Name……………………………….................…….   Index Number……………………/……..

451/1
Computer Studies
Paper 1
(THEORY)
2½ hours

COMPUTER STUDIES PAPER 1
Kenya Certificate of Secondary Education
Computer Studies
Paper 1
(THEORY)

INSTRUCTIONS TO CANDIDATES

Write your name and index number in the spaces provided above.
Sign and write the name of examination in the spaces provided above.
*This paper consists of **TWO** sections; A and **B.***
*Answer **ALL** the questions in section **A**.*
*Answer question **16** and any other **THREE** questions from section **B**.*
All answers should be written in the spaces provided on the question paper.

For official Use Only

Section	Question	Candidates Score
A	1-15	
B	16	
	17	
	18	
	19	
	20	
TOTAL SCORE		

This paper consists of 10 printed pages

SECTION A- *Answer all the questions in this section*

1. What is a computer drive? (1 Mark)

   …………………………………………………………………………………………………
   …………………………………………………………………………………………………

2. Mr. Osanoa computer technician in one of the schools used speech method to store students oral answers to an exam into a computer

   a) What is a speech input? (1 Mark)

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   ………………………………………………………………………………………………

   b) State one advantage and one disadvantage of using this kind of input. (2 Marks)

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   …………………………………………………………………………………………………

3. In reference to ALU, explain the meaning of logic operations and give an example of this processing operation. (2Marks)

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4. a) Identify the four types of storage media shown below (2Marks)

   I   ii   iii   iv

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   ……

   b) Compare the storage device (i) and (iii) above (1Mark)

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   ………………………………………………………………………………………………

5. a) Define the term firewall (1 Mark)………………………………………………………………………………………………………
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   b) State three ways of ensuring efficient backup of data (2Marks)

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   ………………………………………………………………………………………………

6. a) Outline the three program control structures (1½Marks)

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   ……
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   ……

b) Give three types of selection construct (1½Marks)

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c) Define the term encapsulation as applied in object oriented programming (2Marks)

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7. i) What is Hypertext Mark Up Language? (1Mark)

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ii) Why should a program be documented in each and every stage?

(1Mark)………………………………………………………………………………………………

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8. A student was reading through a daily newspaper on different types of data communication media. As a computer student, how will you assist him define the term data communication media? (1Mark)

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9. i) Differentiate between share level security and user level security as used in network security.

(2Marks)………………………………………………………………………………………………

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ii) What are the differences between Token ring topology and Ethernet topology?

(2Marks)

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10. i) Describe the term biometric analysis (1Mark)

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11. Give two uses of spreadsheets in a government office concerned with carrying out national census (2Marks)

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12. i) A student at Sunshine secondary school was working with a computer using the windows operating system. After sometime he started experiencing the following problems.
- The computer failing to load the Operating system during the booting process
- The computer hangs now and then
- Abnormal restarting
- Display a blue screen with the message such as fatal exception error has occurred.

What could be the cause of the above problems?   (2Marks)

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ii) A student was advised by the teacher to buy integrated software over separate software. What do you think could be the advantages of this?   (2Marks)

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13. a) What is a deadlock?   (1Mark)
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b) Explain the term plug and play
        (1Mark)……
………

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………………………………………………………………………………………………………

c)Differentiate between a program file and a data file
        (1Mark)……
………

14. i) State two factors you would consider when designing a file   (1Mark)
………
………
ii) List down three factors you need to consider during file conversion
        (3Marks)……
………
…………………………
………
15. State two limitations of language processing   (2Marks)
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SECTION B (60 marks)

*Answer question 16 and any other **three** questions from this section in the spaces provided.*

16. (a) State the importance of the following in programming

    (i)   Assembler   (1mk)

  ………

    …………………………………………………………………………………………

    (ii)   Compiler   (1mk)

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    …………………………………………………………………………………………

(b) A form four class sat for an exam in eight subjects. A student must get an average of 50% in all subjects in order to pass. A report is required that will show the name, marks obtained by each student per subject, the average mark and whether the student has passed or failed.

    (i) **Write** a pseudocode used to solve this problem.   (6mks)

    (ii) Draw a flow chart for this report.   (7mks)

17. (a)(i)State any THREE standard coding schemes used in computing and electronic systems.

(1½marks)

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..……

(ii) Convert 312_{10} using any TWO of the above mentioned coding schemes.   (2 marks)

(iii) Using TWOs compliment, perform the following arithmetic leaving your answer inbinaryform

(2marks)

10_{10} - 13_{10}

(iii) Use one's compliment to solve the following sum: $-18_{10}+12_{10}$ (2 ½ marks)

(b) (i) Explain the difference between the terms **browser** and a **search engine** with an example of each   (3marks)

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(ii) What is the use of the **favorites** feature of an Internet browser? (1 mark)

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..………………………………………………………………………………………………………

(iii) What do the following abbreviations stand for? (3 marks)

i.URL..……………………………………………………………………………………………

ii. ISP..……………………………………………………………………………………………

iii. WWW..……………………………………………………………………………………………

18. (a) Differentiate between the following as used in word processing (6marks)
(i) An **indent** and **a tab stop**

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(ii) **Margins** and **gutter**

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(iii) **Footnotes** and **Endnotes**

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(b) A History teacher directed all students to present their work in double space format. Outline the procedure for double spacing a document. (3marks)

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(c) Owili, a form Four student, formatted a document to four columns. Explain how this was achieved in word processing   (3marks)
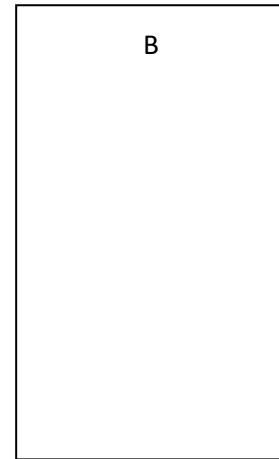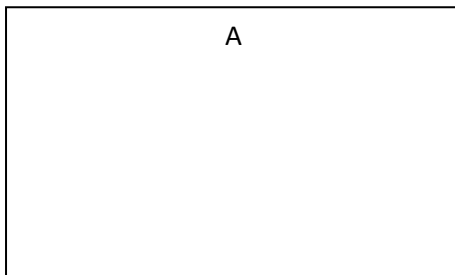
..……………………………………………………………………………………….…………………

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(d) Ndwiga printed documents with paper layout as shown below.

A

B

(i) Identify the layouts.   (1mark)

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(ii) Explain when each layout should be applied   (2marks)

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19. (a) Computer students visited KASSUJET TV station in the city and noticed that the News presenter in the studio was communicating in real time with other four reporters through a web cam and a microphone connected to a notebook PC nearby. The live images of the other reporters were projected on a white board mounted in the studio.

(i) Describe this type of communication.   (2 marks)

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(ii) State any TWO advantages and ONE disadvantage of this type of communication. (2 marks)

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(b) Currently there is a shift in technology towards digital from analog. State any THREE advantages of digital technology over analog technology. (3 marks)

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(c) (i) Documentation is usually not considered as a programming stage. Why is this so? (2 marks)

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(ii) Differentiate between internal and external documentation. (2 marks)

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(ii) State THREE types of documentation that are available at the end of the programing project. (3 marks)

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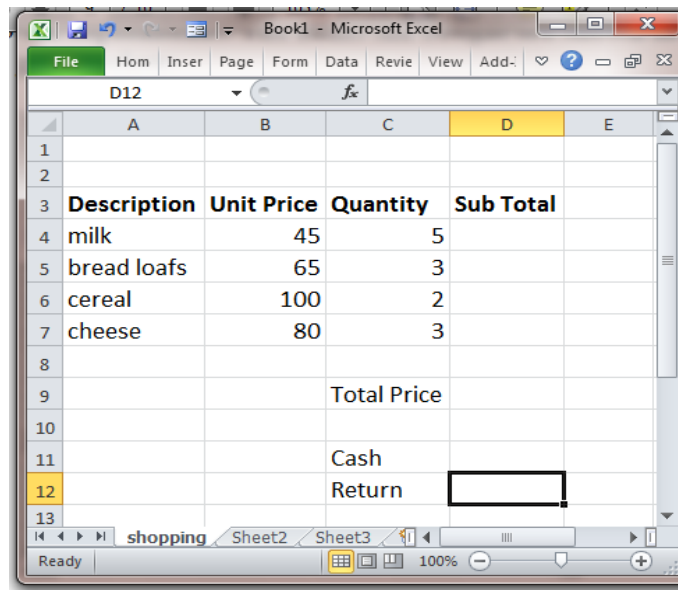………
………

20. Martina Lotino went to the supermarket and bought the items shown in the picture of the spreadsheet given below:

(a.) (i) What is the name of the **active sheet**? (1 mark)

..……

(ii) By looking at the above picture, give the **reference of an active cell**. (1 mark)

..……

(iii) What function did the examiner use to **copy** the above picture on this examination paper? (1 mark)

..……

(b) (i) A cell can contain a formula. **Name** the other TWO items which a cell can contain. (2 marks)

..……

..……

(ii) Now, Julieta , a new employee, has just joined the company and does not know the difference between a formula and a function. You are required to explain this to her in the space provided below. Support your explanation with an example of each. (4 marks)

Formula:……………………………………………………………………………………………

Example:……………………………………………………………………………………………

Function:……………………………………………………………………………………………

Example: ……………………………………………………………………………………………

(c) (i) Write the **formulae** that must be typed in the following two cells: **D5, D7** (2 marks)

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..……

(ii) Write the function that must be typed in cell **D9**: (2 marks)

…………………………………………………………………………………………….…………………

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(iii) The bill total in cell D9 amounts to Ksh.860 Martina has a Ksh.1000 note. Write the formula that calculates the change in **D12**.   (2 marks)

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