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CANDIDATE'S FULL NAME (FIRST, MIDDLE, LAST)

A022

NAME OF SCHOOL/CENTRE

REGISTRATION NUMBER

GENERAL PROFICIENCY

INFORMATION TECHNOLOGY – Paper 02
SUBJECT

451

TEST CODE 0 1 2 2 9 0 2 0

FULL IN ALL THE INFORMATION REQUESTED CLEARLY IN CAPITAL LETTERS.

M 22011229020

24 MAY 2022 (a.m.)

CARIBBEAN SECONDARY EDUCATION EXAMINATION CERTIFICATE®

CARIBBEAN EXAMINATIONS COUNCIL



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01229020/MJ/CSEC 2022

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

1. This paper consists of FOUR questions. Answer ALL questions.
2. Write your answers in the spaces provided in this booklet.
3. Do NOT write in the margins.
4. If you need to rewrite any answer and there is not enough space to do so on the original page, you must use the extra lined page(s) provided at the back of this booklet. Remember to draw a line through your original answer.
5. If you use the extra page(s) you MUST write the question number clearly in the box provided at the top of the extra page(s) and, where relevant, include the question part beside the answer.

READ THE FOLLOWING INSTRUCTIONS CAREFULLY.

2 hours

Paper 02 – General Proficiency

INFORMATION TECHNOLOGY**CARIBBEAN SECONDARY EDUCATION CERTIFICATE®
EXAMINATION****CARIBBEAN EXAMINATIONS COUNCIL**

MAY/JUNE 2022

TEST CODE **01229020****FORM TP 2022088**



GO ON TO THE NEXT PAGE

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(2 marks)

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(ii) Explain how data is captured from a turnaround document.

(2 marks)

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(i) Describe what is meant by a turnaround document.

(b) Turnaround documents are popular with automated methods of data entry.

(2 marks)

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(ii) Name an application in which any ONE of the devices circled in (a) (i) is used and describe the type of data that is captured with that device.

(2 marks)

Barcode reader	Light pen	Optical mark reader
Joystick	Touchscreen	

(i) Circle TWO direct data entry devices from the following list of input devices.

1. (a) Direct data entry devices can transfer data directly from a document into a computer system.

Answer ALL questions.



0 1 2 2 9 0 2 0 0 5

GO ON TO THE NEXT PAGE

(3 marks)

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- (ii) List the steps (in the correct order) required to conduct a spell-check on the paragraph above, using a word processing program.

(2 marks)

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- (i) State the steps (in the correct order) required to find the number of words in the paragraph above, using a word processing program.

A printer is an output device on a computer system used to print hard copy output. Printers fall into two categories: impact and non-impact. Impact printers spray ink or toner powder and the characters are fixed onto the paper by heating. Examples of non-impact printers are inkjet printers, laser printers and thermal printers. Non-impact printers strike the paper when printing. The most popular impact printer is a dot-matrix printer. Dot-matrix printers print multiple copies using carbon paper. Impact printers strike the paper when printing. The most popular impact printer is a dot-matrix printer.

- (d) Consider the following paragraph.

(2 marks)

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- (c) Determine the number of 5 MB documents that could fit on a 16 GB flash drive. (Show all working.)



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Total 20 marks**(3 marks)**

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- (ii) Outline the steps needed to replace all occurrences of the word "print" with the word "produce" using the Replace All option in the dialogue box above.

(2 marks)

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- (i) Briefly explain why it would be safer to use the Replace option rather than the Replace All option in the dialogue box above.



- (e) The following diagram illustrates the dialogue box obtained when using the Find and Replace editing feature in a word processing program, to replace all occurrences of the word "print" with the word "produce" in the paragraph in (d) on page 5.



(8 marks)

- Router
Function:
Location:
Modem
Function:
Location:
Wireless network adapter
Function:
Location:
Network interface card
Function:
Location:
EACH
be found AND describe the function of EACH device.

(a) State the location on the network where EACH of the following hardware devices could

new home-based business initiative.
Sharon recently had a home network built with both wired and wireless capability to facilitate her

2.



0 1 2 2 9 0 2 0 0 8

01229020/Mj/CSEC 2022

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(4 marks)

.....

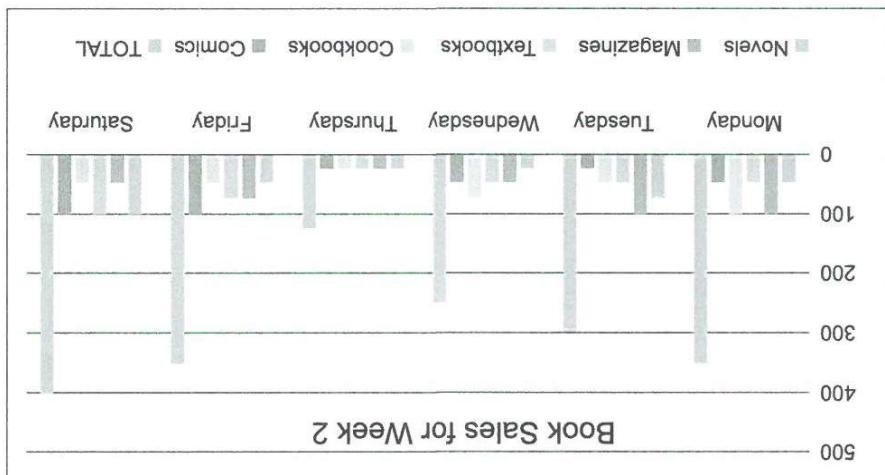
.....

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- (i) List the steps (in the correct order) required to create the chart from data in a spreadsheet.



- (c) Examine the following chart created from data in a spreadsheet.

(2 marks)

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- (b) The wireless devices were accessing the Internet but Sharon's desktop computer was unable to access the Internet. Suggest TWO instructions that could be given to Sharon to help her to troubleshoot the problem.



0 1 2 2 9 0 2 0 0 9

01229020/MJ/CSEC 2022

GO ON TO THE NEXT PAGE

(2 marks)

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(iii) Name ONE type of chart other than those mentioned in (c) (i) and (ii) and describe when it is BEST used.

(2 marks)

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(ii) State ONE other type of chart which is appropriate to represent the data in the spreadsheet and state how it differs from the one on page 8.



0 1 2 2 9 0 2 0 1 0



01229020/MJ/CSEC 2022

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Total 20 marks

(2 marks)

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of books sold on Monday.

Write the formula/function to be inserted in Cell B8, to calculate the total number

Books Sold for Week 2		A	B	C	D	E	F	G	H	
2	Type of Book	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Total		
3	Newspapers	50	75	25	50	50	100	325		
4	Magazines	100	100	50	25	75	50	375		
5	Textbooks	50	50	50	25	75	100	350		
6	Comics	100	50	75	25	50	50	350		
7	Cookbooks	50	25	50	25	100	100	350		
8	TOTAL			300	250	125	350	400	1775	

- (iv) Sharon used the following spreadsheet to create the chart displayed on Page 8.



0 1 2 2 9 0 2 0 1 1

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GO ON TO THE NEXT PAGE

(5 marks)

Web Technology Concept	Description
Hyperlink	Connects webpages to other webpages
Web browser	Stores, processes and delivers webpages to client devices on request
HyperText Markup Language	Facilitates communication with client devices for the delivery of webpages
HyperText Transfer Protocol	Software application that allows client devices to access resources and websites from the Internet
Uniform resource locator	Text-based application used to create web pages for display on the client devices

3. (a) Complete the table below by inserting the MOST appropriate web technology concepts from the following list.
- | | | | |
|-------------|---------------------------|-----------------------------|--------------------------|
| Hyperlink | Web server | File transfer protocol | Uniform resource locator |
| Web browser | HyperText Markup Language | HyperText transfer protocol | |



0 1 2 2 9 0 2 0 1 2

01229020/MJ/CSEC 2022

GO ON TO THE NEXT PAGE

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STUDENTS

ID	First Name	Last Name	Birth Date	Gender	Married	Phone	Sport No
1	Roy	CLARKE	1/2/1997	M	Yes	688-4444	010
2	Jamilla	ALI	3/22/1982	F	No	720-9123	020
3	Tyson	LENNY	3/23/1996	M	Yes	630-1234	040
4	Ikeilia	DRAKES	7/4/1978	F	No	456-7890	050
5	Suresh	BAPTISTE	5/23/1999	M	No	456-6676	030
6	James	BROWN	6/18/2001	F	Yes	620-0190	050
7	Smith	JONES	12/20/2002	M	Yes	640-2823	020
8	Michael	JONES	6/18/1999	M	Yes	640-4929	080
10	Daniella	SINGH	6/18/2008	F	No	640-9989	090
11	Bridget	NICOLAS	6/18/2008	F	No	637-4442	100
14	Brian	JOSEPH	3/3/2001	M	Yes	638-2223	020

SPORTS

Sport No	Sport Name
020	Football
030	Basketball
040	Lawn tennis
050	Badminton

Consider the following database with two database tables named STUDENTS and SPORTS.



0 1 2 2 9 0 2 0 1 3

01229020/Mj/CSEC 2022

GO ON TO THE NEXT PAGE

(4 marks)

Field	ID	FirstName	LastName	Phone	SportNo	SportName	STUDENT	STUDENT	STUDENT	SPORTS	SPORTS
Table											
Show											
Sort											
Criteria											
OR											

football.

- the field SportName from the SPORTS table, for all married students who play football.
- the fields ID, FirstName, LastName and Phone from the STUDENTS table

(c) Create a query by completing the following query design view window to extract

(2 marks)

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tables.

(iii) Outline how the one-to-many relationship is formed between the two database

(1 mark)

.....

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tables.

(ii) State why it is necessary to maintain the accuracy of data between the two database

(1 mark)

.....

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.....

between the two database tables.

(i) State the feature that is used to establish and maintain the accuracy of data be-

(b) The database tables STUDENTS and SPORTS can be joined in a one-to-many relationship to ensure that data in the two tables remain as accurate as possible.



0 1 2 2 9 0 2 0 1 4

01229020/MJ/CSEC 2022

GO ON TO THE NEXT PAGE

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(2 marks)

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(ii) Describe what is involved in any TWO of the steps listed in (e) (i).

(3 marks)

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(e) (i) There are four steps in implementing a program. List THREE of these steps.

(2 marks)

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.....
.....

(d) State the record IDs of the record(s) that would be extracted when the query designed in

(c) is executed.

(d)



0122902015

01229020/Mj/CSEC 2022

GO ON TO THE NEXT PAGE

Total 25 marks

(5 marks)

STOP

Write „Enter the name and number of goals scored by Team A“
Read Team_A,goals_A
Write „Enter the name and number of goals scored by Team B“
Read Team_B,goals_B

STAR

- Complete the following pseudocode by writing a nested if-then-else statement to produce the following:

 - If Team A scores more goals than Team B, the algorithm should output Team A is the winner.
 - If Team B scores more goals than Team A, then the algorithm should output Team B is the winner.
 - Otherwise, the program should output game drawn.



0 1 2 2 9 0 2 0 1 6

01229020/Mj/CSEC 2022

GO ON TO THE NEXT PAGE

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(2 marks)

(2 marks)

(a) Identify TWO variables which when added will always be equal to the monthly repayment amount of \$1000.

(b) (i) The pseudocode has a logic error. Identify the line with the error and make the necessary corrections.

```

START
Line 1. Set Principal → 10,000
Line 2. Set MonthlyPayment → 1,000
Line 3. Set MonthlyInterest → 0.01
Line 4. Write "Principal", "Payment", "Interest"
Line 5. WHILE Principal > 0 DO
Line 6.   Set Interest → Principal * MonthlyInterest
Line 7.   Set Payment → MonthlyPayment - Interest
Line 8.   Set TotalInterest → TotalInterest + Interest
Line 9.   Set TotalPayment → TotalPayment + Payment
Line 10.  Write Principal, Payment, Interest
Line 11.  Set NewPrincipal → Principal - Payment
Line 12.  Set Count → Count + 1
Line 13. END WHILE
Line 14. Write TotalPayment, TotalInterest, Count
STOP

```

The pseudocode below will print a payment schedule showing the principal, the payment made to the principal and the interest charged for each month once the principal is greater than zero. The payment schedule will also print the total amount paid to the principal, the total amount of interest paid and the number of payments made.

A credit union gives loans of \$10 000 at a fixed monthly interest rate of one percent on the principal amount. The monthly payment amount is a fixed \$1000. The amount paid to the principal each month is the monthly payment amount minus the interest paid for the month.

4.



(2 marks)

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(e) Explain ONE other **named** looping construct that could be used in the program.

(2 marks)

.....
.....

(d) Suggest ONE reason why the looping construct stated in (e) was used in the pseudocode.

(1 mark)

.....

(c) State the type of looping construct used in the pseudocode.

(2 marks)

.....
.....

(b) (i) Identify the stage in program implementation where the type of error stated in (ii) will show up and state the consequences of the error.



0 1 2 2 9 0 2 0 1 8

01229020/Mj/CSEC 2022

GO ON TO THE NEXT PAGE

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(3 marks)

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- (ii) Describe the term, denial-of-service (DOS) attack, giving ONE example.

(2 marks)

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- (i) Describe the concept of, telecommuting and state ONE reason why telecommuting is so impactful.

- (g) The advent of the COVID-19 pandemic has resulted in an increase in connectivity and online activities, for example, telecommuting, cyber-criminal activities and greater use of cloud-based applications.

(4 marks)

Principal	Payment	Monthly Interest	\$ 81.91	\$ 81.91
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Loop 3

Loop 2

Loop 1

- (f) Complete the following trace table by inserting the missing values for the variable in EACH row representing the first THREE times the pseudocode loops.



0 1 2 2 9 0 2 0 1 9

01229020/MJ/CSEC 2022

IF YOU FINISH BEFORE TIME IS CALLED, CHECK YOUR WORK ON THIS TEST.

END OF TEST

Total 25 marks

(3 marks)

..... Disadvantage

.....

.....

.....

..... Advantages

(iv) State TWO advantages and ONE disadvantage of buying software applications stored in the cloud.

(2 marks)

Difference

.....

(iii) State ONE similarity and ONE difference between Bluetooth and Wi-Fi technologies.



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01229020/Mj/CSEC 2022

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Question No.

If you use this extra page, you MUST write the question number clearly in the box provided.

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