

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
HEADQUARTERS

**REPORT ON CANDIDATES' WORK IN THE
SECONDARY EDUCATION CERTIFICATE EXAMINATION**

MAY/JUNE 2009

INFORMATION TECHNOLOGY

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GENERAL COMMENTS

In June 2009, 28 867 candidates from the participating territories entered for the Information Technology examination; 1 106 entered for General Proficiency and 27 761 for Technical Proficiency. This represents an increase of 5.84 per cent in registration for the Information Technology examination when compared with June 2008.

DETAILED COMMENTS

PAPER 01 – THEORY

This paper consisted of four sections. Sections I and II consisted of ten compulsory short-answer questions, testing the theory profile and is common to both the Technical and General Proficiencies. Section III is the Programming section for Technical Proficiency candidates and Section IV is the Productivity Tools section for the General Proficiency candidates.

The mean scores for General and Technical Proficiencies were 58.5 out of 90 and 39.27 out of 90 respectively. The range of marks obtained by the General and Technical Proficiencies candidates were 8 – 85 and 0 – 82 respectively.

SECTION I

Question 1

This question tested candidates' ability to:

- Identify the basic functions of a computer
- Provide examples of devices used to perform the operation of a computer

The majority of candidates were able to identify the basic functions of a computer. However, some candidates confused the output operation with the storage operation.

Most candidates were also unable to identify devices used for processing.

Question 2

This question tested candidates' knowledge of the use of secondary storage devices.

This question was satisfactorily done by the majority of candidates. However, some candidates confused software with data and information. In addition, a variety of incorrect names were provided for USB flash drives such as "dick drive" and "junk drive".

Question 3

This question tested candidates' ability to:

- Convert binary to decimal using 8-bit representation
- Find the decimal equivalent for a binary coded decimal
- Perform subtraction in binary using two's complement representation

This question was poorly done by the majority of candidates. Many candidates could not do binary subtraction; instead they performed the subtraction in decimal and converted the result in binary form.

Question 4

This question tested candidates' ability to compare the use of general purpose software with custom written software.

This question was satisfactorily done by the majority of candidates. However, many candidates could not provide a reason for integrating one software with other application software.

SECTION II

Question 5

This question tested candidates' ability to match input devices with their appropriate uses.

This question was well done by the majority of candidates. However, some candidates were unfamiliar with the use of the OMR and the MICR.

Question 6

This question tested candidates' knowledge of the use of robots in industry.

This question was satisfactorily done by the majority of candidates. Some candidates found difficulty in naming two industries where robots are used.

Question 7

This question tested candidates' knowledge of measures to secure data.

This question was well done by the majority of candidates.

Question 8

This question tested candidates' ability to:

- State the functions of computer personnel
- Explain terms used in communication

The majority of candidates were able to provide the function of the computer trainer but were unfamiliar with the function of the system analyst.

The majority of candidates were unable to correctly explain terms used in communication.

Question 9

This question tested the candidates' knowledge of computer-related crimes.

This question was well done by the majority of candidates. Many candidates described the crimes clearly but did not use the technical language associated with this area.

Question 10

This question tested the candidates' knowledge of the use of computers in a classroom.

Although this question was well done many candidates did not focus on the use of computers for teaching and learning activities.

Question 16

This question tested candidates' knowledge of basic features of a Database Management program.

This question was poorly done by the majority of candidates. Some candidates found difficulty in determining the field size of the table structure. Many candidates could identify two meaningful queries. Many candidates were unable to explain the steps to generate a report.

PAPER 02 & 02/2 – TECHNICAL PROFICIENCY

Paper 02 consisted of three questions testing Word Processing, Spreadsheet and Database Management.

Paper 02/2 is the alternative to paper 02 and consisted of three questions testing Word Processing, Spreadsheet and Database Management.

Spreadsheet – Question 2 of Paper 02/ Question 2 of Paper 2/02

This question tested candidates' ability to use various features of a spreadsheet program.

This question was well done by the majority of candidates. Some areas of difficulty were as follows:

- Advanced filtering of data:
 - Setting up the criteria and extraction ranges
 - Use of correct criteria
- Sorting data:
 - Selecting the correct data range
 - Selecting the correct column and order for the sort
- Graphing:
 - Selecting the correct data range
- Formatting:
 - Use of correct alignment and indentation
- Formulae and Functions
 - Printing the formula worksheet

Database Management – Question 3 of Paper 02 / Question 2 of Paper 2/02

This question tested candidates' ability to use various features of a database management program.

This question was satisfactorily done by the majority of candidates. Some areas of difficulties were as follows:

Tables:

- Linking tables
- Printing the design view

Sorting:

- Sorting on a primary field and then by a secondary field

Queries:

- Creating a calculated field
- Performing calculation (SUM) within a query
- Copying the output of all the queries to a word processing document

Reports:

- Inserting footer in the report

Question 3

This question tested candidates' ability to:

- Define various methods of file organization and access
- Identify data fields
- Describe the updating process

Candidates satisfactorily defined master file and transaction file but were confused with the difference between a sequential and a serial file.

Candidates successfully identified appropriate data fields based on the given scenario.

The majority of candidates were unfamiliar with the updating process. Many candidates were unable to distinguish an immediate update from an update at the end of each day.

Question 4

This question tested the candidates' ability to:

- Identify loops and flowcharting symbols
- Calculate the maximum number of operating codes and addressable locations for a simple computer that uses 14-bit word length
- Trace an assembly program segment to compute values of the variable and to rewrite the program in a structured language

The majority of candidates were able to identify correctly the conditioning loop (Diagram A) but were unfamiliar with unconditional loop (Diagram B).

Many candidates correctly identified the flowcharting symbols.

The majority of candidates were unable to calculate the maximum number of operating codes and addressable location for a simple computer that uses 14-bit word length.

Many of the values provided by the candidates after the trace were incorrect.

The majority of candidates were unable to rewrite the program using structured language.

Question 5

This question tested the candidates' ability to analyse and manipulate flowcharts and algorithms

The majority of candidates were able to analyse but not manipulate flowcharts and algorithms.

Question 6

This question tested the candidates' ability to identify levels of programming languages and to convert between binary to decimal using two's complement representation.

Question 7

This question tested the candidates' ability to swap values in arrays and trace tables.

The majority of candidates seemed unfamiliar with arrays and hence could not swap. In addition, many candidates were unable to complete a trace table.

Question 8

This question tested candidates' ability to write a program in a structured language and to analyse a flowchart.

The majority of candidates could write the program. However, they appeared unfamiliar with the functions of the flowchart in the context in which they were used.