Information and Communication Technology 2
0596

JUNE 2022   INTERMEDIATE LEVEL

Specialty Name and Acronym	All Specialties
Subject Title	Information and Communication Technology
Subject Code No.	0596
Paper No.	2

Duration: 2 Hours, 30 Minutes

Answer FIVE QUESTIONS.

All questions carry equal marks.

Begin each question on a new page of the Answer Booklet.

This paper carries 30% of the total weighted marks.

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

1) a. State the functions of the following: **(4 marks)**
    i.   BIOS
    ii.   CMOS

  b. Give any TWO hardware components that can be upgraded by the user to improve the computer's performance. **(4 marks)**

  c. Differentiate between functions of the delete key and the backspace key on the keyboard. **(4 marks)**

  d.   (i)   Define cloud storage and give one example. **(4 marks)**
      (ii)   Give one advantage and one disadvantage of cloud storage. **(2 marks)**
      (iii) Match the various cloud storage to their corresponding companies. **(2 marks)**

Cloud Storage	Companies
Google drive	Apple
One drive	Google
iCloud	Microsoft

2) (a)   State the main technological differences between the following generations of computer.
      (i)   First and third generations **(2 marks)**
      (ii)   Second and forth generations. **(2 marks)**

   (b)   How can computers be used in the following domains? **(6 marks)**
      (i)   Communication;
      (ii)   Banking

  c. Differentiate between the following: **(4 marks)**
      (i)   Formatting and editing.
      (ii)   Fragmentation and defragmentation

  d. Give the names of the software that correspond to the following file extensions: **(6 marks)**

Filename extension	Software applications
.doc	
.XLS	
.accdb	

(3) a) Considering the table below and using cell references, give:
        (i) The formula used to obtain the total mark of Alain Nkome in cell I4. **(3 marks)**
        (ii) The formulae used to obtain the subject Average for ICT in Cell C9 **(3 marks)**
        (iii) The formulae used to obtain the minimum mark for ICT in Cell C10 **(3 marks)**

S/N	NAMES	ICT	B MATHS	ACC	COMM	MATHS	ENG	TOTAL MARK	AVERAGE
1	ALAIN NKOME	12	9	13	12	11	9	66	
2	ACHIRI TOM	13	8	12	13	10	8	64	
3	TANTOH WALTERS	12	7	9	12	12	7	59	
4	ABONG ELVIS	11	5	8	9	7	5	45	
5	AKO ENOW	15	12	7	15	11	12	72	
	Subject Avg.	12.6	8.2	9.8	12.2	10.2	8.2		
	Min. Mark	11	5	7	9	7	5		

Sheet1

(b) Define wireless communication techniques and state three (3) different types of wireless technologies. **(5 marks)**

(d)   (i) Convert the binary 10101_2 to its decimal equivalent. **(3 marks)**
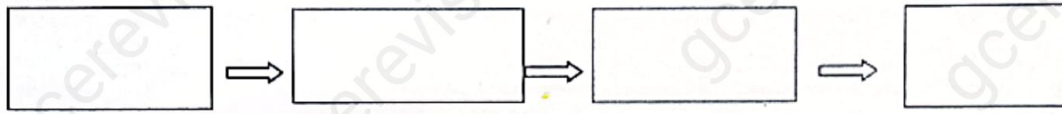   (ii) Give the binary equivalent of the decimal number 24. **(3 marks)**

4) (a) As an IT specialist of a school, you have been sent to buy a computer for the school. Use the Specification type below to complete the table. **(6 marks)**

Items	Specifications
Operating Systems	
Operating System Type	
RAM capacity	
Hard disk capacity	
Processor Type	
Processor Speed	

Specification Types:

(i) Pentium 4;   (ii) Windows 10;   (iii) 2.5 GHz;   (iv) 4 GB;   (v) 64 bits;   (vi) 500GB

(b)   State four (4) components of an Information system.   **(8 marks)**

(c)   The diagram below shows the information processing cycle.

(i)   Label the diagram chronologically.   **(4 marks)**

(ii)   Name one device used for each stage.   **(2 marks)**

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5)   a)   Define antivirus.   **(2 marks)**

    b)   Give an example of an anti-virus software.   **(2 marks)**

    c)   During the life update of an anti-virus software in a computer, four activities take place. State them chronologically   **(4 marks)**

    d)   (i)   Give the condition for those activities to take place.   **(2 marks)**

            (ii)   What is the importance of an anti-virus software in a computer system?   **(2 marks)**

            (iii)   Give two possible effects that the computer can undergo in the absence of an updated anti-virus software.   **(4 marks)**

    (e)   (i)   Give the function of a firewall.   **(2 marks)**

            (ii)   Give the differences between Copyright and Plagiarism   **(2 marks)**

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6)   a)   (i)   Explain how one can share internet connections with your mobile phone and the laptop.   **(4 marks)**

            (ii)   Explain the difference between Wi-fi and Bluetooth.   **(2 marks)**

    b)   (i)   What is a database? Give Three database objects.   **(5 marks)**

            (ii)   Explain the importance of primary key in database.   **(2 marks)**

            (iii)   What is database redundancy?   **(2 marks)**

    c)   (i)   Give three(3) basic characteristics of a computer.   **(3 marks)**

            (ii)   Name two(2) transmission media.   **(2 marks)**

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7)   a)   Explain the following e-commerce methods: **(6 marks)**

            (i)   C2C

            (ii)   B2C

            (iii)   G2C

    b)   Define the following and give practical examples: **(6 marks)**

            (i)   Full Duplex

            (ii)   Half Duplex

             (iii)   Simplex.

    C)   Define the following terms and give two examples of each:

            (i)   Network protocol   **(4 marks)**

            (ii)   Network topology   **(4 marks)**