CARIBBEAN EXAMINATIONS COUNCIL

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

GEOGRAPHY (TRINIDAD AND TOBAGO)

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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, the Internal Assessment, is 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 map work 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 and is examined by a single project.

DETAILED COMMENTS

UNIT 1

PAPER 01

Module 1: Population and Settlement

Question 1

Part (a) required definitions of infant mortality rate and crude death rate. Most candidates could accomplish this task and those who lost marks did so because the definitions were incomplete, for example, no unit was indicated for the time period. In Part (b), candidates were required to identify patterns of infant mortality rates only. However, many considered the relationship between infant mortality and life expectancy which was unnecessary. The responses to Part (c) – reasons for the pattern of infant mortality – were good as most saw its relationship to poverty, poor sanitation and poor health services.

Question 2

The definitions world population growth given in Part (a) were good. However, in Part (b), many confused Malthus' model of population growth with the Lorenz curve. Some who did identify it correctly were unable to name, in Part (b), the two curves – food and population, and in Part (b) (iii) to explain how they were related – arithmetic and geometric with population growth overtaking food supplies at the intersection of the two curves.

Question 3

This question examined knowledge of migration and was well done. However in Part (a) (i), candidates should use acceptable geographical terms for migration, for example, 'internal' instead of local or domestic; 'international' rather than the more precise inter-regional. In Part (a) (ii), most candidates were familiar with the reasons for international migration.

Part (b) focused on counter-urbanisation in more economically developed countries (MEDCs) and presented problems to very few candidates.

Module 2: Hydrological, Fluvial, Coastal and Limestone Environments

Question 4

The stimulus for Part (a) was a diagram showing stream order according to Strahler and candidates were required to label two first order streams in (i) and the highest order segment in (ii). Generally, this was very well done although there were some miscalculations and in some cases a failure to number the highest order segment.

Part (b) required a definition of the term 'bifurcation ratio'. A formula is not a definition although as an expansion, a formula could be included. To define is to say what something is. Similarly, there was no need to calculate the ratio.

Part (c) was based on stream geometry and it was clear that candidates did not understand the concept as the responses were poor. While candidates were able to identify an effect of human activities on flows within a river channel, they could not outline how flows within a channel were affected – for example, with respect to velocity, volume, path.

Question 5

Responses to this question were extremely poor. In Part (a), many candidates could not complete the diagram showing sources of exogenetic load and could not define 'load' in Part (b). In Part (c), instead of identifying the types of load (suspended, solution and bed), candidates described how a river transports its load. Majority of candidates were unable to explain the role of critical erosion velocity in the transportation of the load of a river as required in Part (d). A thorough explanation of the concept of critical erosion velocity is necessary.

Question 6

Responses to this question were very good. Candidates, in general, were able to identify the different types of coral reefs required in Part (a), the factors encouraging their development in Part(b) and their vulnerability to the effects of global warming (rising sea levels, dust, coral bleaching and salinity) required in Part (c).

Module 3: Natural Events and Hazards

Question 7

This question had very good responses. A few candidates had problems with the classification of natural hazards required in Part (a) and in clearly distinguishing between a 'natural hazard' and the 'hazard realized' that is, the natural disaster in Part (b). Part (c) focused on processes at plate margins and was well done.

Question 8

In Part (a), few candidates appreciated the fact that the movement caused by Rayleigh seismic waves was very similar to that of water waves. However for Part (b), they had a good understanding of the ways in which human activities increased the effects of flooding. The focus on the dumping of garbage speaks eloquently of current practices. In Part (c), candidates were asked how the size of a river basin regulates the response of a river to precipitation. The majority found this an easy task although only few articulated concepts such as lag time which is expected from geography candidates at the advanced level.

Question 9

Responses to this question were surprisingly poor. For Part (a) candidates seemingly had no idea of the shape of Hawaiian–type volcanic cones. For Part (b), they could not enumerate the value of faulted landscapes, for example, scenic, minerals and therapeutic. In Part (c), candidates could not explain how the movement of plates over hot spots resulted in volcanic chains.

UNIT 1

PAPER 02

Question 1

The map of Nevis provided was on a scale of 1: 25,000.There was an improvement in standard of candidates' performance on this question.

Part (a) (i) focused on the characteristics of the settlement pattern. The emphasis should be on patterns. What was the dominant pattern? What other patterns were represented and where? The question of where could be addressed by the use of grid references rather than simply place names. Candidates were able to describe the location of Charlestown including key terms, such as coastal, elevation, road intersection and nearby features. However, they were unable to use these factors of the location of the town to explain why the location was important, for example, port, protected harbour, focus of transportation routes.

Part (b) (i) required a description of a section of the map area with the assistance of a sketch map. Generally, the sketch maps were poor although a few were excellent. The sketch map should show the main relief features – a numbered contour line to demarcate the upland areas in the south of the section and the northwest, the coastal strip and cliffs. There should be a title and a key. For some very odd reason some candidates were given tracing paper. Candidates who use tracing paper will be penalized. The skill that is being tested is the ability to draw sketch maps and not to trace features. Having drawn the sketch maps, it should be a simple task to describe the main features. Some candidates produced excellent descriptions. Others gave disorganized accounts often including vegetation and settlement.

Part (b) (ii) was the weakest section. Candidates were asked to compare the river valleys. Few distinguished features of the valleys, for example, straight, winding, steep slopes. In Part (c), the responses to the questions based on the photograph were fairly good.

Module 1: Population and Settlement

Question 2

The stimulus for Part (a) was a graph showing the percentage urban population for Europe and Africa for the years 1960, 1990 and 2004. Candidates were asked to compare aspects of the growth in the two areas. There were many instances in which candidates offered explanations for the growth in the two areas. The formats of the questions are the same every year. Teachers should familiarize candidates with it and explain that these questions are based solely on the interpretation of the stimulus material. Explanations may be requested as follow–up questions. However, most candidates were able to make the comparisons requested.

In Part (b), they were asked to describe factors influencing the location of urban settlements in the Caribbean. Candidates were expected to discuss factors, such as, relief, shelter from winds, sheltered harbours and history. Responses were fair but one very common error was to see the solution in terms of the attraction of urban areas to migrants. In Part (c), the majority of candidates displayed an understanding of the physical and economic factors that influence population distribution in a Caribbean island.

They were able to describe what factors encouraged and what discouraged. Very few were able to discuss historical factors influencing distribution – post emancipation subdivision of estates, subdivisions for ex-indentured servants, influence of the plantation system.

Question 3

The problem encountered in Part (a) was similar to that described for Question 2 (a). Although candidates were required to describe the changes in the age structure of the Chinese population shown on the population pyramid, they tried to account for the changes. Moreover, although the question was allocated four marks only, they tended to write extremely long responses. In general, candidates gave accurate descriptions of the characteristics of the central business district (CBD) required in Part (b) although a few included activities that were not characteristic of the section. Part (c) focused on the benefits and problems of urbanization and had fair responses from most candidates. The problems were better developed than the benefits.

Module 2: Hydrological, Fluvial, Coastal and Limestone Environments

Question 4

In Part (a), the candidates were required to draw a well-labelled diagram of the cross profile of a rejuvenated river valley. Many produced excellent diagrams. Some drew the long profile of a river. Many were not properly labelled, were not enclosed in borders but left, as it were, hanging in an untidy manner.

Part (b) required candidates to explain how paired alluvial terraces are formed and how ground water storage is created. Candidates had the general idea that there was a link between paired alluvial terraces and rejuvenation but the process was poorly understood. Responses to Part (b) (ii) were better although there were candidates who appeared to believe that the water table was a solid object. In addition, there is still the confusion between infiltration and percolation. There were many good responses to Part (c) which focused on the impact of human activity on ground water levels. Some of the responses were directed to water quality rather than water level.

Question 5

The sketches of the storm hydrograph were, in general, quite good although the problems with labelling are again evident.

In describing two factors that influence the volume of a river, candidates did not appear to know that volume and discharge are the same. Discharge is affected by factors such as climate, relief of the drainage basin, vegetation, soil and by the activities of man. In Part (c), they were required to examine ways in which depositional processes influenced landform development on an identified coastal area. Responses were poor. Many confused erosional with depositional processes. Many failed to make the link with a specific coast.

Module 3: Natural events and Hazards

Question 6

In Part (a) (i), candidates were presented with a specific plate boundary and asked for the name of the type and in (a) (ii) for two landforms formed by the movement. Responses were poor as they lacked specificity. The meeting of the Eurasian and Indian plates forms a convergent or collision boundary and has resulted in the formation of the Himalayas and the Plateau of Tibet. Part (b) (i) focused on measures for improving emergency preparedness for flooding. The responses were poor as many described measures to reduce flooding. In Part (b) (ii), the plan to improve the national response was also poor. A plan should include activities for all stages; before (pre), during and after (post).

Question 7

Relatively few candidates attempted this question. In Part (a), candidates were given a diagram showing a model of risk or hazard and asked to describe the concept as shown in the diagram. The diagram clearly showed risk at the intersection of a natural event and a vulnerable population. Again, most candidates ignored the diagram and gave their own definition of risk. Candidates must read the question carefully. The marks assigned to skills or individual questions may be low. However, if candidates fail to gain these marks they could lose up to approximately 12 marks and this could make a difference to the final grade.

Part (b) focused on constructional features produced by volcanism. The performance was weak. Some confused this with plate tectonics. Others gave examples of intrusive features. The descriptions of the different types of faults in Part (c) did not rise above the CSEC level. Here, too many described the movement of plates. The diagrams were unsatisfactory.

UNIT 2

PAPER 01

Module 1: Climate, Vegetation and Soils

Question 1

The stimulus for Question 1, was a map of the world and in Part (a), candidates were required to insert the SW monsoon and NE trades. Most candidates had the directions right but too little attention was paid to the wind belt. There were many good responses to Part (b) which focused on the factors controlling atmospheric motion as well as to Part (c) which focused on the characteristics of jet streams.

Question 2

The majority of responses to Question 2 were also good. Knowledge of weaker systems and symbols seems adequate in Parts (a) and (b) as well as the characteristics associated with hurricanes in Part(c) and mitigation measures in Part (d).

Question 3

This question examined the candidates' knowledge of the tropical rain forest and, in general the performance was good. They had a good grasp of the structure of the rain forest in Part (a) (i), its composition in Part (a) (ii) and knowledge of its importance in terms of biodiversity and climate stability in Part (b).

Module 2: Economic Activity

Question 4

This question was largely based on Von Thunen's model of agricultural land use and again most candidates performed creditably. In Part (b) (i), their interpretation of the relationship between locational rent and distance from the market was very good, as was their knowledge of the effect of changes in transportation required in Part (b) (iii). However, many did not quite grasp the concept of locational rent-profit as they confused it with the rent for property.

Question 5

Part (a) (i) required a definition of the term 'isodapane' and responses were generally weak. There were definitions of isobars and isotherms. In Part (a) (ii),many could not use the diagram showing transport costs to calculate costs for industries located at different intersections. Responses to Parts (b) and (c) were fair but teachers must clarify the role of the size of countries in development. Small island developing states (SIDS) face specific problems. However, this does not mean that the islands are too small to develop manufacturing industries. Hong Kong and Singapore have done so successfully. Capital, energy costs, and reliance on imported raw materials are important impediments.

Question 6

The stimulus in Part (a) comprised a table showing international tourist arrivals for various years and candidates competently identified the trends. However, the performance in Part (a)(ii) was not satisfactory because they failed to use their knowledge of the factors affecting world tourism to explain the trends they described. In Part (b), they were asked to identify ways in which Caribbean – owned hotel chains have benefited the region. Comments needed to be specific to the Caribbean, for example, encouragement of local agriculture.

Module 3: Disparity and Development in the Caribbean

Question 7

Part (a) was based on a table which showed development indices for developed and developing countries and candidates were able to identify the trends. However, responses to the questions on natural regions, Parts (b) (i) and (a) (ii), were weak and so were those for Part (c) which focused on the importance of regional planning, for example, equity considerations and insecurity.

Question 8

Responses to this question underscored the difficulty candidates' face in dealing with development models. In Parts (a) (i) and (ii), they could not identify the diagram as a stage in the core-periphery model. They were not familiar with the measures suggested by dependency theorists to weaken the grip of metropolitan countries – regional trading, protection, control of multinational corporations (MNCs) – or Part (c) which focused on the ways in which backwash effects could deepen regional inequalities – movement of activities and people to key growth points once these have been established, multiplier effects, all surpassing spread effects.

Question 9

In Part (a), the majority of candidates could not define the concepts of relative poverty – a situation in relation to other groups and absolute poverty, the inability to meet basic needs. In Parts (b) (i) and (ii), a small number of candidates correctly identified the differences in the relationship between gross national product (GNP) and gross domestic product (GDP) in the USA and Ireland. GNP was larger than GDP in the USA but the difference was small. GDP was larger in Ireland than GNP and the difference was larger. The candidates clearly did not understand the role of foreign companies in this difference.

The high proportion of candidates who produced 'no responses' for the question in this Module suggests that there is a major problem.

UNIT 2

PAPER 02

Question 1

The map extract provided of Belize was on a scale of 1:50,000. In general the performance on this question was very good. In Part (a), the description of the natural vegetation shown on the map was good but candidates must be more careful in quoting grid references – easting before northing (tip: remember the phrase along the corridor and up the stairs).

In Part (b) (i), candidates were asked to shade on a sketch map provided an area that was suitable for the development of an industrial town and in Part (b) (ii), to describe the factors that would attract industrial development in the area shaded. The area shaded by many candidates was not sufficiently accurate although they gained marks for the description of the pull factors.

The performance on Part (b) (iii) was also generally good. Those who lost marks did so largely because they misinterpreted the question, writing on the influence of the area on the growth made rather than vice versa.

In Part(c) (i), many candidates did not restrict their answers to what was shown on the map extract. The measures to encourage development should have had relevance to the area shown. Part (c) (ii) had poor responses because candidates failed to relate them to the preceding question. The constraints must apply to the suggested measures.

Module 1: Climate, Vegetation and Soils

Question 2

This question had a very low response rate and the few candidates who attempted it showed little knowledge of the concepts required in Part (a): gravitational water, infiltrated water that maps through the aerated zone and hygroscopic water or water held as then films. Part (b) focused on mountain microclimate and had very weak responses.

Question 3

This was the more popular of the two questions based on vegetation and soils. Too many candidates could not accurately locate the Equator and areas of tropical rainforest on the map of Africa provided for Parts (a) (i) and (ii). Part (b) which focused on factors accounting for the distribution of rainforest had a better performance with most candidates describing rainfall and temperature. However, Part (c) which focused on effects of erosion had extremely good responses.

Module 2: Economic Activity

Question 4

The stimulus in Part (a) was a diagram of Weber's least-cost location model and the questions based on it, the identification of points and the type of industry represented, were not well addressed.

In responding to Part (b), Smith's modification of Weber's model, most candidates wrote general criticisms of Weber rather than Smith's concept of sub-optimal location and imperfect knowledge. In Part (c), the inapplicability of Weber's model to the Caribbean was not well addressed. They could not refer to the fact that industrial goods were imported or based on imported raw materials or the role of government in the location of industries. It was clear that the candidates did not have a good grasp of the subject matter and were therefore, not in a position to apply the model.

Question 5

From the performance on Part (a), it is evident that candidates need more practice in interpreting triangular graphs. Many could not plot the points accurately on the given diagram. The definition and characteristics of the informal section required in Parts (b) (i) and (ii) were known to most. While most candidates gave good responses to Part(c) (i), the environmental factors affecting commercial farming in the Caribbean, they had less success in Part (c) (ii) for describing economic factors in spite of the current problems in the market, for example, high costs of production and competition.

Module 3: Disparity and Development in the Caribbean

Question 6

In Part (a), candidates were given line graphs and asked to describe the changes. Candidates are not expected to spend their time calculating exact figures for increases and decreases annually. It seems that candidates do not know what is expected of questions such as these. Changes were requested, for example, after a period which debt, principal and interest all increased, there was a decline in all except interest. What was also of interest was the point at which interest exceeded principal and then a closing of the gap. Candidates need practice in answering these types of skill questions.

There were poor responses to Part (b), which was based on the dependency theory. This underscores an overall weakness in grasping the essentials of theories as models. Asked for the stages by which, according to dependency theorists, the rich got richer at the expense of poor countries, most candidates gave an outline of dependency theory but did not answer the question.

Part (c) focused on constraints presented by to the development of Caribbean Islands by their small size, and had fairly good responses. However, many could not discuss four reasons for this.

Question 7

In Part (a), candidates were asked to use the figures presented to draw compound bar graphs. Many had no idea of what a compound bar graph was. Most were unable to identify the shortcomings of the concept of 'relative poverty'. Part (b) required an essay on import substitution industrialization and was reasonably well done. The responses in describing the actual strategy were weak, that is, the shift from imported manufacturers to local production based on imported raw materials and the barriers erected to protect local production. Reasons for the adoption and decline were mentioned but not well developed.

UNITS 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, for example, speed, pressure 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 for example, crops grown, practices 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 studies were awarded marks in excess of their 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.