

REPUBLIQUE DU CAMEROUN
Paix – Travail – Patrie
MINISTRE DES ENSEIGNEMENTS
SECONDAIRES
DELEGATION REGIONALE DU LITORALE
INSPECTION REGIONALE DE PEDAGOGIE



REPUBLIC OF CAMEROON
Peace – Work – Fatherland
MINISTRY OF SECONDARY EDUCATION
REGIONAL DELGATION FOR THE LITTORAL
REGIONAL INSPECTORATE OF PEDAGOGY

GENERAL CERTIFICATE OF EDUCATION MOCK EXAMINATION		
ORDINARY LEVEL		
SUBJECT TITLE CODE	COMPUTER SCIENCE CSC 0595	MARCH-APRIL 2023
PAPER NUMBER	2	

Time Allowed: Two hours (2H)

INSTRUCTIONS TO CANDIDATES:

Answer any **FIVE** questions. All questions carry equal marks

All questions carry 20 marks each. For your guidance, the appropriate mark for each part of a question is indicated in brackets.

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

In calculations, you are advised to show all the steps in your working, giving your answer at each stage.

*Calculators are **NOT** allowed.*

1)

a) Data verification and validation are technics used to ensure data integrity in a database. A validation rule states that both alphabets and numeric characters are acceptable and that an entry must be at least five characters in length

- i) Briefly explain the underlined words in the text above. **(3mks)**
- ii) Which two of the following data will be **REJECTED** by the database management system and give reasons for your answer : Food; To593Y; W-8656; Giving **(4mks)**
- iii) What do you understand by at least five characters in length? **(2mks)**
- iv) Define the following DBMS terms: redundancy and consistency **(3mks)**

b) Let the circuit below:



- i) Given the following input of the logic circuit above, complete the truth table below for E, F and G **(3 marks)**

A	B	C	D	E	F	G
0	0	0	0			
0	1	0	1			
1	0	1	0			
1	1	1	1			

- ii) Write the logic expression for E, F and G **(3mks)**
- iii) What will happen if a NOT gate is added to the output at G

(2mks)

2)

- a) Ten years ago, Ngwa and Atem were form 5 students in GBHS QUATA who had the ability and passion to imitate the act of inventing cars. They did this by fabricating car toys as a hobby.
- What is the name given to such process?
(2mks)
 - Describe another real-life situation in which the process mentioned in (i) is applicable.
(2mks)
 - Explain two advantages and two disadvantages of the process given in (i) above.
(4mks)
 - In the course of doing that, Ngwa grew up to become a system designer while Atem became a computer programmer. state the roles of the underline words
(2mks)
 - Explain two situations that shows the relation between the Monitory and control system
(2mks)
- b) Carry out the following computing arithmetic:
- $1101111_2 + 1111_2$ (2mks)
 - $110010_2 - 111_2$ (2mks)
 - $BC_{16} + 2A_{16}$ present your answer in Octal and Hexadecimal (4mks)

(2mks)

3)

- a) Your father own a mini-store in which he always have difficulty to trace out daily transactions of the store. He called you to help him in developing a system that will ease the management and control of the store.
- Define Information System (1mk)
 - State 2 types of systems that could be install on your father's computer.
(2mks)
 - Give the function each of the systems mention in (ii) above.
(2mks)
 - What role do people plays in an Information system
(2mks)

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1

- b)
- i) Differentiate between e-commerce and e-banking
(2mks)
 - ii) State and briefly explain two advantages and one disadvantage of e-commerce
(3mks)
- c) Differentiate between the following:
- i) Data Validation and Data verification
 - ii) High level language and low level language (*stating two differences in each case*)
 - iii) Magnetic storage and optical storage devices
 - iv) Software updating and upgrading
(4x2mks)

4)

- a) Peter went to a cyber café in order to send a mail and chat with his friends and also visit the website of MINESEC Distance Learning using the URL: <http://www.minesec-distancelearning.cm/>
- i) Define URL. (2mks)
 - ii) Identify the different components of the URL above.
(2mks)
 - iii) Let's assume that Peter wants to access the file name registration.pdf from the gce directory of the MINESEC website, what will be the URL?
(2mks)
 - iv) In a cyber café, in which kind of computer architecture are the machines connected?
(2mks)
- b) A project to build an E-commerce Information System for JUMIA Cameroon is scheduled to run for months. It is estimated that the following activities will take the following schedule:
- 1) Planning=4weeks, 2) Analysis=2weeks, 3) Design=2weeks, 4) Implementation=8weeks
- i) Define project management
(2mks)

- ii) What is the duration of the project
(2mks)
 - iii) Assuming that the project is to start on the 1st of April 2018, represent the above schedule on a Gantt chart
(5mks)
- c) An office secretary works on a computer for a very long period of time.
- i) What medical problems can this secretary encounter?
(1mk)
 - ii) Give and explain briefly any TWO piece of advice that you would give to the secretary.
(2mks)

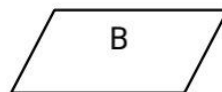
5)

- a) The DG of DOV supermarket in Bonamoussadi called you as a network administrator, to set up a network that will enable him and the various block of the structure to communicate easily. He provides you with computers, cables, switch and printers.
- i) Who is a network administrator? (1mk)
 - ii) Based on the geographical coverage, what type of network will you put in place?
(2mks)
 - iii) From the devices provided, state and design the physical topology will you use to set up the network?
(3mks)
 - iv) State one advantage and one disadvantage of the above physical topology.
(2mks)
 - v) The DG then asks you to interconnect this network with the one of other DOV structure around the country to make an intranet. What is an intranet?
(2mks)
- b) You have two bulbs connected to an electrical source and equipped with a switch. When a light bulb is ON, it takes the form A and when it is OFF, it takes the form E. You have four pieces of information to encode using these light bulbs.
- i) Form the corresponding codes with the symbol A and E.
(2mks)

- ii) For 16 pieces of information, how many light bulbs should we have?
(3mks)
- c) Re-arrange the remedies in column B to suit the problems in column A.
(1x5mks)

COLUMN A: PROBLEMS	COLUMN B: REMEDIES
1. Computer display "Low Disk Space"	a) Check Video cable or contact of Monitor
2. Monitor Display blue screen when turned on	b) Perform disk defragmentation
3. Computer make a continuous beeping sound when turned on	c) Resent option from control panel
4. File get mixed-up or missing on the system	d) Check RAM
5. Mouse Pointer doesn't show in the screen	e) Disk clean-up or delete unimportant files

- 6)
- a)
- i) State the role of the following flow chart symbols labeled A, B and C
(3mks)



- ii) Explain the differences between pseudo code and flowchart
(2mks)

Study the algorithm below and answer the questions that follow.

1. START
2. GET Mark
3. GET Coef
4. Final_Mark = Mark*Coef

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5. IF (Final_Mark<50) THEN

5.1 DISPLAY "You have failed. Work harder"

ELSE

5.2 DISPLAY "You have Passed. Keep it up"

6. DISPLAY "Goodbye."

7. STOP

iii) State three characteristics of a good Algorithm
(3mks)

iv) Run the Algorithm with the values 09 and 5 for mark and coef, respectively.

Write the output

(6mks)

b) Define the following terms as used in a programming stating example in each case:

i) Syntax error

(2mks)

ii) OOP

(2mks)

iii) Compiler

(2mks)

7)

a) Consider the following code from a web page:

```
1<HTML>
2 <HEAD><TITLE> WELCOME TO MY HOME PAGE </HEAD></TITLE>
3 <BODY bgcolor="#0000FF">
4 <H1> Welcome to my site </H1>
5 <p> Follow the link below to continue <p>
6 <a href="My_page.html"> click here </a>
7 </BODY>
8</HTML>
```

- i) Identify and correct TWO errors in the above code. (1x2mks)
- ii) State the role of the <H1> ... </H1> tag and <a>.... tag. (2 mks)
- iii) Identify TWO attributes in the above code. (1x2mks)

b) Given the table below called **student_table**:

ID	Name	Surname	Gender	Class
001	MBUH	Godlov	M	Form 2
002	CHE	Mary	F	Form 1
003	SALIHOU	AMADOU	M	Form 1
004	EBAY	BEA	F	Form 2

- i) How many fields and records are there in the student table above? (2mks)
 - ii) What do you understand by a primary key? (2mks)
 - iii) State which of the fields in the student table is a suitable key field. Give a reason for your choice. (1x2 mks)
- c) Youths are heavily engaged on social media positively and negatively.
- i) Define social media (1mk)
 - ii) Briefly explain two benefit of social media to their businesses (2mks)
 - iii) Briefly explain two negatives aspect of social media in communication (3mks)
 - iv) State two examples of social media commonly used (2mks)

END