENERAL PROFICIENCY EXAMINATION

GENERAL COMMENTS

This year 12 421 candidates wrote the CSEC Geography examination. Of this number, 390 did the alternative to the School-Based Assessment SBA (Paper 032). Approximately 65 per cent of candidates obtained Grades I – III representing a slight decrease from the 66 per cent obtaining similar grades in 2011.

The perennial problem of candidates displaying a lack of understanding of basic geographical concepts continues to be evident in candidates' responses. In the SBA and its alternative, many candidates continue to display an inability and a lack of knowledge of the processes required to conduct research and to write the research report.

Some other areas of concern include the following:

- Maps and diagrams are often poorly drawn, untidy and inaccurate. Conventions for drawing maps and diagrams are often ignored.
- Lack of understanding of basic geographical concepts such as *distribution.*
- Poor language skills.
- Lack of adequate and meaningful elaboration of answers. Many candidates were able to identify, name and list factors, phenomena and so on but often do not earn full marks for a question due to lack of appropriate elaboration and explanation.

DETAILED COMMENTS

Paper 01 – Multiple Choice

This paper is comprised of 60 multiple-choice questions. The mean on this paper was 60 per cent, similar to that for 2011.

Paper 02 – Structured Response Questions

This paper consisted of ten structured response type questions. The first question tested map reading skills and was compulsory. The other nine questions tested Natural, Human and Human Environment Systems. Candidates were required to do one of the three questions based on each system. The mean for this paper was 41 per cent, slightly higher than the 40 per cent in 2011.

Section A – Map Work

Question 1

Part (a) was well done with over 90 per cent of candidates being able to give the correct compass direction and identify named buildings on the map.

There was improvement over 2011 performance on the question on bearing with approximately 80 per cent of candidates answering correctly. Incorrect responses were close to the accepted range which suggests candidates' inability to draw an accurate north line and read the protractor.

In the measurement of distance, some answers were not expressed in kilometre which was the unit of measurement required. The perennial problem continued as nearly ten per cent of the candidates were unable to correctly use the line scale and hence did not measure from zero.

For Part (a) (iii), the majority of candidates were able to list four named building in the village of Marigot. Many candidates were unable to calculate gradient and about 20 per cent of them did not attempt this section. Most knew the formula for calculating gradient but some gave the denominator as vertical interval or vertical distance instead of difference in height and for horizontal difference some wrote horizontal equivalent or horizontal shift.

In Part (b), over 80 per cent of the responses on the six figure grid references were correct. The usual mistakes — use of punctuation, reversal of the eastings and northings and identifying the square rather than the six figure point — continued to be evident. Most candidates could not identify the feature represented by the zigzag line which suggests they were unable to distinguish between the symbols in the key, or they failed to use the key at all.

In Part (c), candidates were asked to describe drainage features of the area about 70 per cent of the candidates merely listed drainage patterns or gave textbook definitions, some included unnecessary textbook diagrams and failed to use map evidence in their descriptions. Answers should have included reference to, *direction of flow, drainage density and size of rivers.*

Part (d) which tested candidates' ability to describe settlement distribution was poorly done with only 15 per cent of candidates' responses getting all four marks. The majority of candidates did not understand the concept of distribution and incorrectly included textbook definitions of settlement patterns. Many made no reference to the map; gave reasons for the location of settlement rather than describing the actual distribution and some were unable to identify the dense and sparsely populated areas. Answers should have referred to *the absence of and presence of settlement in specific areas*.

From the responses it can be concluded that most candidates found Part (e) challenging. Fewer than 15 per cent of the candidates scored full marks on this section of the question. Many gave textbook reasons for the functions of roads rather than discussing the actual distribution based on the evidence in the map. Candidates seemed to have misunderstood the word *distribution* as some gave the location of roads and tracks using map evidence to explain these locations.

Section B: Natural Systems

Question 2

This question tested candidates' knowledge of plate boundaries and the formation and development of volcanic features. This was the most popular of the optional questions in this section with approximately 42 per cent of candidates attempting it.

Part (a) required candidates to identify and name intrusive and extrusive features on a diagram. While there was awareness of the names of the features, many of them were unable to clearly distinguish between the intrusive and extrusive features illustrated in the diagram provided.

In Part (b), candidates confused the divergent and convergent plate margins and some were unable to describe the processes which occur at each margin. For those who were able to distinguish between the types of plate margins, many who described the convergent margins obtained maximum marks. It was evident that candidates were more knowledgeable about the convergent than the divergent plate margin.

For Part (c), many candidates confused features formed by plate movement with those formed from volcanic activity. Where intrusive volcanic features were discussed, candidates were not knowledgeable of their formation and many stated that these were formed within the volcano rather than below the earth's surface. Some also had difficulty distinguishing between the crater and a caldera. Most failed to adequately explain how the volcanic features change over time and the resultant landforms. Answers in this section also revealed many misunderstandings with regard to the formation of Fold Mountains at plate boundaries.

Question 3

This question tested candidates' understanding of the water cycle, river processes and limestone landforms. Approximately 40 per cent of candidates responded to this question.

In Part (a), many candidates could not identify four of the features shown on the diagram. Processes of infiltration and percolation were confused and many identified the water table or level of saturation as sea level.

Part (b) (i) was generally well done. Candidates were able to describe the processes at work in a river in great detail. Part (b) (ii) which required candidates to explain the formation of one of two fluvial landforms was poorly answered, especially by those candidates who attempted to explain the formation of flood plains. Candidates did not know its development beyond the river overflowing its bank and depositing its load. Few candidates discussed meander development. For those who chose to show the development of waterfalls, terms such as permeable and impermeable rocks were used instead of *resistant* and *non-resistant* to describe the varying rock types. In addition 'potholes' and 'plung holes' were common terms used to describe *plunge pools*. Many candidates wrote about waves and undercutting and viewed the waterfall only as a coastal feature found on sea cliffs.

In Part (c) (i), weaker candidates interpreted the term *characteristics* as 'features' and few were able to describe the characteristics of limestone such as *chemical composition*, *permeability* or *structure*.
In Part (c) (ii), most candidates explained the formation of stalactites and the responses earned better marks than those for swallow holes. However, there was the misconception by some that stalactites resulted from a drop in temperature, with the 'water' freezing and forming icicles on the roof of the cave. They should have explained that *the evaporation of the water molecules from the calcium bicarbonate solution left a solid residue of the calcite hanging from the roof of the cave*. Few candidates could describe a swallow hole and many confused this feature with 'blue holes' and 'blow holes'. Many candidates knew the formation of swallow holes resulting from carbonation but referred to it as an erosional rather than a *weathering* process.

Diagrams for both Parts (b) (ii) and (c) (ii) were generally poorly drawn and labelled.

Question 4

This question tested candidates' knowledge of Caribbean weather systems and the vegetation of tropical rain forests and tropical grasslands. Only 18 per cent of candidates did this question.

For Part (a), a climate graph was provided and most candidates scored two out of the four marks available. While candidates recognized the graph as depicting a type of tropical climate, most did not give the specific response of *tropical continental*. Generally, interpretation of the graph was weak due to inability to differentiate between temperature and rainfall (e.g. temperature range of 200 mm) and failure to read the units and the numeric data correctly.

Candidates were asked to describe the characteristics of two of four systems that affect the Caribbean in Part (b). The most popular choices were hurricanes and tropical waves. Responses on the weather in hurricanes were much better done but some candidates made references to volcanic activity, the formation and effects of the systems on the landscape and sometimes confused the details of one system with another. Candidates demonstrated the least knowledge about tropical waves.

The majority of candidates totally misinterpreted or misunderstood the requirements of Part (c), resulting in poor performances. They were asked to demonstrate how the vegetation in the tropical rain forest or tropical grassland is influenced by the climatic conditions. Better responses earned at least eight out of the twelve marks available. Poorer answers included references to crops, soils, weather and earth movements. Instead of identifying a specific characteristic and explaining how this is influenced by climate, many candidates wrote primarily on climate with no connection to vegetation.

Section C: Human Systems

Question 5

This question tested candidates' understanding of the benefits of international migration to the Caribbean, strategies to reduce urbanization and factors influencing population distribution. It was the most popular in this section as it was attempted by over 80 per cent of the candidates. Approximately 60 per cent of the candidates performed satisfactorily and showed basic knowledge of the concepts tested.

Part (a) was very well done. Weaker candidates failed to do the mathematical calculation correctly. Performance in Part (b) was poor. Answers were not clearly stated and often points listed were poorly developed. Many responses did not relate to the economic benefits of international migration.

For Part (b) (ii), performance was fair. Candidates identified strategies but many were unable to clearly develop their points. Some could not differentiate between utilities, services and infrastructure. Most candidates named a country but some identified countries which were not on the syllabus or were not Caribbean countries.

In Part (c), candidates were generally able to explain how relief and employment opportunities influenced population distribution. However, the influence of natural vegetation and soils on population distribution was poorly handled. Candidates did not seem to understand the term *natural vegetation*, as often soils and agriculture were discussed. There was limited knowledge of the influence of natural vegetation and soils on population distribution. In discussing population distribution in relation to the factors identified, candidates often explained one type of distribution and failed to explain the contrast between sparse and densely settled areas.

Question 6

This question tested candidates' knowledge of the food processing industry, tourism, mining, forestry and fishing. This question was attempted by approximately 17 per cent of candidates. Many of the responses were weak.

In Part (a) candidates were asked to interpret a table and most candidates scored at least two out of four marks. However, some were unsure of how to describe or state a trend.

Part (b) required candidates to give two benefits of the food processing industry to the Caribbean and many showed a good grasp of this content.

Responses to Part (c) (i) were often inadequate and many candidates were unable to explain the effect of the global recession on tourism in a named Caribbean country. Too many candidates attempted to explain why the economic recession prevented tourists from travelling to the Caribbean rather than explaining how the reduction in the number of visitors has impacted the tourist industry. Others wrote about the effect on the economy of the country rather than referring specifically to the tourist sector. A few interpreted global recession as global warming and wrote long answers on the negative impact on tourist travel to the Caribbean. Many of the answers on Jamaica's tourism had inaccurate information and hence earned candidates low scores. Candidates were expected to discuss factors such as *declining tourist arrival and the effect on profits, foreign exchange receipts and demand for tourism related services.*

Part (c) which asked candidates to explain challenges faced by either mining or fishing or forestry in the named Caribbean Country posed a great deal of difficulty and, except for those who chose the fishing industry, many responses received scores at the lower end of the range. Many candidates who selected forestry or mining did not understand the concept of *challenge* and wrote long responses pertaining to any problem that could impact the activities negatively. Many statements were too

general, especially when the choice for forestry was neither Guyana nor Belize and that for mining was neither Jamaica nor Guyana. It was obvious that many candidates were unfamiliar with the objectives and content of the syllabus. In addition, the responses demonstrated that candidates did not have access to appropriate sources of information to equip themselves with sound geographical knowledge in their preparation for the examinations. Where correct statements were made, the development was weak, or inappropriate.

Question 7

This question tested candidate's knowledge of agriculture in the Caribbean and the Prairies of Canada. Only about three percent of the candidates attempted this question. This made it the least popular in this section and also on the paper.

Part (a) was poorly done. Most candidates failed to draw a reasonable outline of a Caribbean country and could not locate and name an area of commercial arable farming. Part (b) which tested understanding of challenges facing peasant farmers was generally well done.

Part (c) (i) proved to be difficult for candidates. Many candidates could not account for the declining contribution of agriculture using the headings given. Most could not differentiate the concepts of *cost of production* which relates to the expenses incurred in producing from *prices* which deals with the earnings from the agricultural product.

Part (c) (ii) which asked for a comparison of diversification in the Caribbean and the Prairies of Canada was poorly done and most candidates scored no marks. Candidates failed to focus on *diversification* and simply compared characteristics of commercial arable farming in the Caribbean and Canada. Many candidates showed a lack of knowledge about farming in the Prairies.

Section D: Human – Environment Systems

Question 8

This question examined candidates' knowledge of the effects of hazards and responses to these at the individual and national levels. Approximately 36 per cent of candidates did this question.

Part (a) required that candidates complete a bar graph on a given grid and to provide a title for the graph. Some wrote imprecise titles such as the number of people affected without adding 'by five disasters in Dominica'.

In Part (b), many candidates scored between six and eight marks (this part was marked out of 8). Some candidates, instead of identifying the hazard, described it and did not clearly say what makes it a hazard. Some also confused hazard and disaster.

For Part b (ii) some candidates failed to describe the effects of the of the identified hazard such as *destruction of property* and *loss of lives* while in other cases some described the effects of more than one hazard.

Part (c) required that candidates discuss precautions to reduce the impact of hazards. About 25 per cent of candidates could not differentiate between individual and national precautions and about 50 per cent of the candidates failed to explain how the action reduced the impact.

Question 9

This question tested candidates' knowledge of pollution, threats to coral reefs and remediation measures. It was the most popular question in this section. Approximately 43 per cent of candidates responded to it.

Part (a) proved to be the most challenging; most candidates lacked the basic skill to construct a pie chart and as a result failed to earn a mark.

In Part (b) (i), most candidates in defining the term *pollution* failed to mention that the environment is contaminated or there is an undesirable change. Some defined population instead and so did not earn any marks. Part (b) (ii) was well done with most being able to name one type of pollution as well as its source.

In Part (b) (iii), candidates were able to identify and describe ways by which pollution could be reduced. However, a few candidates failed to follow the instruction given in the question and subsequently lost marks.

For Part (c) (i), most candidates identified the actions of humans to which coral reefs are vulnerable but did not explain how these actions destroyed coral reefs. Candidates performed poorly in Part (c) (ii). Most repeated the human activities mentioned in Part (c) (i) by just adding "do not" or "stop" at the beginning of their answers; for example, Do not walk on coral reefs. Candidates who scored full marks for this question explained how measures such as *the setting up of marine parks, sewage treatment plants and public education can reduce degradation of coral reefs.*

Question 10

This question tested candidates' knowledge of the effects of global warming and the causes and consequences of deforestation in the Caribbean. It was the least popular in the section, with 22 per cent of candidates attempting it.

Candidates performed best in Part (a) although some candidates failed to give the graph a title. Part (b) required candidates to define *global warming* and *greenhouse effect*, and to describe the causes of global warming. It was poorly done with most candidates confusing global warming with the concept of CFCs and ozone layer depletion. Acceptable definitions should state that *global warming is the increase in the average global temperatures over time and greenhouse effect is the process by which certain gases absorb heat from the earth and re-radiate some of it back to the earth causing the atmosphere to become warmer.*

In Part (c) (i), candidates were expected to give two likely effects of global warming on the Caribbean. Acceptable responses included *reference to rising sea levels, coral bleaching and marine erosion*. Most candidates were unable to adequately explain two likely effects.

For Parts (c) (ii) and (iii), many candidates were able to state two causes of deforestation but some did not adequately explain two consequences.

Paper 031 - School-Based Assessment

Table of Contents

The majority of students were able to produce a satisfactory table of contents. However, there were several who did not number their pages or had sections incorrectly sequenced.

Aim of Study

For the most part, the aims presented by students needed to be more specific and measurable. In most cases, aims were either too general or were not geographical in focus. Several students did projects on topics that were not in the syllabus. In some cases, the study area, place and the aims of some studies were not included in the report. Where aims were included they were poorly written. Acceptable aims included examples such as *To examine and account for factors influencing the development of coastal features at Scott's Head, Dominica.* A poor aim such as to investigate tourism development in (territory) would receive marks at the very lowest end of the mark range. Students are

encouraged to use those verbs set out in the specific objectives of the geography syllabus such as *assess*, *evaluate*, *analyze* and *discuss* in framing their aims. With the use of these words, studies are much less likely to be descriptive in nature and will tend to be more evaluative, if the aims are properly worded.

Location of Study

Most students did not perform well in this section. Candidates must be reminded that the study area should be clearly highlighted on the territory map. Study area maps should have specific features studied clearly labelled and highlighted. On many case maps which candidates submitted were untidy and had labelling in cursive script. Details such as neighbouring settlements, rivers, access roads and other principal features should also be included on study area maps. In too many projects, the border, title, key, north arrow and scale were missing from both territory and study area maps. Where candidates use computer generated maps, such as those from Google Earth, these should be manipulated to suit the purpose specified in the aim of the study and unnecessary details should be removed.

Methodology

This section was fairly well done. Most students were able to indicate *where* and *when* field work was conducted but had challenges in clearly stating *how* field work was done. There was an over-reliance on questionnaires and some were used even when they were not appropriate to the aim of the study. As such, many studies, such as those done on pollution, tended to be based on respondents' perceptions rather than quantitative measurements. In some cases, sample questionnaires were placed in the methodology or presentation of and analysis of data sections rather than in the appendix. Candidates should include sampling details such as the population size and sampling method used.

Presentation of Data

Improvement is required in terms of the illustrations presented. Some of the challenges included:

- Failure to give illustrations a title and figure number
- Improperly labelled axes on graphs and unlabelled photographs
- Diagrams not appropriate to the type of data presented
- The use of more than one type of diagram to represent the same data
- The inclusion of less than three different types of diagrams
- Weak integration of illustrations
- Unclear and untidy diagrams
- All or most of the candidates from the same school having identical illustrations

Students need to be reminded that no credit is given for illustrations copied from secondary sources.

Quality of Data

Some students included 'Quality of Data' as a separate section in their projects. Many students failed to obtain full marks for this section because their data was either inappropriate or irrelevant to the aims or lacked evidence of field work. Too often, the data were not comprehensive enough to achieve the aim of the study and this led to superficial analysis.

Analysis and Discussion

By and large, students were unable to appropriately analyse the data presented or to evaluate their findings in a properly sequenced and logical manner. More guidance is required in this area. Many studies, especially those based on questionnaire surveys, tended to be descriptive and based on secondary data or perceptions of respondents. Students must be encouraged to account for and explain patterns and trends in their field data and clearly relate these to the aim of the study. Coastal studies, needed to show measurements of features described as well as a discussion of the influence of geological, wave action, human and other factors on the formation of these features.

Conclusion

For most studies, the conclusions were too simplistic. Students had some difficulty in summarizing their findings and others attempted to introduce new information not mentioned in the analysis and discussion. Often, students engaged in discussions in the conclusion which should have been placed in the presentation and analysis of data.

Communication of Information

Students must be encouraged to review and thoroughly edit their projects before submission in order to reduce the incidence of spelling, grammatical and punctuation errors. Students must be strongly encouraged to make better use of appropriate geographical jargon.

Bibliography

Many students failed to adhere to acceptable format in compiling the bibliography as outlined in the Geography syllabus. Many of them did not present their sources in alphabetical order and used the first name of the author rather than the surname when listing sources. Some students also did not mention sources referred to in the study.

The correct format for referencing internet sources must also be adhered to — the author of the article and the date of publication need to be included.

Paper 032 - Alternative to School-Based Assessment (SBA)

Question 2

Candidates performed poorly. This question tested their ability to frame a research question or hypothesis on population structure. It does not appear that the candidates were familiar with the word *hypothesis* and were therefore unsure as to how to respond. A suitable response for the scenario given might have been: *How do the occupations and age structure in Wesley compare with the national pattern?*

Question 3

Part (a) required candidates to identify secondary sources of geographical information. Many candidates could not do this and some confused the term data *with instruments of data collection*.

In Part (b), most candidates were able to identify an appropriate time to conduct the research but many did not mention sampling techniques.

Part (c) required candidates to identify one problem (excluding weather, illness and injury) they may encounter in conducting the research and state how they would overcome that problem. Many were able to identify a problem and explain how it could be overcome.

Question 4

Part (a) required the construction of an age – sex diagram. Many candidates were aware of what was expected. However, a significant number of them plotted line graphs. Part (b) proved challenging for the vast majority of candidates. They were unsure as to how to use both tables in writing a report on the characteristics of the population.

Question 5

Part (a) (i) required candidate to construct a pie chart from given data.

Candidates showed the ability to convert percentage to angles. However free hand drawings compromised the accuracy of the pie charts. Candidates must be reminded that geometry sets will be very useful when doing this examination.

Many candidates performed poorly. For Part (b) most candidates were able to use another method of illustrating the data. In many cases, in Part (c) candidates simply rewrote the data given in the table. They were unable to comment on the nature of the distribution. All that was required was for candidates to draw some conclusions based on the relative importance of the data. For example*: the small percentage for industry shows that there is very little manufacturing taking place in the village.*

Question 6

The ability to write up a bibliography in an accepted format was tested by this question. Most candidates did not perform well on this question. They must be made aware of how to correctly construct a bibliography using the APA referencing style.

Recommendations

1. Teachers need to emphasize the skill of drawing sketch maps and statistical diagrams. Teachers should also stress the meaning of terms like *list*, *describe* and *account for* when answering questions

2. Some guidance should be provided in the classroom to help students develop the practical skills in constructing pie charts. Also students should be guided in the selection of examination questions and how to structure their responses.

3. Teachers should endeavour to teach basic geographical concepts.