CAMEROON GENERAL CERTIFICATE OF EDUCATION BOARD
General Certificate of Education Examination

JUNE 2014   **ADVANCED LEVEL**

Subject Title	Information and Communication Technologies
Paper No.	Paper 3 – Practical Examination
Subject Code No.	796

Three Hours

Carry out ALL the tasks given. For your guidance, the approximate mark for each part of a task is indicated in brackets.

Great importance is attached to the accuracy, layout and labeling of the diagrams and computer generated outputs.

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

Analyse the problem as well as write algorithms in the answer booklet provided. Also record in your answer booklet any information requested or that you believe would make it easier to understand how you carried out tasks or answered questions.

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.

Where information is provided as soft copy, notify the supervisor if it is not found in your machine or has not been made available to you.

ANSWER ALL QUESTIONS IN THE TASKS

ENTER ANY FORMULA TYPED IN THE SPREADSHEET IN YOUR ANSWER BOOKLET WHEN ASKED.

The task below is based on the spreadsheet with file name STOCK-CONTROL, found in your candidate folder. The software is designed to control stock in a mini whole sale shop of six items.
The field names in the stock sheet contain comments that define their contents.

TASK A (32 MARKS)

Open the **Stock Control** file found in the candidate folder and answer the following questions.

1. Insert borders in the area A1:I9.

    (1 mark)

2. Merge the cells in the range A9:B9 and write TOTAL in the merged cells.

    (1 mark)

3. Insert a formula in cell C9 that calculates the total number of stock items in the shop. Copy the formula in C9 through H9.

    (2 marks)

4. Change the font of the row containing the totals to bold with font size 14.

    (1 mark)

5. Select the cell range D3:F8 and set the format to a thousand separator.

    (1 mark)

6. Click the SALES sheet to continue with the next activities.
    Format the cells for the date from A4 to A15 to the date format dd-Month-yy (e.g. 10-Jun-13).   **(2 marks)**

7. Copy the sample sales for rice in the SAMPLE sheet and paste in the appropriate location in the sales for rice in the SALES sheet. Use an appropriate paste option so that the date appears in the format selected in (6) above and adjust the column width for **Date**.

    (1 mark)

8. Insert a formula to calculate the total for each sale made in column D.

    (1 mark)

The table below shows the sales made between 12-Feb-13 to 17-Feb-13.

Date	Item	No. sold	Unit price
12/2/13	Milk	1	11100
13/2/13	Soap	2	14300
13/2/13	Milk	4	14200
13/2/12	Milk	4	12400
13/2/12	Flour	2	19400
13/2/13	Tomatoes	2	7100
14/2/12	Flour	3	19900
14/2/13	Milk	2	12000
15/2/12	Tomatoes	3	8300
15/2/12	Rice	2	18200
16/2/13	Rice	1	17600
17/2/13	Sugar	2	6600

9. Enter the data above in the appropriate table in the SALES sheet.

    (3 marks)

10. Insert a formula to calculate the total for each sale made in the respective tables as for the rice table.

    (2 marks)

11. Insert a formula that displays a message in the **Comment** column; any of the options: *Low Sale, Good Sale* or *High Sale,* by considering the unit price as follows:

- If unit price is lower than **Min Price**, then comment is "Low Sale".
- If unit price is greater than **Min Price** but lower than **Max Price** then comment is "Good Sale".
- If unit price is greater than the **Max Price** then comment is "High Sale".

Insert the absolute value sign where necessary in your formula for the first rice sale and copy the formula through other sales for rice.

(4 marks)

12. Copy the comment formula in the rice table to the tables of the other items; making adjustments within the formula where necessary.

(2 marks)

13. Type a formula in the *No Sold* column in the stock sheet that links the respective cells to the number sold for each item found in the SALES sheet.

(2 marks)

14. Type a formula in the Stock sheet that calculates the stock level and the % Stock Level in columns H and I respectively use the formulae:

- *STOCK LEVEL = INITIAL STOCK – No Sold.*

- % Stock Level = $\frac{STOCK\ LEVEL}{INITIAL\ STOCK} * 100$ (Adjust values to display to 1 decimal place)

(3 marks)

15. Create a new field at the right end of the Stock table named COMMENT that displays a warning message "REFILL" if the % Stock Level for an item is less than or equal to 50% and "**OK**" otherwise. **(2 marks)**

16. Type in D13 in the **Stock** sheet a formula that calculates the total expenditure for all the six items by taking the sum of all the products of the INITIAL STOCK and the UNIT COST PRICE. **(2 marks)**

17. Type in D14 in the **Stock** sheet a formula that calculates the total sales amount by adding all the total sales of the different items in the SALES tables.
Also type in D15 a formula that calculates stock balance, being the difference between the TOTAL EXPENDITURE and TOTAL INCOME.

(2 marks)

TASK B (6 marks)

In the design of the above software,
(a) State two activities you would have carried out during the investigation phase of the software development cycle.

(2 marks)

(b) State two weaknesses of the software developed and, for each, suggest a possible solution.
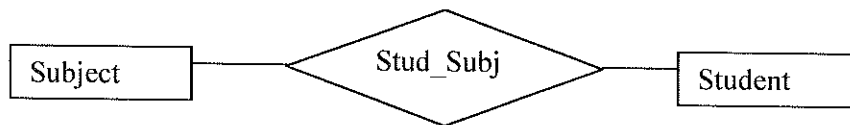
(4 marks)

TASK C (17 marks)

This task is based on databases and uses a database called SchoolDatabase

1. Open the SchoolDatabase found in the candidate folder.

(1 mark)

2. Open the subject table and state the data type of each field.

(2 marks)

3. Add the following information in the Stud_Subj table.

St_ID	Sub_ID	Grade
13	ICT101	D
14	MAT101	C
12	FRE101	D
16	ENG101	B
22	ICT101	A
20	CSC101	E

Print the Stud_Subj table when done.

(2 marks)

4.   Create a relation for the three tables using the E-R diagram below.

Explain in your answer booklet the procedure you have taken to create the relationship   **(3 marks)**

5.   Create a query to generate the list of students who score grade A or B. Your query should display the name of student, and the subject ID and name for which they scored A or B grade. Save the query as GradeAB.

(3 marks)

6.   Create a query that displays the grades for the subjects taken by student A. Rocky. Save the query as RockSub then Print Rocksub.   **(2 marks)**

7.   Create a form to enter data into the subject table and save the form as Subject. Print a page of the form. Write in your answer booklet the procedure you took to create the form.   **(4 marks)**

Go back and check your work. Make sure the following are printed:
* -The Stock Sheet.
* -The first page of the SALES Sheet.