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): ►	

HOLY INFANT HIGH SCHOOL - MELEN

ADVANCED LEVEL MOCK EXAMINATION

SUBJECT TITILE	SUBJECT CODE	PAPER NUMBER
INFORMATION & COMMUNICATION TECHNOLOGIES	**0796**	**3**
	EXAMINATION DATE:	**MARCH 2024**

FOR EXAMINERS' USE ONLY	
Marked By: …….. Signature: …….. Date: …….....	**SCORE**
Checked By: …….. Signature: …….. Date: …….....	

TWO HOURS

*Carry out **ALL** the tasks given. For your guidance, the approximate mark for each part of a task is indicated. Great importance is attached to the accuracy, layout and labeling of diagrams and computer generated outputs.*

You are reminded of the necessity for good English and orderly presentation in your answers.

You are expected to print a single copy of relevant fragments of your work at different times. Please notify the supervisor of any required printout that was not done!

When an imperative programming language is required to write program code, either standard (ISO) Pascal or the Standard (ANSI) C programming language may be used.

If need be, supervisors will assist you in recording details of intermediate work carried out on the computer.

TASK 1: SPREADSHEET (29 Marks)

You are going to help the trainees analyze data about some average broadband speed tests taken on a single day. Use the most efficient methods.

1. Open the spreadsheet file named **Broadband Speed Test.xlsx** found in your candidate folder. It contains the data you need to do the following activities. **(1 mark)**
2. Insert two new rows above row 1 **(1 mark)**
3. In cell,
   - A1 enter the title: **"Broadband speed test data"** and cell style: **Heading 1** **(1 mark)**
   - E2 enter the subtitle: **Speed (in Mb/s)** and cell style: **Heading 2** **(1 mark)**
4. Merge cells A1 to F1. **(5 marks)**
   Format this merged cell so that:
   - Text alignment: ***Center*** - Font color: ***White*** - Font size: ***20***
   - Font: ***Georgia*** - Background color: ***Black***
5. Merge cells E2 to F2. **(2 marks)**
   Format this merged cell that:
   - Text alignment: ***Center*** - Font color: ***Blue*** - Font size: ***13***
6. Merge cells A2 to D2. **(1 mark)**
7. Format the cells found on row 3 so that: **(2 marks)**
   - Text alignment: ***Left*** - Font size: ***13*** - Make text **Bold**
8. In cell C4 enter a function to look up the name of the broadband provider from the content of ***Provider*** sheet. Adjust your columns so that data can be fully seen.
   Enter the formula below **(4 marks)**
   _____
   Replicate this formula for each speed test.
9. Place the image **logo.jpg** into the merged cell A2:D2. **(2 marks)**
   Make the image fit the available space in this cell by:
   - Increasing the height of row 2. - Adjusting the image size.
10. In your ***Broadband*** sheet: **(1 mark)**
    - insert the text **"Broadband Speed Analysis 2024"** as the footer.
11. Filter out only the tests with a download speed greater than 30Mb/s. **(3 marks)**
    - For these providers: **Virgin media, 3, Orange** and **Tmobile**.
    - Sort this data into ascending order of **provider.**
12. In row 65, do the following: **(2 marks)**
    - Font size: **14** - Text: **Bold**
    - Merge cells A65 to D65 and type **TOTAL** in the merge cell.
13. Insert a formula in cell E65 and F65 to calculate the total. Make sure you sum only the filtered cells.
    Write the formula in **E65** below:
    _____
14. Insert All Border round your work. **(1 mark)**
15. Select the columns Code, Download and Upload. Insert a column or Bar chart. **(2 marks)**
    - Make sure the Chart title is **Download VS Upload.** - Move chart into a new sheet called ***Chart***

16. Save your work.

Print the Sheets ***Broadband, Provider, and Chart.***

TASK 2: DATABASE (21 Marks)

This exercise will lead to the normalization of the General Sales table given below. The complete implementation of the database is to have three tables. Two of the tables have been created in a database named ***Sales*** found in the Candidate folder.

The General Sales table below shows the purchase made by eight customers from an equipment shop for a week.

Table A: General Sales

No	Names	Items	Unit Price	Quantity	Line - Total
1	Gabriel Kome	Gallon	550	400	220,000
2	Makia Betoke	Spanner	900	230	207,000
3	Gabriel Kome	Cutlass	2,700	336	907,200
4	Samson Takang	Bulb	1,500	220	330,000
5	Hadison Okie	Spinner	900	11	9,900
6	Etame Juliet	Bulb	1,500	18	27,000
7	Gabriel Kome	Spanner	900	19	17,100
8	Ngwa Kingsley	Cutlass	2,700	10	27,000
9	Samson Takang	Spanner	900	11	9,900
10	Bekolo Jean	Gallon	550	12	6,600
11	MakiaBetoke	Bulb	1,500	15	22,500
12	Etame Juliet	Floor rag	1,300	15	19,500
13	Gabriel Kome	Cable	2,700	15	40,500
14	Ngwa Kingsley	Padlock	1,300	18	15,300
15	Bekolo Jean	Bulb	1,500	12	18,000
16	Gabriel Kome	Padlock	1,300	14	11,900
17	Etame Juliet	Cable	2,700	18	48,600
18	Ngwa Kingsley	Bulb	1,500	16	24,000
19	Makoge Kingsley	Hand saw	3,500	17	59,500
20	Samson Takang	Spanner	900	10	9,000

1. Does the table contain an entire primary key?

   Explain your answer _____ **(2 marks)**

2. The General Sales table is not normalized. Give two explanations for this, in the spaces below. **(2 marks)**

   Reason 1. _____

   Reason 2. _____

3. Give a reason why the table is in 1NF. **(1 mark)**

   _____

   Open the ***Sales*** database in your Candidate folder.

   In an attempt to normalise the database, the table above was split into three tables. Two of the tables are

Table 1: Items, which identifies the items
Table 2: Buyers, which identifies the buyers.
The records of the tables are given below.

Table 1: Items

ItemNo	Item	Unit Price
T1	Bulb	1500
T2	Cable	2700
T3	Cutlass	2700
T4	Spanner	900
T5	Gallon	550
T6	Floor rag	1300
T7	Hand saw	3500
T8	Padlock	1300

Table 2: Buyers

SN	Names
1	Gabriel Kome
2	Makia Betoke
3	Samson Takang
4	Hadison Okie
5	Makoke Kingsley
6	Etame Juliet
7	Ngwa Kingsley
8	Bekolo Jean

The third table, named ***Sales*** is designed to relate the two tables above.

4. Complete the table below to show the properties of the ***Sales*** table. Note that the field Line -Total is a calculated field and should not be included in the ***Sales*** table: **(3 marks)**

Field Name	Data type

5. Design a simple Entity-Relationship (E-R) diagram of the database in the space below. **(2 marks)**

6. Create the Sales table in the database and create the relationship according to the E-R Diagram. **(3 marks)**
7. Populate the Sales table by obtaining data from the General Sales table. **(3 marks)**
8. Create a query that reproduces the **General Sales** table (with fields, SN, Names, Items, Unit Price, Quantity,
   Line Total). Take note that ***Line Total*** is a calculated field.
   Save the query as **General Sales**. **(3marks)**
   Write, in the line below, the formula in the calculated field found in the query.
   _____
9. Capture the screen of your query in (8) above and paste in a new document file named ***Query Screen*** and print. **(2 marks)**

Print the Sales table and the General Sales query.