

REGISTRATION CENTRE NUMBER	CENTRE NAME	
CANDIDATE'S FULL NAMES		
CANDIDATE IDENTIFICATION NUMBER	SUBJECT CODE 0796	PAPER NUMBER 3
FOR OFFICIAL USE ONLY (Candidate Random CODE):	▶	
GENERAL CERTIFICATE OF EDUCATION BOARD ADVANCED LEVEL EXAMINATION		
SUBJECT TITLE INFORMATION & COMMUNICATION TECHNOLOGIES	SUBJECT CODE 0796	PAPER NUMBER 3
EXAMINATION DATE: JUNE 2022		

FOLD
HERE

TWO HOURS

Group 1

Enter the information required in the shaded boxes.

Do not write in pencil.

*You are reminded of the necessity for good English and orderly presentation in your answer. Your results must be recorded in the spaces provided in this question booklet. Candidates must allow for themselves enough time to complete and check their work where these are required. The supervisor will guide you on how to save your files but usually you will be expected to save all your work in one folder named **Candidate folder** that will be created in your desktop.*

When an imperative programming language is require to write program code, either Standard |ISO|Pascal or |ANSI|C programming language may be used.

You should ensure all your work is collected and printed before leaving the examination room. All printed work should be inserted in this booklet and well stapled.

CAREFULLY HANDLE ALL EQUIPMENT PUT AT YOUR DISPOSAL to avoid accidents that may lead to a disaster or system failure. Report any case of system or device malfunction to your supervisor.

Answer ALL TASKS.

FOR EXAMINERS' USE ONLY	
Marked by:.....	SCORE
Signature: Date:	
Checked by:.....	
Signature: Date:	

TURN OVER

TASK A (SPREEDSHEET: 18 MARKS)

Open the SALES workbook in the candidate folder. This workbook contains three worksheets, Sales, OldSales and Summary.

Questions 1 to 9 are based on the Sales sheet.

1. Change the font type of the first row (showing SN, NAME, 3% Discount ...) to ALGERIAN. (1 mark)
2. Insert cell border in the range A1:G25. (2 marks)
3. Adjust the Name field width to 138 pixels. (1 mark)
4. Insert a formula in the 3% Discount field to calculate the discount for each item bought.

This discount is 3% of the product of Unit Price and Quantity.

Write down the formula in cell C4.

C4: _____ (2 marks)

5. Insert a formula in the Payable Total field to calculate the total price for each sale. The total is calculated following the algorithm below

Start

Multiply Unit Price by Quantity to get total price

Subtract the 3% Discount from the total price above

Stop.

Write down the formula in to calculate the Payable Total in F12 in the line below.

F12: _____ (2 marks)

6. Calculate the total of 3% Discount and total of the Payable Total in row 25.
Write down the formula in cell C25.

C25: _____ (1 mark)

7. Set the font of row 25 to bold and size 14. (1 mark)

Ensure that you have written down the formulae in the cells in questions 4, 5 and 6 above before attempting the questions that follow.

8. Rearrange the fields (columns) in this sheet to occur in the order SN, Name, Item, Unit Price, Quantity, 3% Discount and Payable Total. (2 marks)
9. Format the numbers in the range D2:G25 to thousand separator without decimal place. (1 mark)

The next exercises are based on the *OldSales* and *Summary* sheets.

10. Insert a fill color of light blue to the cells that make up the field names in both sheets. (1 mark)

11. Sort the table in **OldSales** by items. (1 mark)
12. In C2 in the **Summary** sheet, type a formula to link C2 to a cell in **OldSales** that contains the unit price of spanners. Do similarly for the cells in the range C3:C9. (1 mark)
Write down the formula in cell C5 in the line below.

C5: _____

13. In the **Summary** sheet, type a formula in D2 that will add the total quantity of spanners sold as declared in **OldSales**. Do similarly for the cells in the range D3:D9. Write down the formula in cell D2 in the line below. (2 marks)

D2: _____

Print the three sheets of this workbook: Sales, OldSales and Summary.

TASK B: (PROGRAMMING: 17 marks)

The algorithm given by a student to solve a certain problem.

Start

Output: Give the unit price, of the item

Input: Get the unit price, U, from the keyboard

Output: Give the quantity of item bought

Input: Get the quantity, Q, from the keyboard

*Set the total, T, to $U*Q$*

Print T.

Stop.

1. Explain the objective of the algorithm. _____ (2 marks)
2. Identify the variables and give their respective data types of the program that will implement the above algorithm.
- Variable 1 _____ Data type _____
- Variable 2 _____ Data type _____ (2 marks)
3. Which control structure has been used in this algorithm? _____ (2 marks)
4. Implement the algorithm above using either C or Pascal programming language. (10 marks)
You will be evaluated based on the following aspects: declaration of variables, presentation of I/O instructions, process instructions, understanding of syntax.
Save your code using the file name **Calculator**.
5. Compile and execute using the following test data: U=11, Q=7; and write down the final result in the line below (3 marks)
- _____

Print the source code of your program.

©2022/0790/3/G1 _____

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TWO HOURS
Group 2

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TASK A (SPREEDSHEET: 18 MARKS)

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3. Adjust the Name field width to 138 pixels. (1 mark)
4. Insert a formula in the 3% Discount field to calculate the discount for each item bought.

This discount is 3% of the product of Unit Price and Quantity.

Write down the formula in cell C4.

C4: _____ (2 marks)

5. Insert a formula in the Payable Total field to calculate the total price for each sale. The total is calculated following the algorithm below

Start

Multiply Unit Price by Quantity to get total price

Subtract the 3% Discount from the total price above

Stop.

Write down the formula in to calculate the Payable Total in F12 in the line below.

F12: _____ (2 marks)

6. Calculate the total of 3% Discount and total of the Payable Total in row 25.

Write down the formula in cell C25.

C25: _____ (1 mark)

7. Set the font of row 25 to bold and size 14. (1 mark)

Ensure that you have written down the formulae in the cells in questions 4, 5 and 6 above before attempting the questions that follow.

8. Rearrange the fields (columns) in this sheet to occur in the order SN, Name, Item, Unit Price, Quantity, 3% Discount and Payable Total. (2 marks)
9. Format the numbers in the range D2:G25 to thousand separator without decimal place. (1 mark)

11. Sort the table in **OldSales** by items. (1 mark)
12. In C2 in the **Summary** sheet, type a formula to link C2 to a cell in **OldSales** that contains the unit price of spanners. Do similarly for the cells in the range C3:C9. (1 mark)
Write down the formula in cell C5 in the line below.
- C5: _____
13. In the **Summary** sheet, type a formula in D2 that will add the total quantity of spanners sold as declared in **OldSales**. Do similarly for the cells in the range D3:D9. Write down the formula in cell D2 in the line below. (2 marks)

D2: _____

Print the three sheets of this workbook: Sales, OldSales and Summary.

TASK B: (PROGRAMMING: 19Marks)

The algorithm given by a student to solve a certain problem.

Start

Display: Give the number of science students in class

Input: Get the number, N1, from the keyboard

Display: Give the number of arts students in class

Input: Get the number, N2, from the keyboard

Set the total students, TS, to $N2+N1$

Print TS.

Stop.

1. Give one input statement and one process statement from the algorithm.
Input: _____
Process: _____ (2 marks)
2. Identify the variables and give their respective data types of the program that will implement the above algorithm.
Variable 1 _____ Data type _____
Variable 2 _____ Data type _____ (2 marks)
3. Which control structure has been used in this algorithm? _____ (2 marks)
4. Implement the algorithm above using either C or Pascal programming language.
You will be evaluated based on the following aspects: declaration of variables, presentation of I/O instructions, process instructions, understanding of syntax. (10 marks)
Save your code using the file name **Calculator**.
5. Compile and execute using the following test data: $N1=53$, $N2=15$: and write down the final result in the line below
_____ (3 marks)

Print the source code of your program.