COMPUTER SCIENCE 2
0595

CAMEROON GENERAL CERTIFICATE OF EDUCATION BOARD

General Certificate of Education Examination

JUNE 2018   **ORDINARY LEVEL**

Subject Title	COMPUTER SCIENCE
Paper No.	2
Subject Code No.	0595

Two Hours

Answer any FIVE questions.

All questions carry 20 marks each. For your guidance, the approximate 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.

Write out the full meaning of each of the abbreviation listed below as used in computing.

1. (a)
   (i)   SDL
   (ii)   BIOS
   (iii)   PDF
   (iv)   CPU   **(4 marks)**

(b)
   (i)   List the constituent parts of the CPU.   **(3 marks)**
   (ii)   State briefly, how each of the parts functions.   **(7 marks)**
   (iii)   Describe what happens at each stage in the Fetch- Decode- Execute **(6 marks)**

2. (a) Briefly describe the role of the following networking devices.
   (i)   Network interface card   **(2marks)**
   (ii)   Modem   **(2marks)**
   (iii)   Router   **(2marks)**

(b)
   (i)   State the role of the following flowchart symbols labelled A, B and C. **(3 marks)**
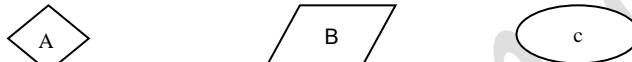
   (ii)   Explain the difference between pseudocode and flow chart. **(2 marks)**

(c) Study the algorithm below and answer the questions that follow.

```
1.   Start
2.   Get Mark
3.   Get Coef
4.   Final_Mark = Mark*Coef
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
```

   (i)   State three characteristics of a good algorithm. **(3 marks)**
   (ii)   Run the algorithm with the values 12 and 5 for mark and coef, respectively. Write the output.
                                                         (3 marks)
   (iii)   Identify two programming constructs used in the algorithm stating clearly the line numbers.
                                                         (3 marks)

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3. (a) A school attempts the computerization of her processes by storing all data in files created using word processing software.

   (i)   Give two reasons why word processing software is a poor choice of software for this purpose.
                                                         (4 marks)

         The school now decides to use a database management system to handle its data.
   (ii)   What is a database management system?   **(2 marks)**
   (iii)   What is a database?   **(2 marks)**
   (iv)   What is a key?   **(2 marks)**
   (V)   Explain what is meant by data integrity?   **(2 marks)**

(b) What do you understand by a user interface?   **(2 marks)**

(c) Give one characteristic of each of the following user interface types:
   (i)   Graphical User Interface.   **(2 marks)**
   (ii)   Voice interface   **(2 marks)**
   (iii)   Command Line Interface   **(2 marks)**

4. (a) Given the following characteristics of a hard disk.

Number of platters	2
Number of tracks per platter	100
Sectors per track	10
Bytes per Sector	512

Calculate:
   (i)   The storage capacity of the disk in Bytes.   **(3 marks)**
   (ii) The exact storage capacity of the hard disk in Kilobytes. **(2 marks)**

   (b) State the importance of:
      (0   Disk defragmentation.   **(2 marks)**
      (ii) File backups.   **(2 marks)**
      (iii Updating an antivirus software.   **(2 marks)**
)

   (c) In relation to computer storage, explain the functions of the following components:
      (i)   Read Only Memory.   **(2 marks)**
      (ii) Random Access Memory.   **(2 marks)**
      (iii Hard disk.   **(2 marks)**
)

   (d) (i) What is cybercrime?   **(1 mark)**
       (ii) Name any two common cybercrimes.   **(2 marks)**

5. (a) Explain the following security notions :
      (i)   Confidentiality   **(2 marks)**
      (ii)   Software damage   **(2 marks)**
      (iii) Unauthorized access   **(2 marks)**
      (iv)   Unauthorized use   **(2 marks)**

   (b) State two ways in which any two of the security issues mentioned in (a) above can be checked.
                                                                    (4 marks)

   (c) Showing clearly all necessary steps, convert:
      (i)   the hexadecimal number DC to octal   **(4 marks)**
      (ii) the binary number 10011101 to decimal   **(4 marks)**

   (a) (i) Rearrange the following phases of the SDLC from earliest to latest:
            Design,
            Analysis,
            Implementation,
            User support.   **(2marks)**
      (ii) State two distinct activities each in the Design and Analysis phases. **(4 marks)**
            marks)

   (b) State the roles of each of the following persons in Information System Development:
      (i)   Systems Analyst   **(2marks)**
      (ii)   Programmer   **(2marks)**

   (c) (i) Write down the abbreviation WWW in full.   **(1 mark)**
       (ii)   Give the difference between WWW and the Internet.   **(2 marks)**
       (iii) Give the difference between a blog (weblog) and an Internet **(2 marks)**
       relay chat

Turn Over

(d)   (i)   What is social network?   **(1 mark)**

      (ii)   State two examples of social networks.   **(2 marks)**

      (iii)   Give one advantage and one disadvantage of social networks   **(2 marks)**

7. (a)   What is an operating system?   **(3 marks)**

      (ii)   Outline any three functions of an operating system.   **(3 marks)**

  (b)   (i)   Describe two differences between low and high level programming languages.   **(2 marks)**

      (ii)   Give one example of each of the programming languages in (i) above.   **(2 marks)**

  (c)   Explain the functioning of:

      (i)   Interpreters   **(2 marks)**

      (ii)   Compilers   **(2 marks)**

  (d)   Given the logic circuit below write down the expression for the output:
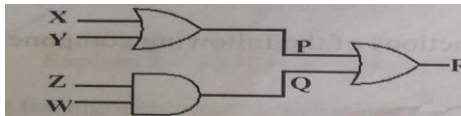
(i) P in terms of inputs X, Y   **(2 marks)**

(ii) Q in terms of inputs Z, W   **(2 marks)**

(iii) R in terms of inputs P, Q   **(2 marks)**