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MAY/JUNE 2007

CARIBBEAN EXAMINATIONS COUNCIL

SECONDARY EDUCATION CERTIFICATE EXAMINATION

INFORMATION TECHNOLOGY

Paper 01 – General and Technical Proficiencies

THEORY

1 1/2 hours

04 JUNE 2007 (p.m.)

INSTRUCTIONS TO CANDIDATES

1. **This paper has four sections.**

   SECTIONS *ONE* AND *TWO* ARE TO BE DONE BY *ALL* CANDIDATES.

   ***TECHNICAL PROFICIENCY* CANDIDATES MUST DO SECTIONS ONE, TWO, AND *THREE*.**

   ***GENERAL PROFICIENCY* CANDIDATES MUST DO SECTIONS ONE, TWO, AND *FOUR*.**

2. **Number EACH answer correctly in the answer booklet.**

3. **You may write Basic or Pascal (or any other language) code in those questions requiring pseudocode/algorithm.**

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO.

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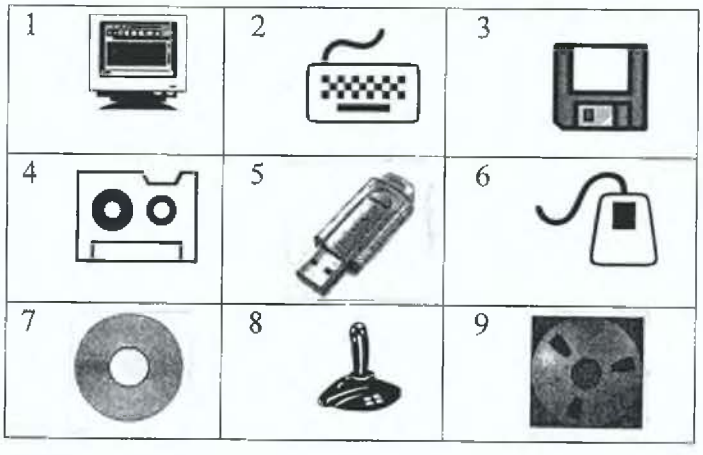
SECTIONS I and II

TECHNICAL AND GENERAL PROFICIENCIES

ANSWER ALL QUESTIONS.

SECTION I – 30 marks

1. Answer the following questions using the icons in the table below:



(a) Using the number and corresponding name, categorize the above icons into the following groups:

(i) Input devices **(2 marks)**

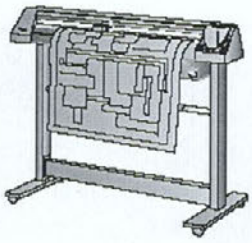
(ii) Output devices **(2 marks)**

(iii) Storage devices **(2 marks)**

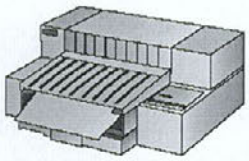
(b) Describe ONE common use of icon number 4. **(1 mark)**

Total 7 marks

2. Consider the following printers:



Printer 1



Printer 2

(a) Identify EACH of the above printers. **(2 marks)**

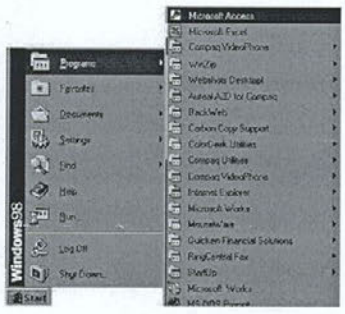
(b) Describe ONE specific purpose for EACH of the printers. **(2 marks)**

(c) Name another type of printer which is noisy when printing and explain its purpose. **(2 marks)**

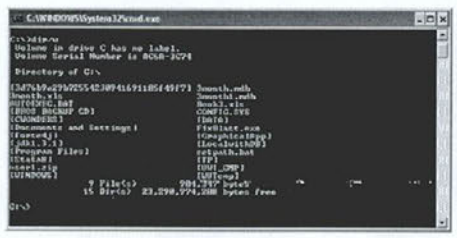
(d) Explain ONE common use of a printer which uses heat on chemically treated paper. State the name of this type of printer. **(2 marks)**

Total 8 marks

3. Consider the following interfaces 1 and 2:



Interface 1



Interface 2

(a) Identify EACH of the above interfaces. **(2 marks)**

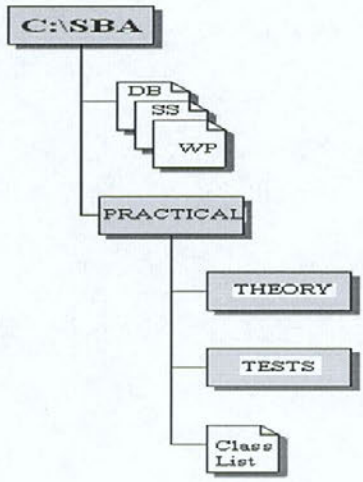
(b) Describe ONE advantage and ONE disadvantage of EACH of the interfaces. **(4 marks)**

(c) Explain in which of the interfaces a mouse is used. **(2 marks)**

Total 8 marks

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4. Consider the structure as shown below:



(a) Name the folders found in the PRACTICAL folder. **(1 mark)**

(b) Explain what would happen if the PRACTICAL folder was deleted. **(1 mark)**

(c) Write the path required to reach the Class List. **(2 marks)**

Total 4 marks

5. You see the following error message on the screen:



(a) State the drive indicated in this message. **(1 mark)**

(b) Explain ONE possible reason for this error message. **(1 mark)**

(c) Explain ONE possible solution to this error message. **(1 mark)**

Total 3 marks

SECTION II – 30 marks

6. (a) Describe an Information Technology application that would be BEST suited for the following:

(i) Make payments without carrying cash **(1 mark)**

(ii) Pay bills 24 hours a day without queuing at the counters **(1 mark)**

(b) Describe an IT application that would be useful in EACH of the following areas:

(i) Doing homework **(1 mark)**

(ii) Entertainment **(1 mark)**

(iii) Communicating with friends or students **(1 mark)**

Total 5 marks

7. (a) Explain the meaning of EACH of the following terms:

(i) IRC **(1 mark)**

(ii) FTP **(1 mark)**

(iii) HTML **(1 mark)**

(iv) E-Mail **(1 mark)**

(b) State ONE use of EACH of the terms indicated in (a) (i) to (iii). **(3 marks)**

Total 7 marks

8. Jamie is a computer systems consultant and Levert provides end-user support.

(a) (i) State TWO tasks that Jamie performs in her job. **(2 marks)**

(ii) State TWO tasks that Levert performs in his job. **(2 marks)**

(b) State ONE qualification that EACH of them should possess. **(2 marks)**

Total 6 marks

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9. Two agencies use **teleconferencing** and **videoconferencing** tools to collaborate.

(a) State the meaning of EACH of the tools the agencies use to collaborate. **(2 marks)**

(b) Give ONE example of the equipment that is essential for EACH tool to operate effectively. **(2 marks)**

(c) State ONE advantage and ONE disadvantage of the use of the tools. **(2 marks)**

Total 6 marks

10. An insurance company gathers medical reports on its clients from the computer system of a certain out-patient clinic. The insurance company increases its insurance payments according to the number of visits to the clinic. State with reasons, whether this involves

(a) Electronic eavesdropping **(2 marks)**

(b) Electronic surveillance **(2 marks)**

(c) Computer fraud **(2 marks)**

Total 6 marks

TECHNICAL PROFICIENCY

THIS SECTION IS FOR TECHNICAL PROFICIENCY CANDIDATES ONLY.

SECTION III – 30 marks

PROGRAMMING

ANSWER ALL QUESTIONS.

11. The three diagrams below represent three different ***generations*** of programming languages.

```
LOAD    X
ADD     Y
STORE   Z
LOAD    W
MULT    Z
STORE   X
```

Diagram 1

```
00000000 01101101
10010010 00011000
10101010 01010101
10001000 00111001
01010101 01110111
00100100 00111001
00010001 001111100
11000110 11111111
11100111 00011000
11000011 10100101
```

Diagram 2

```
# include stdio.h
main()
{  int myage; myDOB,myID
        printf("Type you age, your Date of Birth and your ID number");
        scanf(myage);
        scanf(myDOB);
        scanf(myID);

        Printf("\n We are twins. I was born on the same day and have the same age")
        Printf("\n We just need to have the same mothers")
}
```

Diagram 3

(a) Identify EACH generation. **(3 marks)**

(b) State ONE advantage and ONE disadvantage of EACH generation. **(6 marks)**

Total 9 marks

12. The following is a program segment written to perform a division and a multiplication.

(a) Read the code carefully then state whether each line of the code represents 'input', 'process' or 'output'.

```
Line 1  Writeln ("Enter the numerator and the denominator");
Line 2  Read   numerator
Line 3  Read   denominator
Line 4  MyQuotient = numerator/denominator
Line 5  MyProduct = numerator * denominator
```

(5 marks)

(b) Calculate MyQuotient and MyProduct if the numerator = 10 and the denominator = 2.

(2 marks)

Total 7 marks

13. Consider the following programming statements:

```
Total = 45
Temp = 'T'
Total = Total + 90
```

(a) Identify the variable(s). **(2 marks)**

(b) State the data type(s) of the variable(s). **(2 marks)**

(c) Calculate the result of Total. **(1 mark)**

Total 5 marks

14. Write the result of the following segments of code given num = 10:

(a)
```
num = 10
If (num >20)
then write "CXC'
else write "XCX"
```

(1 mark)

(b)
```
num = 10
count = 0
While (num <13) do
        write num
        num = num + 1
        count = count + 1
        Write count
```

(6 marks)

(c)
```
num = 10
For count = 1 to 2 do
        Write num
```

(2 marks)

Total 9 marks

GENERAL PROFICIENCY

THIS SECTION IS FOR GENERAL PROFICIENCY CANDIDATES ONLY.

SECTION IV – 30 marks

PRODUCTIVITY TOOLS

ANSWER ALL QUESTIONS.

15. The following questions relate to Word-Processing:

(a) The first line of your document contains the word "John". List TWO ways to replace the word "John" with the word "Mary". **(1 mark)**

(b) You have a document with 10 paragraphs. How would you interchange the third and seventh paragraphs? **(2 marks)**

(c) What is the difference between centered text and fully justified text? **(1 mark)**

(d) You have a document with 10 paragraphs on one page. What is the most efficient way to make paragraphs 6 – 10 as page two of your document? **(1 mark)**

(e) For the submission of your document, you are required to use 1.5" as the left margin and 0.5" as the right margin. How would you set the margins as required? **(1 mark)**

(f) The heading of your document is ***THE DIGITAL DIVIDE***

(i) How would you remove the underline? **(1 mark)**

(ii) List TWO formatting features used beside underlining and bolding. **(1 mark)**

(g) In your document, you want the page number to be inserted automatically at the top right of EACH page of the document. How would you do this? **(1 mark)**

(h) How would you print the content of a page across the length of the paper? **(1 mark)**

Total 10 marks

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16. The following questions relate to Spreadsheets:

The number of students attending the local University for the past 5 years is given in the following spreadsheet:

	A	B	C	D	E	F	G
1	Programs	2001	2002	2003	2004	2005	Total
2	Masters	20	18	12	10	13	
3	Degree	300	350	400	387	213	
4	Diploma	700	680	600	500	450	
5	Certificate	130	211	345	678	212	
6	Professional	#######	311	234	367	412	
7	Total						
8							
9							
10							

(a) In cell B6, you entered a number and "#######" appears in the cell. Why did this occur and how would you make the actual number you entered appear in the cell?
(2 marks)

(b) State the range that contains the name of the various programs offered by the University. **(1 mark)**

(c) The number of students who pursued Diploma program in 2002 is 608 **and not** 680. How would you change the data? **(1 mark)**

(d) You want to compute the total number of students who pursued Masters program for the period: 2001 – 2005. State the formula you would use. **(1 mark)**

(e) The formula "=B3/B10" was inserted in a cell. What is the purpose of the B10 in the formula? **(1 mark)**

(f) For good presentation, you are required to right-align the data in the range, B1:G1. How would you do this? **(1 mark)**

(g) The formula "=SUM(B2:B6)" was entered in a cell B7. The value in B4 was changed and it was observed that the value in B7 changed. Why did this occur? **(1 mark)**

(h) The formula in Cell B7 was copied to the range C7:F7. The values in the range C7:F7 were checked and found to be correct. Why did this occur? **(1 mark)**

(i) Explain how you would format all numeric values in the range, B7:F7 so that all thousands are separated by commas. **(1 mark)**

Total 10 marks

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17. The following questions relate to Database Management:

The Traffic Department is concerned about reckless driving by drivers of public transportation vehicles using a particular route. On a daily basis, the traffic department would like to store information on the Registration Number of the Vehicle, the type of Vehicle (Bus, Mini-Bus, and Hired Car), the driver of the vehicle and the number of tickets issued to the driver. You have been asked to create a database table named TICKET to store the information.

(a) Create the structure of the table TICKET. Your structure should indicate the name, data type and size for EACH field in your table. **(3 marks)**

(b) State ONE reason for using a form to input data into your table. **(1 mark)**

(c) Give ONE example of a record in the TICKET table. **(1 mark)**

(d) Suppose you now need to store the sex of the driver, what would you do to accomplish this task, assuming that your table has 10 records already? **(2 marks)**

(e) Write a query to show ALL female drivers of Hired Cars. **(1 mark)**

(f) How would you print the data in a table for the date, 24/12/06? **(2 marks)**

Total 10 marks

END OF TEST